Participatory Research for the Development of Community Pharmacy Services

Investigación Participativa para el Desarrollo de Servicios Farmacéuticos en Farmacia Comunitaria

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Dissemination of Research

Papers

- Franco-Trigo L, Fernández-Llimós F, Martínez-Martínez F, Benrimoj SI, Sabater-Hernández D. Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review. Health Policy [sent for review].

- Franco-Trigo L, Marqués-Sánchez P, Tudball J, Benrimoj SI, Martínez-Martínez F, Sabater-Hernández D. Collaborative health service planning: A stakeholder analysis with social network analysis to develop a community pharmacy service. Research in Social and Administrative Pharmacy (2019). doi: https://doi.org/10.1016/j.sapharm.2019.05.008. [In Press. Epub ahead of print]

- Franco-Trigo L, Tudball J, Fam D, Benrimoj SI, Sabater-Hernández D. A stakeholder visioning exercise to enhance chronic care and the integration of community pharmacy services. Research in Social and Administrative Pharmacy 2019;15:31-44 doi: 10.1016/j.sapharm.2018.02.007.

- Franco-Trigo L, Hossain L, Durks D, Fam D, Inglis S, Benrimoj S, Sabater-Hernández D. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. Research in Social and Administrative Pharmacy 2017;13(3):539-552. doi: 10.1016/j.sapharm.2016.06.009.

Conference communications and workshops

- Lucia Franco Trigo, Pilar Marqués Sánchez, Jacqueline Tudball, Shalom Isaac Benrimoj, Fernando Martínez Martínez, Daniel Sabater-Hernández. Identificación de actores clave para el desarrollo de un servicio farmacéutico orientado a la prevención cardiovascular a prestar desde la farmacia comunitaria andaluza. Protocolo de estudio. IV Summer Course en ARS y IV Workshop de Investigación: En-Redando en el Camino de Santiago 2017; 28 June – 1 July 2017; Ponferrada and Villafranca del Bierzo, León, Spain. [Oral communicationl]

- Lucia Franco-Trigo, Lutfun N Hossain, Desire Durks, Shalom I Benrimoj, Daniel Sabater-Hernández. Integrating community pharmacy services to enhance cardiovascular care: a stakeholder visioning exercise. FIP 76th World Congress of Pharmacy & Pharmaceutical Sciences; 28 August – 1 September 2016; Buenos Aires, Argentina. [Poster communication]

- Lucía Franco-Trigo, Daniel Sabater-Hernández. Workshop: Cómo diseñar servicios para tu farmacia. Simpodader International 2016; 23-25 June 2016; Granada, Spain. [Speaker] Ars Pharm. 2016; 57(suppl1):7.

- Lucía Franco-Trigo, Lutfun N. Hossain, Desire Durks, Shalom Isaac Benrimoj, Daniel Sabater-Hernández. Planning a leading cardiovascular care model integrating community pharmacy services: preliminary results of a stakeholder proposal. Simpodader International 2016; 23-25 June 2016; Granada, Spain. Ars Pharm. 2016; 57(suppl1):51. [Poster communication]

- Lucía Franco Trigo, Desire Durks, Lutfun N. Hossain, Dena Fam, Shalom (Charlie) Benrimoj, Daniel Sabater-Hernández. Identifying a planning group for the development, implementation and evaluation of a pharmacy service aimed at preventing cardiovascular diseases in Australia. FIP World Congress 2015; 29 September – 3 October 2015; Düsseldorf, Germany. [Poster communication]

Awards

- International Pharmaceutical Federation Community Pharmacy Section Poster Award 2015- First Prize - Lucía Franco Trigo, Desire Durks, Lutfun N. Hossain, Dena Fam, Shalom (Charlie) Benrimoj, Daniel Sabater-Hernández. Identifying a planning group for the development, implementation and evaluation of a pharmacy service aimed at preventing cardiovascular diseases in Australia. 75th FIP World Congress of Pharmacy and Pharmaceutical Sciences 2015. Düsseldorf, Germany, 2015.

Preface

This dissertation is submitted in fulfilment of the requirements for the Joint Doctoral Degree Program between the University of Technology Sydney, Australia (UTS) and the University of Granada, Spain (UGR): Doctor of Philosophy at UTS and Doctora por la Universidad de Granada at UGR. It is submitted for examination according to the *Candidate Program Agreement* signed between both Universities.

The format chosen for the presentation of the research is thesis by compilation. Chapter 1 introduces the research topic and setting, states the objectives of the thesis and provides a research outline and dissertation structure. Chapters 2 to 5 are research papers, each of them containing introduction, methods, results, discussion and conclusion sections. Chapter 2 presents a review of existing evidence on the topic of interest. This paper is currently under review by a journal and the version provided in this dissertation is the same as that submitted to the journal. Chapters 3 and 5 describe fieldwork carried out in Australia. These chapters were published as papers, and the versions included in this dissertation are the same as those accepted by the journal. Chapter 4 corresponds to the fieldwork carried out in Spain. This paper is *in press (Epub ahead of print)* and the version provided in this dissertation is the one accepted by the journal. For all three field studies, human research ethics clearance was obtained (see Annexes), and participants provided informed consent to participate in the research, as explained in the methodology sections of each chapter. Chapter 6 provides an overall discussion of the thesis. This encompasses a reflection on the main lessons learned throughout the research journey and suggestions for future research. Finally, Chapter 7 brings together the main conclusions of the thesis. The Preface, Introduction (Chapter 1), Discussion (Chapter 6) and Conclusions (Chapter 7) of the thesis are presented both in English and Spanish.

The doctoral candidate, Lucía Franco Trigo, is the primary author of the papers. Co-authors (including supervisors) contributed to the conception, design, data collection, data analysis, data interpretation of the studies, and drafting and critical revision of the resulting manuscripts. The specific contributions of co-authors can be found in the Annexes.

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Prefacio

Esta memoria de tesis se presenta en cumplimiento de los requisitos para el Doctorado Conjunto entre la Universidad Tecnológica de Sídney, Australia (UTS) y la Universidad de Granada, España (UGR): Doctor of Philosophy en la UTS y Doctora por la Universidad de Granada en la UGR. Se deposita para su examen de acuerdo con el *Candidate Program Agreement* firmado entre ambas universidades.

El formato elegido para presentar la investigación es el de tesis por agrupación de artículos. En el Capítulo 1 se introduce el tema de investigación y el contexto, se establecen los objetivos de la tesis, y se presenta un esquema de la investigación y la estructura de esta memoria de tesis. Los Capítulos 2 a 5 son artículos, y cada uno de ellos contiene secciones de introducción, métodos, resultados, discusión y conclusiones. En el Capítulo 2 se presenta una revisión de la evidencia existente sobre el tema de interés. Este artículo se encuentra en la actualidad en revisión en una revista, y la versión incluida en esta memoria coincide con la enviada a dicha revista. Los Capítulos 3 y 5 describen trabajo de campo llevado a cabo en Australia. Estos artículos han sido publicados, y las versiones que se incluyen en esta memoria corresponden a aquellas aceptadas por la revista. El Capítulo 4 se corresponde con el trabajo de campo llevado a cabo en España. Este artículo se encuentra *"in press (Epub ahead of print)"*; la versión incluida en esta memoria es la aceptada por la revista. Como se explica en la sección de metodología de cada uno de los tres estudios que constituyen el trabajo de campo, para cada uno de ellos se obtuvo la aceptación del comité de ética de investigación en humanos (ver Anexos) y todos los participantes dieron su consentimiento informado para participar en la investigación. En el Capítulo 6 se presenta una discusión general de la tesis, centrada fundamentalmente en una reflexión sobre las principales lecciones aprendidas a lo largo de la investigación y sugerencias para futuras investigaciones. Finalmente, el Capítulo 7 reúne las principales conclusiones de la tesis. Prefacio, Introducción (Capítulo 1), Discusión (Capítulo 6) y Conclusiones (Capítulo 7) de la tesis se presentan tanto en inglés como en español.

La doctoranda, Lucía Franco Trigo, es la autora principal de los artículos. Los coautores (incluyendo directores) han contribuido en la concepción, diseño, recogida de datos, análisis e interpretación de datos, y la redacción y revisión crítica de los manuscritos finales. Las contribuciones específicas de los coautores se encuentran en los Anexos.

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Abbreviations / Abreviaturas

ARS: Análisis de Redes Sociales

CCM: Chronic Care Model

CPA: Community Pharmacy Agreement

CPS: Community Pharmacy Service

CVD: Cardiovascular Disease

DOAJ: Directory of Open Access Journals

ECHO: Economic, Clinical and Humanistic Outcomes

ECV: Enfermedad Cardiovascular

EMR: Electronic Medical Record

GP: General Practitioner

MeSH: Medical Subject Headings

NGOs: Non-Governmental Organisations

NSW: New South Wales

NSW-MCC: New South Wales Model for Chronic Care

PBS: Pharmaceutical Benefits Scheme

PCMH: Patient Centered Medical Home

PHN: Primary Health Network

RISA: Reporting Items for Stakeholder Analysis

SEFAC: Sociedad Española de Farmacia Familiar y Comunitaria

SNA: Social Network Analysis

SPFA: Servicios Profesionales Farmacéuticos Asistenciales

UGR: University of Granada

UTS: University of Technology, Sydney

WHO: World Health Organization

Abstract

The early involvement of key stakeholders (with various roles and perspectives) in the planning process of a community pharmacy service (CPS), increases the potential of such services to respond to real needs and to be integrated in practice. Participatory development of CPSs was explored in this thesis by reviewing the applicability of stakeholder analysis within planning processes, then putting into practice the initial steps of the development of a cardiovascular disease-prevention CPS.

A systematic scoping review was performed to investigate the use of stakeholder analyses in health innovation planning processes and revealed that stakeholder analyses were applied to all phases of the process. High heterogeneity was found in the steps to carry out stakeholder analysis, in the methods used, the stakeholder attributes analysed and the descriptions of the analyses. A tool to guide future reporting of stakeholder analyses (the RISA tool) resulted from this review.

The first step of the planning process that was put into practice was the identification and initial engagement of stakeholders. Two stakeholder analyses were performed using different methodologies (one in Australia, the other in Spain). In Australia, 46 stakeholders were identified, with 12 of them considered *key stakeholders* because of their potential to drive or hinder the development of the service. Needs and gaps in cardiovascular care ($n = 6$), roles for community pharmacists in cardiovascular prevention ($n = 12$) and potential factors that can hinder the integration of CPSs into practice ($n = 7$) were also identified. In Spain, the stakeholder analysis revealed 217 stakeholders belonging to 10 groups and a collaboration network between the 96 stakeholders participating in the study. Out of the 217 stakeholders, 57 were considered critical because of having high influence and interest in the collaborative initiative to develop the CPS, being highly ranked key stakeholders, having most collaborations with other stakeholders or being most strategically situated in the network. The initiative was supported by stakeholders and could be put into effect by combining their capacities and willingness to contribute.

The second step was the development of a stakeholder-shared vision in Australia to establish common ground among stakeholders and focus planning efforts. Additionally, 24 initiatives to achieve such a vision were identified. As a result, a preliminary model for chronic care that stipulates which stakeholder groups to consider, seven principles

for advanced care and six environmental factors that may influence the implementation of these principles (the NSW-MCC) was proposed.

Resumen <small>(requisito UTS)</small>

En el proceso de planificación de servicios profesionales farmacéuticos asistenciales (SPFA), la participación temprana de actores clave, con distintos roles y perspectivas, aumenta el potencial de estos servicios para responder a necesidades reales e integrarse en la práctica. En esta tesis se exploró el desarrollo participativo de los SPFA revisando la aplicabilidad del análisis de actores a lo largo de los procesos de planificación y llevando a la práctica los pasos iniciales del desarrollo de un SPFA orientado a la prevención de la enfermedad cardiovascular.

Se realizó una *scoping review* sistemática para investigar el uso de los análisis de actores en los procesos de planificación de innovaciones sanitarias que reveló que estos análisis se aplicaban en todas las fases del proceso. Se encontró mucha heterogeneidad en los pasos para realizar análisis de actores, en los métodos utilizados, los atributos de los actores que se analizaban y las descripciones de los análisis. Como resultado de esta revisión, se propuso una guía para reportar futuros análisis de actores (la guía RISA).

El primer paso del proceso de planificación que se llevó a cabo fue la identificación e involucración inicial de actores. Se realizaron dos análisis de actores utilizando distintas metodologías (uno en Australia, el otro en España). En Australia, se identificaron 46 actores, de los que 12 se consideraron actores clave debido a su potencial para impulsar o dificultar el desarrollo del servicio. También se identificaron necesidades y carencias en el cuidado cardiovascular actual (n = 6), papeles que podrían jugar los farmacéuticos comunitarios en la prevención cardiovascular (n = 12) y factores que potencialmente podrían dificultar la integración de SPFAs en la práctica (n = 12). En España, el análisis de actores reveló 217 actores que pertenecían a 10 grupos y una red de colaboración entre los 96 actores que participaron en el estudio. De los 217 actores identificados, 57 se consideraron críticos por tener alta influencia e interés en la iniciativa colaborativa para desarrollar el SPFA, puntuar alto como actores clave, ser de los que tenían más colaboraciones con otros actores o estar más estratégicamente situados en la red. En general, los actores apoyaron la iniciativa y, combinando sus capacidades y voluntad de contribuir, ésta se podría poner en marcha.

El segundo paso consistió en el desarrollo de una visión conjunta de los actores en Australia para establecer un punto de partida común y centrar los esfuerzos de planificación. Además, se identificaron 24 iniciativas para alcanzar dicha visión. Como resultado, se propuso un modelo preliminar para el cuidado crónico (el NSW-MCC) en

el que se estipulan los grupos de actores a considerar, siete principios para un cuidado de calidad y seis factores ambientales que pueden influir en la implantación de estos principios.

Extended summary

When developing, implementing and evaluating a community pharmacy service (CPS), it is critical to involve and engage the individuals, groups and/or organisations that may be affected by, have an influence on, or have an interest in, the health issues or needs addressed by such a service (i.e., stakeholders). Selecting key stakeholders with varied roles and perspectives and bringing them together from the initial steps of the planning process, increases the potential of a service to respond to real needs, to be accepted and, ultimately, to become integrated into practice. Therefore, understanding how to perform the initial steps of a collaborative planning process for a CPS could be considered of paramount importance to its success.

The general objective of this thesis was to generate knowledge on collaboratively planning of CPSs and to put into practice the initial steps of the development of a CPS aimed at preventing cardiovascular disease. These initial steps were explored through the use of stakeholder analysis, which assisted in identifying and analysing the stakeholders involved, and through the development of a stakeholder-shared vision, which assisted in establishing a common ground and focusing planning efforts. The thesis is composed of four research studies presented as chapters with the following specific objectives, methods and results.

Study 1: *Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review.* This study gathered existing evidence to understand stakeholder analysis within health innovation planning processes. The specific objective of this study was to investigate how stakeholder analyses were used and reported in health innovation planning processes and to propose guidelines on reporting such analyses. A systematic scoping review was performed following the Arskey and O'Malley framework and the Joanna Briggs Institute's recommendations. Literature was searched in PubMed, Scopus and DOAJ, grey literature was sought using Google and the references of included articles were scanned to identify other relevant studies. Fifty-one records were incorporated in the qualitative synthesis. Stakeholder analyses were conducted worldwide and used in all types of health innovations, including health services, and applied to all phases of the planning process. Forty-one studies reported the identification of stakeholders, 50 differentiated/categorised them, and only 25 analysed stakeholder relationships. There was high heterogeneity in the steps taken to carry out stakeholder analysis, as well as in the methods used, the stakeholder attributes analysed and the ways of reporting the analyses. A list of Reporting Items for Stakeholder Analysis

(i.e., the RISA tool) was proposed as a guideline to foster the systematic and transparent reporting of future stakeholder analyses.

Study 2: *Stakeholder Analysis for the Development of a Community Pharmacy Service Aimed at Preventing Cardiovascular Disease.* This qualitative study put into practice the first step of a collaborative planning process. The objective of the study was to identify who the key stakeholders were that could be part of a planning group for the development of a CPS aimed at preventing cardiovascular disease in New South Wales, Australia. The secondary objective of this study was to explore the gaps in, and needs of, cardiovascular care and the role that community pharmacists could play. A workshop was organised, including two structured activities, and the participants were eight key informants within the Australian healthcare system. The first activity explored current needs and gaps in cardiovascular care and the role of community pharmacists. The second was a stakeholder analysis for which ex-ante and ad-hoc approaches were combined. The stakeholders identified were classified in three groups depending on the influence they could exert on the development of the CPS. Data were analysed using qualitative content analysis. Forty-six stakeholders pertaining to different parts of the health system were identified, mainly: (1) patients/consumers and their representative organisations, (2) healthcare providers and their professional organisations and (3) institutions and organisations with no direct interaction with patients but with an indirect influence on patients' health (policy-makers, managers of the healthcare system, etc.). Twelve out of the 46 stakeholders identified were considered *key stakeholders* because of their potential to drive or hinder the development of the service. The secondary results of the workshop were composed of a list of needs and gaps in cardiovascular care ($n = 6$), a list of roles for community pharmacists in cardiovascular prevention ($n = 12$) and a list of potential factors ($n = 7$) that can hinder the integration of CPSs into practice.

Study 3: *Collaborative Health Service Planning: A Stakeholder Analysis with Social Network Analysis to Develop a Community Pharmacy Service.* This mixed-methods study also put into practice the first step of a collaborative planning process. It used a different methodological approach to carry out a stakeholder analysis to develop a CPS to prevent cardiovascular disease. The objective was to identify stakeholders, differentiate them and analyse their relationships to organise a collaborative initiative for the development of a service in Andalucía, Spain. Stakeholder identification was performed using a snowballing technique involving the research team, nine key informants with varied profiles, and 96 stakeholders. Information on stakeholder differentiation/categorisation and an analysis of stakeholder relationships (i.e.,

collaboration relationships) were obtained using an online web-based questionnaire developed during the stakeholder identification process. Information about the stakeholders consisted of the following: their self-perceived influence; their level of interest in and attitude toward the initiative; their stake in the initiative; their capacity to contribute to the initiative; the level of involvement desired; and their concerns regarding the initiative. Stakeholders were also asked who among the list of identified stakeholders they considered key to the initiative, and what level of collaboration, if any, they had with the remaining stakeholders in the previous year-and-a-half. Ninety-six stakeholders participated in the study. Data analysis combined descriptive qualitative content analysis, descriptive quantitative analysis and social network analysis. Two hundred and seventeen stakeholders were identified, belonging to 10 different groups. There was an existing collaboration network between the 96 stakeholders that participated in the study. Fifty-seven of them were considered critical stakeholders after data analysis: 25 declared having a high influence and interest in the collaborative initiative; 20 were in the first decile of the most highly-ranked key stakeholders; 25 were in the first quartile of stakeholders most connected to other stakeholders; and 24 were the first quartile of stakeholders situated most strategically in the network. Several stakeholders had more than one of these characteristics, and three of them had all of them (two healthcare professional organisations and one scientific organisation). Most stakeholders supported the initiative. Combining their capacities and willingness to contribute, the initiative could be put into effect.

Study 4: *A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services.* This qualitative study put into practice the second step in the collaborative planning process for the CPS that was initiated in New South Wales in Study 2. The objective was to develop a stakeholder-shared vision of a cardiovascular care model which integrates community pharmacists and to identify the initiatives that the stakeholders consider necessary to achieve this vision. A participatory visioning exercise involving 13 stakeholders with different profiles identified in a previous stakeholder analysis was conducted. To carry out this exercise, a workshop was held that was structured in three parts (introduction; developing the vision; defining initiatives to achieve it). The Chronic Care Model was used as a framework for the development of the vision. Qualitative content analysis was used for data analysis. Stakeholders reframed the objective of the study to develop a vision focused on chronic disease rather than just cardiovascular disease. They also considered it convenient to adapt the existing services to cover emerging needs instead of developing new ones. Seven general principles of care were identified: patient-centred care; a multidisciplinary team

approach; shared goals; long-term care relationships; evidence-based practice; ease of patient access to healthcare settings and services; and good communication and coordination. The vision also included six environmental factors that can influence the implementation of these principles: payment systems; health funding; financial incentives; electronic systems; evaluation systems; and health system organisational changes. Twenty-four specific initiatives for achieving the vision were identified and two of them were considered by stakeholders to be main priorities: (1) enhancing the teamwork, including the co-design of protocols and effective communication between members of the healthcare team, and (2) conducting a needs assessment to prioritise and focus health planning efforts. The principles and factors identified in the vision were finally combined to produce a preliminary model of chronic care (the New South Wales model for chronic care).

In conclusion, this thesis contributed to the knowledge of CPS planning processes by demonstrating the usefulness of stakeholder analyses and shared visions in initiating such processes. Likewise, it proved that stakeholder analyses are valuable in the other phases of the planning process. The research highlighted the number and variety of stakeholders that should be taken into account and the importance of stakeholder participation since the early phases of the process. As a product of this thesis, detailed reports were produced on the first two steps of the CPS collaborative planning process and two tools were generated that other researchers and planners can use in their work. One of them is the RISA tool, which is a guideline for systematising reports on stakeholder analyses, and the other is the New South Wales Model for Chronic Care, whose structure may facilitate the context analysis in future planning processes. This research explained the utility and part of the complexity that involves the participation of actors in the collaborative planning of CPS. Future research could increase knowledge in this area by exploring stakeholder engagement throughout the remaining phases of the planning process. Of particular interest are ways of dealing with power relationships and conflict among stakeholders to ensure that collaborations are successful.

Resumen extendido (requisito UGR)

A la hora de desarrollar, implantar y evaluar un servicio profesional farmacéutico asistencial (SPFA), es crítico involucrar a los individuos, grupos y/u organizaciones que podrían verse afectados, tener influencia o interés sobre los problemas o necesidades de salud abordados por dicho servicio (en adelante denominados *actores* como equivalente al término *stakeholders* utilizado en inglés). Seleccionar actores clave con funciones y perspectivas variadas, y reunirlos desde los pasos iniciales del proceso de planificación, aumenta el potencial del servicio para responder a necesidades reales, para ser aceptado y, en última instancia, para que sea integrado en la práctica. Por tanto, entender cómo llevar a cabo los pasos iniciales de un proceso de planificación participativo para un SPFA es de suma importancia para su éxito.

El objetivo general de esta tesis fue generar conocimiento en la planificación colaborativa de los SPFA y poner en práctica los pasos iniciales del desarrollo de un SPFA orientado a la prevención de la enfermedad cardiovascular. Estos pasos iniciales se exploraron a través del uso de análisis de actores, que ayudó a identificar y analizar a los actores involucrados, y a través del desarrollo de una visión conjunta entre los actores, que ayudó a establecer una base común y centrar los esfuerzos de planificación. Para ello, se llevaron a cabo cuatro estudios de investigación que se presentan como capítulos con los objetivos, métodos y resultados descritos a continuación:

Estudio 1: *Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review.* En este estudio se sintetiza información que permite entender el uso de los análisis de actores en los procesos de planificación de innovaciones en salud. El objetivo específico del estudio fue investigar cómo se usan y reportan los análisis de actores en los procesos de planificación de innovaciones en salud y proponer directrices para reportar dichos análisis. Se realizó una *scoping review* sistemática siguiendo el marco de referencia propuesto por Arskey y O'Malley, y las recomendaciones del Joanna Briggs Institute. La búsqueda de literatura se llevó a cabo en PubMed, Scopus y DOAJ, la literatura gris se buscó utilizando Google y también se revisaron las referencias de los artículos incluidos para identificar otros estudios de relevancia. Se incorporaron 51 registros en la síntesis cualitativa. Los análisis de actores se llevaron a cabo en todo el mundo y se utilizaron en todos los tipos de innovaciones en salud, incluyendo servicios sanitarios, y se aplicaron en todas las fases del proceso de planificación. Cuarenta y un estudios reportaron la identificación de actores, 50 los

diferenciaron/categorizaron y sólo 25 analizaron las relaciones entre actores. Se encontró una gran heterogeneidad en los pasos utilizados para llevar a cabo los distintos análisis de actores, en los métodos utilizados, en los atributos de los actores analizados y en cómo se describían estos análisis. Se propuso una herramienta que contiene los ítems para fomentar una descripción sistemática y transparente de futuros análisis de actores. La herramienta se llama RISA, por sus siglas en inglés (Reporting Items for Stakeholder Analysis).

Estudio 2: *Stakeholder Analysis for the Development of a Community Pharmacy Service Aimed at Preventing Cardiovascular Disease.* En este estudio cualitativo se llevó a la práctica el primer paso de un proceso de planificación colaborativo. El objetivo del estudio fue identificar los actores clave que podían formar parte de un grupo de planificación para el desarrollo de un SPFA orientado a la prevención de la enfermedad cardiovascular en New South Wales, Australia. El objetivo secundario de este estudio era explorar las carencias y necesidades en el cuidado cardiovascular y el papel que podrían jugar los farmacéuticos comunitarios. Se organizó un taller que incluía dos actividades estructuradas, y los participantes fueron ocho informantes clave relacionados con el sistema de salud australiano. La primera actividad exploró las necesidades y carencias en el cuidado cardiovascular y el papel de los farmacéuticos comunitarios. La segunda fue un análisis de actores en el que se combinaron enfoques ex-ante y ad-hoc. Los actores identificados se clasificaron en tres grupos en función de la influencia que podían ejercer en el desarrollo del SPFA. Los datos se analizaron mediante un análisis de contenido cualitativo. Se identificaron 46 actores pertenecientes a distintas partes del sistema sanitario, principalmente: (1) pacientes/consumidores y las organizaciones que los representan; (2) profesionales sanitarios y las organizaciones que los representan; y (3) instituciones y organizaciones que no interaccionan directamente con los pacientes pero que influyen indirectamente en la salud de los mismos (responsables políticos, gestores del sistema sanitario, etc.). Doce de los 46 actores identificados fueron considerados *actores clave* debido a su potencial para potenciar u obstaculizar el desarrollo del servicio. Los resultados secundarios obtenidos en el taller consistieron en una lista de necesidades y carencias en el cuidado cardiovascular ($n = 6$), una lista de papeles que los farmacéuticos comunitarios podrían jugar en la prevención cardiovascular ($n = 12$), y una lista de factores ($n = 7$) que potencialmente pueden obstaculizar la integración del SPFA en la práctica.

Estudio 3: *Collaborative Health Service Planning: A Stakeholder Analysis with Social Network Analysis to Develop a Community Pharmacy Service.* En este estudio de métodos mixtos también se llevó a la práctica el primer paso del proceso de planificación

colaborativo. Se utilizó una aproximación metodológica diferente para llevar a cabo el análisis de actores para el desarrollo de un SPFA orientado a la prevención cardiovascular. El objetivo fue identificar a los actores, diferenciarlos y analizar las relaciones entre ellos para organizar una iniciativa participativa para el desarrollo de un servicio en Andalucía, España. La identificación de actores se llevó a cabo utilizando una técnica de bola de nieve e involucrando al equipo de investigación, nueve informantes clave con perfiles variados y 96 actores. La información para diferenciar/categorizar a los actores y para el análisis de relaciones entre ellos (relaciones de colaboración) se obtuvo utilizando un cuestionario en línea desarrollado durante el proceso de identificación de actores. La información sobre los actores consistía en lo siguiente: su influencia auto percibida; su nivel de interés y actitud hacia la iniciativa; el interés cualitativo que tenía en la iniciativa; su capacidad para contribuir a la iniciativa; a qué nivel le gustaría involucrarse; y sus preocupaciones acerca de la iniciativa. También, se preguntó a los actores a quiénes consideraban actores clave, del listado de actores identificados, y qué nivel de colaboración, si existía, habían tenido con los demás actores del listado en el año y medio anterior. Noventa y seis actores participaron en el estudio. El análisis de datos combinó un análisis cualitativo de contenido descriptivo, un análisis cuantitativo descriptivo y un análisis de redes sociales. Se identificaron 217 actores, pertenecientes a 10 grupos diferenciados. El análisis reveló una red de colaboración entre los 96 actores que participaron en el estudio. Cincuenta y siete de los actores identificados fueron considerados actores críticos tras el análisis de datos: 25 declararon tener una alta influencia e interés en la iniciativa colaborativa; 20 estaban situados en el primer decil de actores más votados como actores clave; 25 estaban en el primer cuartil de actores más conectados a los demás; y 24 estaban en el primer cuartil de actores situados de manera más estratégica en la red. En varios actores se daban más de una de esas características, y tres de ellos reunían todas ellas (dos organizaciones de profesionales sanitarios y una organización científica). La mayoría de los actores apoyaba la iniciativa. Combinando sus capacidades y deseo de contribuir a la iniciativa, se considera que la planificación del mencionado SPFA podría ponerse en marcha.

Estudio 4: *A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services.* En este estudio cualitativo se llevó a la práctica el segundo paso en el proceso de planificación colaborativo para el SPFA que se había iniciado en New South Wales en el Estudio 2. El objetivo fue desarrollar una visión conjunta de los actores sobre un modelo de cuidado cardiovascular que integrase a los farmacéuticos comunitarios e identificar las iniciativas que los actores

consideraban necesarias para alcanzar dicha visión. Se llevó a cabo un ejercicio participativo para desarrollar la visión en el que se involucraron 13 actores con perfiles variados identificados en el análisis de actores previo. Para efectuar dicho ejercicio, se organizó un taller estructurado en tres partes (introducción; desarrollo de la visión; definición de las iniciativas para conseguirla). El Chronic Care Model sirvió como marco de referencia para guiar el desarrollo de la visión. Para el análisis de datos se llevó a cabo un análisis de datos cualitativo de contenido. Los actores replantearon el objetivo del estudio para desarrollar una visión centrada en las enfermedades crónicas y no sólo en la enfermedad cardiovascular. Además, creyeron conveniente no desarrollar nuevos servicios sino adaptar los ya existentes para cubrir las necesidades emergentes. Se identificaron siete principios generales para el cuidado: cuidado centrado en el paciente; abordaje desde equipos multidisciplinares; práctica basada en la evidencia; facilidad de acceso de los pacientes a los establecimientos y servicios sanitarios; y buena comunicación y coordinación. La visión también incluyó seis factores ambientales que pueden influir en la implantación de estos principios: los sistemas de pago; los fondos sanitarios; los incentivos económicos; los sistemas electrónicos; los sistemas de evaluación; y los cambios organizativos del sistema de salud. Se identificaron 24 iniciativas específicas para alcanzar la visión, de las cuales dos fueron consideradas prioritarias por los actores: (1) mejorar el trabajo en equipo, incluido el diseño conjunto de protocolos y la comunicación efectiva entre los miembros del equipo sanitario, y (2) llevar a cabo un análisis de necesidades para priorizar y centrar los esfuerzos de planificación sanitaria. Los principios y factores identificados en la visión se combinaron finalmente para producir un modelo de cuidado crónico (el modelo New South Wales de cuidado crónico).

En conclusión, esta tesis ha contribuido a generar conocimiento sobre los procesos de planificación colaborativos de SPFA, demostrando la utilidad de los análisis de actores y del desarrollo de una visión conjunta como modo de poner en marcha tales procesos. Además, ha probado que los análisis de actores también son de utilidad en las otras fases del proceso de planificación. La investigación ha mostrado la cantidad y variedad de actores que se deben tener en cuenta y la importancia de su participación desde las etapas iniciales del proceso. Como producto de esta tesis, se generaron informes detallados de los dos primeros pasos del proceso de planificación colaborativa de SPFA y dos herramientas que pueden utilizar otros investigadores y planificadores en su trabajo. Una de estas herramientas es la guía RISA para sistematizar las descripciones de análisis de actores y la otra el modelo New South Wales de cuidado crónico, cuya estructura puede facilitar el análisis del contexto en futuros procesos de planificación.

Con este trabajo, se ha explicado la utilidad y parte de la complejidad que conlleva la participación de actores en la planificación colaborativa de SPFA. Sería beneficioso que en un futuro se aumentase el conocimiento en este área explorando la involucración de actores a lo largo de las demás fases del proceso de planificación. Tendría especial interés investigar los métodos para lidiar con las relaciones de poder y los conflictos entre actores para asegurar el éxito de las colaboraciones.

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Chapter 1

Introduction & Objectives

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Introduction

Community pharmacy may be described as "a collective form of practice centred on an organisation embedded within a community".[1] Within community pharmacy, the profession has evolved over time by gradually increasing the degree of patient-centred services provided to the population. As a result, this evolution has implied a change of paradigm.[2-4] Overall, the initial paradigm was "product-centred" and community pharmacists were mainly perceived as "retailers". Under this paradigm, compounding and dispensing of medicines were the main activities carried out by pharmacists.[2-4] These activities were always accompanied by some degree of counselling and patient education.[5] In recent decades, the paradigm has changed to "patient-centred" and the role of community pharmacists is evolving to "healthcare providers".[2-4, 6] Under this new paradigm, the activities related to compounding received less attention, the focus on dispensing (with counselling and education) was maintained and more attention has been placed on the provision of professional services.[2-6]

Although there is an evolution, the role of pharmacists in community pharmacy is currently still twofold: they act both as "retailers" and primary healthcare providers.[1, 6] Mostly, the role of primary healthcare provider has not been remunerated, pushing community pharmacists to depend upon and focusing on dispensing and retailing activities.[5, 6] Nevertheless, contextual changes, such as the global increase in chronic diseases, have encouraged more effective uses of available resources. The underutilisation of community pharmacists as primary healthcare providers has been highlighted.[6-10] Over time, the revenue and profits from dispensing and retailing activities in pharmacies have decreased due to economic crises and government policies. This change in economic circumstances has also encouraged community pharmacists to rethink and emphasise their healthcare provider role.[5] Additionally, the pharmacists' motivation to grow professionally and develop their full potential in meeting their patients' needs has grown. Consequently, the development, implementation and evaluation of community pharmacy services (CPSs) are fostered around the world.[4, 5]

CPSs generally refer to those interventions performed by a community pharmacist engaged in enhancing patients' health or quality of life. These interventions include those specifically directed to patients using medications and those related to the improvement of public health.[2] Many examples of community pharmacists'

involvement in the provision of CPSs can be found in the literature.[10-18] Such involvement includes providing information to patients on health problems or the correct use/administration of medications; assessing patients' health parameters (e.g. blood pressure, glucose, haemoglobin A1c, high and low-density lipoprotein cholesterol, etc.); assessing the adequacy/safety of treatments or treatment plans (e.g. medication reviews with or without follow-up, medication reconciliation after hospital discharge); providing advice on lifestyle; assessing cardiovascular risk; assessing adherence to treatments; or interacting with other healthcare professionals to provide them with treatment recommendations or information on patients' health status.[10-18] As for any health service, CPSs must be planned by following a systematic and comprehensive process that eventually leads to a service that is valuable for the population and the health system, and, importantly, is effective and can be successfully integrated into practice.

To facilitate the understanding of what is meant by "planned by following a systematic and comprehensive process", the following section introduces a health program planning process.

A health program planning process

The development, implementation and evaluation of new health services entail multiple activities that must be carefully planned and organised.[19] Different health program planning frameworks suggest using several phases to provide structure to these activities and achieve integration of new health services in real-world practice.[20-22] It is necessary to clarify that, although sometimes used indistinctively, there is a difference between *health service* and *health program*. *Health service* includes interventions carried out by a healthcare provider, oriented to prevent, treat or cure disease or, in general, improve patients' health and/or quality of life. *Health program* includes the health service itself *but also* the strategies or interventions that must be carried out to "support the implementation, sustainability, or overall effect of the service".[23] Therefore, the focus of health program planning frameworks is not limited to "develop", "implement" and "evaluate" health services, but also encompass the development, implementation and evaluation of the implementation plan.

Despite being distinct from one another, planning frameworks share an underlying common process, that McKenzie et al. composed as the "Generalized Model"[19] (See phases in the process in Figure 1).

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Figure 1. Phases in a planning process, based on the Generalized Model[19]

It should be noted that the usual representation of planning frameworks or models in a linear or circular manner attempts to simplify the planning process and facilitate the understanding of what is meant to be done in each of the phases. Real processes, however, may require an iterative refinement of the heath program according to the results of evaluations, thereby producing loops within the process.[21, 24]

The phases that a planning process based on the Generalised Model may include are briefly explained below to echo the complexity that such a process may entail:

The preparation of the process is where the organisation of the whole planning process occurs. This preparatory phase is considered by McKenzie et al. as a "quasi-phase" (i.e., pre-planning) on the basis that these activities are carried out "before planning technically begins". It might be composed of the following steps[19]:

a) The identification and initial engagement of stakeholders[a];
b) The development of a stakeholder-shared vision;
c) Providing an organisational structure for the planning process by defining stakeholders' roles and committees; and
d) Assessing and ensuring access to the resources needed.

Paying attention to early planning steps prior to the actual service development is underscored as critical for success in health program planning frameworks. [19, 20, 22, 23] Similarly, the involvement of stakeholders from these early steps and throughout all planning process phases is considered crucial in the health planning literature.[19, 20, 23, 25-27]

Assessing the needs. In this phase, the health needs of the population are determined and prioritised. A health problem based on these needs is defined and an analysis of both the health problem and the environment is performed. The priority population is chosen and the capacity of the system to respond to this need is assessed.[19, 23]

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[a] The term stakeholders refers to the individuals, groups and/or organisations that, according to Varvasovskzky and Brugha, "have an interest in the issue under consideration, who are affected by the issue, or who – because of their position – have or could have an active or passive influence on the decision-making and implementation processes". Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plan.* 2000;15:338-345.

Setting goals and objectives. Goals propose what will be achieved by the program in a broad sense (i.e., defining "what" and "who" will change). Objectives propose specific changes that lead to achievement of the goals set, which can be monitored (i.e., defining "what", "who", "when" and "how much" will change). Objectives may be set at different levels, such as process objectives, impact objectives (i.e., learning objectives, behavioural objectives, environmental objectives) and outcome objectives.[19]

Development of interventions and implementation strategies. This phase involves defining the activities required to achieve the goals and objectives (i.e., "how" the changes specified in the objectives will be accomplished). The interventions proposed must be systematically developed, evidence-based and theory-driven.[19, 21]

Implementing interventions. These are considered as "putting interventions into action".[19] Interventions are implemented in up to three different scenarios / conditions in which they are evaluated according to different criteria. Sequentially, the three scenarios in which interventions are implemented and evaluated are:

a) First, implementing the intervention in a research environment on a small scale for piloting / assess feasibility. The purpose is to evaluate and refine processes and the components of the intervention (i.e., optimising the intervention);

b) Second, implementing the optimised intervention in a research environment on a bigger scale for assessing effectiveness (impact and outcome evaluation); and

c) Third, wide-scale implementation of the intervention in the real-world environment or service roll-out. This is the phase specifically aiming to finally integrate the service with practice. Its normalisation in the system is evaluated, as well as how it works in real-world conditions.

Evaluating results. A number of assessments should be carried out at several points of the planning process to allow improvement of the quality of the service and the strategies needed to achieve its final integration. It is crucial to be able to link the specific components of the program to the specific results obtained.[19] Also, because final integration matters, it is important to consider a system approach to the selection of *what* to assess and so generate information that is valuable to a variety of stakeholders (e.g. healthcare professionals, decision-makers, patients).[28, 29] Different types of evaluations are available and are usually combined. The predominance of

one or another of these evaluations may vary depending on the needs of each phase of the planning process. Independently of the phase in which they are conducted, evaluations should be designed during the early phases of the planning process.[19] Some useful evaluations described by McKenzie et al.[19] are presented below:

a) *Formative evaluation* aims to assess the components of the program (e.g., the methods, instruments used, etc.) and improve their quality, preceding or during implementation.[19, 22] It may be performed to evaluate individual components of a program (i.e., pretesting) and to evaluate both the components and the implementation strategies at a small scale (i.e., piloting).[19]

b) *Process evaluation* is performed during implementation. It aims to improve the implementation of a program and focuses on indicators of how successful implementation was. The information provided by this type of evaluation is useful for making future implementation efforts smoother.[19]

c) *Impact evaluation* aims to assess the effectiveness of an implemented program throughout its intermediate outcomes. It focuses on short-term effects (e.g. changes in clinical indicators, patient or health professional behaviour or awareness, or the environment).[19, 22]

d) *Outcome evaluation* is long-term-oriented and measures effectiveness according to the ultimate goals (e.g., reduced medical events, the cost-effectiveness ratio, increased quality of life).[19, 22, 29] The ECHO model is an example of a theoretical framework that assists in selecting which outcomes to include in this type of evaluation.[29] The ECHO model promotes the search for a balance between the clinical, economic and humanistic outcomes of evaluations.

e) The combination of impact and outcome evaluation is also referred to in the literature as *summative evaluation*.[19]

The way each of the phases of the planning process is carried out will ultimately influence the chances of the service being effective (i.e., capacity of the service to improve patients' health or quality of life) and finally implemented.

Planning process in community pharmacy services

When it comes to CPSs, planning efforts have been usually carried out by a single group of stakeholders (i.e., pharmacy practice researchers and/or professional or scientific pharmacy organisations) and they often have not followed a systematic

approach.[27] Planning efforts for CPSs usually consist of a series of subsequent steps generally summarised as: (1) identifying a need (based on the literature, health-related statistics, and/or hot health topics); (2) developing the service (commonly on a practical basis, using existing literature, planners' experience/intuition or what "seemed like a good idea at the time")[27, 30]; (3) testing the service in a research environment, to adjust some major issues in the delivery of the intervention and test the research methods for the next phase; (4) evaluating its clinical, economic and humanistic outcomes under controlled experimental conditions (e.g., randomised controlled trials); and, when these results are satisfactory, sometimes (5) designing implementation strategies and rolling-out the service (i.e., wide-scale implementation). Despite these planning efforts, real integration of CPSs into primary care remains a challenge.[6, 23, 31-34] Many services, even those with proven effectiveness, are never finally implemented.[35-38]

Some of the reasons that may explain failure to finally integrate CPSs into practice come to light by comparing the planning process used for CPSs with the one for health programs that was explained above:

- *Insufficient attention is paid to early phases in the planning process (i.e., preparation of the process, needs assessment).* Early steps contribute toward laying the right foundations for the entire planning process and are frequently overlooked in CPS planning. Greater attention to these phases of the planning process may, therefore, present a strategic opportunity to foster the integration of CPSs into real-world practice.[23]

- *Collaborative approaches are lacking or there is a late involvement of stakeholders in the planning process.* When planning CPSs and specific stakeholders (mainly physicians) are involved, it is usually done to agree on protocols for action. Stakeholders may also be involved later, when the service has been tested and is meant to be rolled out. Although some examples of stakeholder involvement related to CPSs exist in the literature,[39-43] collaborative approaches since the early phases of the planning process are still scarce. Community pharmacists, pharmacies and CPSs are not isolated; they are part of a complex system in which they are embedded. What happens in the system influences CPSs and, at the same time, CPSs may influence the system. Stakeholders across the system are crucial to understand the number of influences that CPSs may produce or are exposed to.[44] Moreover,

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stakeholders may foster or inhibit CPSs' integration in the system. For this reason, it is important to understand the CPS stakeholders from the start and involve them in an appropriate manner throughout the planning process. Collaborative approaches make it possible to capitalise on stakeholders' inputs and perspectives, resulting in services addressing real needs and having increased acceptance.[45, 46] The collaborative approach planning should be directed towards understanding stakeholders and organising stakeholder engagement strategies throughout the CPS planning process.

- *The development phase is commonly performed without a systematic approach.* Despite the many well-intentioned efforts to develop effective services, relying almost exclusively on pragmatic approaches that are based on planners' experience or intuition leaves room for improvement in this phase. It is of most importance that the development of services is based on existing evidence and relevant theory.[21, 30] In the absence of an explicit theory that guides the development of the service, it is more difficult to establish causal relationships between what is done, and the results obtained.[30]

- *CPSs are not piloted, understanding this as refining the processes and the components of the intervention (i.e., service optimisation)*, as per explained before. Evaluations are designed without paying too much attention to the services' optimisation.[47] Being able to understand which components of the service are responsible for its results allows discernment of which ones should be maintained as-is and which should be modified to better fit the implementation setting.[24, 30, 48] This, together with the absence of an explicit theory mentioned in the previous point, leads to not know the specific components of existing CPSs that are responsible for the service's effects.

- *CPSs are developed first and the implementation strategies designed later, when the service is meant to be rolled out.* As happens with stakeholders, attention to the remaining parts of the context must be paid from the beginning of the planning process. An early understanding of what can affect the implementation of a service in a specific setting (both positively and negatively) enables the contextual adaptation of the service during the development phase, and the design of implementation strategies accordingly.[27, 42, 49] The development of the service (adapted in the best possible way to the context where it will be implemented) and the implementation plan must occur simultaneously.

- *There are few detailed descriptions of CPSs (their components, method of delivery and theory in which they are based), implementation strategies, and planning processes.* CPSs, as with other complex interventions, especially those related to behavioural change, are usually poorly reported in the literature.[17, 27, 30, 50] There is a stronger focus on reporting the value of interventions than on providing detailed descriptions that enable improvement of interventions and their planning processes.[50] The variability with which services/interventions are described makes it difficult the replication of studies. Additionally, the lack of information regarding intervention components, theories and methods of delivery prevents the formulation of guidelines that promote evidence-based practice.[17, 27, 30] The need for adequate reporting in healthcare has led to the development of different reporting guidelines[51-57] and the creation of the Equator Network (Enhancing the QUAlity and Transparency Of health Research).[58]

Current efforts to enhance the integration of CPSs include researchers who are focused on the application of *Implementation Science* —aimed at introducing innovations into practice— in pharmacy practice.[5] Various studies have proposed and promulgated a framework to guide the implementation of CPSs,[59, 60] used implementation frameworks to integrate existing CPSs[61, 62] and/or studied the issues that affect CPS implementation.[3, 13, 63-67] These studies reveal, amongst many other findings, that implementation strategies require changes at various levels (i.e., individual, interpersonal, organisational, community and healthcare system) and, therefore, require different stakeholders to be considered.[47, 64] It is logical to suggest that these stakeholders may make important contributions if they are involved from the early phases of the planning process.

Other current efforts to foster the integration of CPSs are directed at improving the development of services and CPSs planning processes. For example, a framework for health program planning —*Intervention Mapping*[20]—has been theoretically adapted for pharmacy-based services and health programs,[23] providing guidelines for enhancing CPS planning processes. The methodological advances for the systematic development of pharmacy practice interventions have been also identified.[27] In addition, studies have been carried out to undertake early assessments of the context for the future implementation of a service[49] or to understand how previous research has addressed the establishment of the foundations of, or rationales for, interventions (early phases of planning).[68] The research presented in this dissertation is aligned

with this group of efforts and tries to shed some light on three of the aspects mentioned above as related to CPSs integration failure: the early phases of the planning process, collaborative approaches, and detailed reporting of the planning process.

Early phases of the planning process and collaborative approach planning

Within the early phases of the planning process, the preparatory phase lays the foundations for the entire process. Efforts at this stage are directed at coordinating and organising the process.[19] The preparatory phase, as explained earlier, might be composed of the following steps[19]: (1) identification and initial engagement of stakeholders; (2) development of a stakeholder-shared vision; (3) defining the organisational structure for the planning process (stakeholders' roles and committees); and (4) ensuring access to the required resources. This thesis will be mainly focused on the first two steps of the preparatory phase, providing practical applications within the context of CPS planning. It will revolve around the collaborative approach planning process, addressing specific aspects related to the establishment of a stakeholder participatory approach.

Importance and challenges of stakeholder participation

Stakeholder participation in health research has the potential to foster both the translation of research results into practice and collaborative learning by integrating the theoretical and technical expertise of researchers with the real-world expertise of other stakeholders.[45, 69-71] Stakeholder participation also allows the organisation of transparent processes, creates opportunities to build new relationships, and stimulates feelings of ownership towards the resulting program.[45, 46, 72-75] The incorporation of different perspectives in health planning enriches the process by gathering different ideas, skills and resources, increasing knowledge of the context in which the service will be implemented, and identifying and addressing real needs of patients and the health system.[70, 73, 76] Processes that involve appropriate stakeholders diminish the chances of bias and yield results that are socially and culturally valid and relevant.[45, 46, 74, 76] The participation of stakeholders in defining the scope of the research ensures that the project responds not only to real needs, but also to stakeholders' priorities and concerns.[45, 74, 77] Because stakeholder involvement

fosters a good understanding of the implementation context beforehand, it facilitates the adaptation of research to the implementation context.[45, 46]

Despite the potential benefits mentioned above, participatory approaches are not without risk and several aspects should be carefully considered:

- *The first aspect is the context in which the participatory approach is organised.*[78, 79] The social, political or health-related issues affecting the implementation context may influence how the process unfolds and its objectives.[77, 80, 81] For this reason, it is necessary to understand the context upfront.

- *The second aspect is the participatory process itself.*[78, 79] Participatory processes should be carefully designed and balanced to ensure that stakeholders are involved early and that those involved are representative, creating fair and transparent processes.[73, 79] Efforts should be made to build trusting relationships and mutual respect among stakeholders.[73, 79, 82, 83] Working with stakeholders is time-consuming and requires the development of facilitation skills to be able to foster frank and open discussions of issues, manage the conflicts that could potentially arise throughout the process, deal with power dynamics, and avoid stakeholder self-interests wrecking the process.[45, 46, 82, 84] Participatory processes may be considered expensive, so securing the required resources should be done in advance.[43, 45, 78, 85]

- *The third aspect is the outcomes of the process.*[78] It is necessary to plan for accountability to achieve the objectives, ensuring that empowerment efforts, if any, are focused on the right stakeholders, build stakeholder capacity and foster stakeholder ownership.[78, 79] Attention should be paid to providing stakeholders with feedback on results and ensure that promises made to stakeholders can be kept in order to avoid stakeholder frustration.[46, 78, 82]

- Finally, *long-term planning should be carried out for the future sustainability of the participatory process, its outcomes and partnerships.*[45, 78, 79, 82, 83] In addition to considering the resources required and timelines, it is necessary to consider other long-term aspects that may contribute toward the success of the participatory approach. Performing evaluations of the stakeholder engagement and the outcomes of the participatory effort may help detect difficulties early enough to redirect efforts. Another important feature is to keep adequate documentation systems (e.g., documenting the responsibilities of

each partner or the activities performed) and reports (e.g., creating reports directed to the stakeholders involved or to reach the broader community).[79, 82]

The stakeholders and the contexts in which participatory processes are carried out are constantly evolving[75]; therefore, participatory processes entail iterative design.[86] There is a need to revisit and update purposes and outcomes as the process unfolds.[84, 85] Knowing who to involve at each stage of the planning process and ensuring an adequate degree of involvement for each stakeholder is crucial in effectively planning a participatory process.[78, 84, 85]

Understanding stakeholders and who to involve: Stakeholder analysis

The first step in determining which stakeholders to involve in a participatory process is to define what a "stakeholder" is in the specific situation.[82] This is an important aspect, as there are many stakeholder definitions[44, 87-89] and, depending on how broad or specific the definition is, there will be more or fewer stakeholders to consider.[88] To set up a participatory process for the development of a CPS, it seems reasonable to initially define stakeholders broadly, since being too narrow before the focus of the service is specified could lead to bias, or cause stakeholders that could be important to the process to be ignored.[78, 84] The stakeholder definition put forward by Varvasovskzky and Brugha[90] seems appropriate: "actors who have an interest in the issue under consideration, who are affected by the issue, or who – because of their position – have or could have an active or passive influence on the decision-making and implementation processes". This definition allows initial consideration of stakeholders with varied skills, perceptions and resources who can contribute to improve or solve public health issues.

When it comes to the selection of stakeholders for a CPS, end-beneficiaries (i.e., patients, carers) or those delivering the program (i.e., community pharmacists) are probably the first groups that come to mind. However, it is also important to consider other healthcare professionals and stakeholders who can indirectly influence patients' health because of their decision-making positions (e.g., government, professional organisations, policymakers, academics, etc.).[23] Having a combination of stakeholders from high-level positions and at ground level is important for accessing a variety of knowledge and, to gather adequate support and resources for the process.[23, 45, 70, 80, 91] It is necessary to select the best possible combination of stakeholders in order to find a balance between heterogeneity/representativeness and the complexity to manage the process.[71, 92]

No hard-and-fast criteria exist that define what a stakeholder must fulfil in order to be involved in health program planning; therefore, stakeholder attributes and the criteria used for stakeholder selection in a specific program should be transparent.[78] A stakeholder analysis can assist with achieving this by systematically identifying and assessing the stakeholders related to a specific health program. "Stakeholder analysis is an approach, tool or set of tools for generating knowledge about actors – individuals or organisations – so as to understand their behaviour, intentions, interrelations and interests; and for assessing the influence and resources they bring to bear on decision-making or implementation processes".[90] The information generated by a stakeholder analysis is crucial for laying the right foundations for a participatory planning process[45, 73, 84, 85] and it is essential to adequately understand and respond to the context in which the health program will be developed, implemented and evaluated.[80, 84, 85]

Undertaking a stakeholder analysis implies (1) defining the context in which the analysis will take place and the boundaries for the analysis; (2) applying stakeholder methods to identify stakeholders, differentiate/categorise them and/or investigate stakeholder relationships; and (3) propose upcoming actions and stakeholder engagement activities.[93] The value of stakeholder analyses is supported by their use in different fields, e.g., healthcare management[72]; health policy[70, 72, 92, 94]; infrastructure projects in airports[95] or in the water sector[96]; biosecurity risk[97, 98]; or natural resource management research.[93]

A number of different techniques are described in the literature for conducting stakeholder analysis.[44, 84, 99] Several authors have performed reviews in pursuit of increased understanding of this process.[44, 72, 89, 97] Methods used in stakeholder analysis involve collecting data from different sources (e.g., internet sites and academic literature), from individuals (e.g., using face-to face interviews and structured questionnaires) or from groups of stakeholders (e.g., through workshops, focus groups or informal group discussions).[90, 93] The choice of method depends on the purpose of the analysis and the resources available (in terms of budget, time, and human resources).[72]

Once stakeholders have been analysed, health program planners need to decide who to involve and how. Stakeholders do not have to be involved similarly and concurrently throughout the planning process,[84, 100] since its different phases require different abilities and affect different stakeholders. On the other hand, stakeholders

have diverse interests, capacities and desires for involvement and, therefore, it is important to consider this variability when planning engagement strategies.[84, 101] CPS planners should make efforts to organise an adequate level of stakeholder involvement, at least for those that are key to the process.[85] Different levels of stakeholder involvement have been described, ranging from simply providing them with information, to having them make decisions.[78, 82, 102, 103] Since the design and implementation of stakeholder engagement strategies is a broad and complex area, the focus of this thesis was on the stakeholder engagement needed to conduct the first two steps of the preparatory phase. More information on levels of stakeholder involvement can be found in the articles by Arnstein,[102] Goodman and Sanders Thomson,[82] Bryson[84] – applied to evaluations – or at the International Association for Public Participation.[103] In-depth investigation of stakeholder engagement over the whole planning process deserves close attention but is beyond the scope of this thesis.

Development of a stakeholder-shared vision

Aligning stakeholders in terms of vision contributes to the success of the planning process.[19, 101] A vision may be described as "a carefully formulated statement of intentions that defines a destination or future state of affairs that an individual or group finds particularly desirable".[104] They are used to depict the long-term outcomes of the planning process.[105] Developing a vision provides a focus toward which all efforts should be directed, lays the foundations for planning and makes decision-making processes more transparent.[105-108] The development of a vision is essential for strategic planning,[104, 108] as it provides a powerful boost that drives the process towards its goals.[104]

In planning processes, visions can be developed individually (i.e., by planners) or collectively (i.e., with stakeholders). The participatory approach, apart from considering a range of perspectives, has a number of benefits that make it powerful. Listening to other stakeholders challenges individual ideas and biases and broadens the way the context is perceived by those involved.[93, 109] Stakeholders develop ownership of a shared vision, which builds enthusiasm and helps them embrace the challenge of accomplishing and disseminating the vision.[104-106, 108]

To develop a vision, a date in the future must be set that is far enough away to allow imagination without building on present issues; but also, be sufficiently close to make it seem real.[108] The steps followed vary among authors[110]; it is a flexible process that

should be tailored to the specific circumstances, objectives and resources available.[108] Drawing a vision fosters stakeholders' creativity and enhances deep exploration of their minds to access ideas lying in their subconscious.[106, 111] Workshops and discussions are commonly used to develop visions.[110, 112] Once developed, it is crucial to identify ways in which the vision can be achieved.[108]

Research settings

The research that constitutes this dissertation was carried out in two settings: Australia and Spain. An overview of the CPS situation in each country is provided below.

In Australia, the health system is jointly run by the Australian Government and the State and Territory Governments, who share responsibilities.[113] Managed by the Department of Health (i.e., Australian Government), Medicare is the universal health insurance scheme that "guarantees all Australians (and some overseas visitors) access to a wide range of health and hospital services at low or no cost".[114] Access to healthcare is funded by Medicare (to Medicare card holders) through the Medical Benefits Scheme – that subsidises the health services and treatments provided in public hospitals –, and the Pharmaceutical Benefits Scheme (PBS) – that subsidises medicines, related services and Community Pharmacy Programs –.[114, 115]

The pharmacy profession is highly regulated in Australia. There is an ownership regulation for community pharmacies at the State and Territory levels: the general rule is that only pharmacists can own a pharmacy. However, sometimes pharmacy owners join banner groups to receive management support, bringing their pharmacy physical appearance into line with that group. The number of pharmacies a pharmacist can own or co-own varies depending on the state or territory.[116] Pharmacy Location Rules apply to pharmacies supplying PBS medicines and, before a new pharmacy is established or an existing pharmacy is relocated, prior approval must be obtained.[117]

There are 5,723 community pharmacies supplying PBS medicines in Australia.[118] With a population of 25,257,322[119] Australia has 4,413 residents per pharmacy. In capital cities, 95% of residents have access to a community pharmacy within a 2.5 km range, while 72% do in regional areas.[120] There are 31,212 registered pharmacists,[121] two-thirds of whom work in community pharmacy.[120]

The government's remuneration to community pharmacies for dispensing PBS medicines has been established, since 1990, through 5-year term agreements formed between the Commonwealth and the Pharmacy Guild of Australia (i.e., the National pharmacy owners' organisation).[122] With these Community Pharmacy Agreements (CPAs), both institutions pursue three common interests: (1) "promoting the sustainability, efficiency and cost-effectiveness of the PBS within the broader context of health reform"; (2) "ensuring that community resources are appropriately directed across the health system"; and (3) "supporting the sustainability and viability of an effective community pharmacy sector".[115] The scope of the CPAs evolved over time. Pharmacists' remuneration moved from being only prescription-based and linked to medicine prices in the 1st CPA, to gradually being service-based, this increasing in line with services provided to patients up to the current (6th) CPA. (Figure 2) Remuneration for research that demonstrates pharmacists' contribution to patient healthcare, and to develop community pharmacy programs or services, was also included, commencing with the 2nd CPA and increasing over time.[115, 123-127]

Under the 6th CPA, community pharmacy remuneration was separated from medicine pricing; pharmacists are now paid for the services they provide. Currently, community pharmacy remuneration is mainly based on dispensing (i.e., a dispensing fee on acknowledgment of the specific skills needed for this activity; an administration, handling and infrastructure fee; and a dangerous drug fee), with revenue coming from Community Pharmacy Programs. The 6th CPA considers community pharmacy to be "an integral part of the Australian health care system through its role in the delivery of the PBS and related services" and acknowledges the need to involve stakeholders in Community Pharmacy Program planning.[115]

In Australia, CPSs were established through a combination of drivers from various actors and contextual factors, such as decreases in revenue from dispensing.[5] Among these actors, the government played an important role by acknowledging the role of community pharmacists as part of the healthcare team and providing remuneration for CPS and research. Community pharmacists contributed to this evolution through their willingness to grow professionally and to gain a competitive edge. Academia provided support by conducting research and training students in pharmacy practice.[5] Finally, professional pharmacy organisations (i.e., The Pharmacy Guild,[128] the Pharmaceutical Society of Australia[129]), trained professionals and developed educational materials.[5] The Pharmacy Guild played the additional role of being the liaison and negotiating with the government.

1st CPA (1990)	2nd CPA (1995)	3rd CPA (2000)	4th CPA (2005)	5th CPA (2010)	6th CPA (2015)
• Prescription-based remuneration (dispensing fee – acknowledgment of specialised skills in dispensing medicines + retail mark-up on the price of goods + dangerous drug fee+ essential pharmacy allowance, to maintain the access to medicines)	• Prescription-based remuneration (dispensing fee + administration fee + retail mark-up + isolated pharmacy allowance, for pharmacies in isolated and rural areas) • Funding is allocated for the first time to professional pharmacy services and programs: Residential Medication Management Reviews • Funding allocated to projects to demonstrate "cost-effective roles of Pharmacy in primary care"	• Prescription-based remuneration (dispensing fee + retail mark-up + drug of addiction fee + rural pharmacy allowances + allowance for support to aboriginal health services) • Professional pharmacy services and programs: Medication management services (in residential facilities and patients' home) • Rural pharmacy workforce development program • Funding allocated to create the Pharmacy Development Program to "promote the enhanced involvement of community pharmacy in the pursuit of quality and cost-effective service delivery	• Prescription-based remuneration (dispensing fee + retail mark-up + special handling fee, for dangerous or extemporaneously prepared drugs + payment per PBS prescription processed online + temporary concessional entitlement validation payment per PBS concessional prescription processed + dispensing incentive fee for substituting bioequivalents when applicable –premium free dispensing incentive) • Professional pharmacy services and programs: Medication Management Reviews (in residential facilities and patients' home); better community health programs (to fund new pharmacy projects in primary care and community health); rural pharmacy programs; Aboriginal and Torres Strait Islander Programs; and E-Health initiatives	• Prescription-based remuneration (dispensing fee + retail mark-up + special handling fee + premium free dispensing incentive + electronic prescription fee) • Professional pharmacy services and programs: Medication Management Programs; Rural Support Programs; Aboriginal and Torres Strait Islander Programs; Pharmacy Practice Incentive and Accreditation; Research and Development; Medication Continuance • Additional funds provided to programs supporting patient services	• Prescription-based remuneration (dispensing fee + Administration, Handling and Infrastructure fee - replaces retail mark-up- + premium free dispensing incentive + dangerous drug fee) • Community Pharmacy Services and Programs: Medication Adherence Programs (i.e., Dose Administration Aids, Staged Supply); Medication Management Programs (i.e., Clinical Interventions, Home Medicines Review, Residential Medication Management Reviews, MedsCheck); Aboriginal and Torres Straight Islander Programs; Rural Support Programs; and E-Health • Additional funds provided to support a Pharmacy Trial Program, and to foster new Community Pharmacy Programs

Figure 2. Evolution of major remuneration components for community pharmacy under a series of CPA agreements[115, 123-127]

In Spain, the health system is jointly run by the Central Government and the Governments of the Autonomous Communities (i.e., Regional Governments); it is fundamentally a decentralised system. The National Health System integrates all public structures and health services, including those pertaining to the Central Government and those pertaining to the Autonomous Communities.[130] The National Health System is publicly funded, provides universal coverage, and healthcare services are free for users "at the time of use".[131] Overall, the Central Government coordinates healthcare between the Autonomous Communities to ensure all citizens have adequate access. It also establishes a basic common services portfolio (i.e., prevention, diagnosis, treatment and rehabilitation) and a supplementary common portfolio (which includes pharmaceutical benefits among others). The Autonomous Communities are responsible for health planning, public health and healthcare services management in their territories. They may supplement the basic common services portfolio by providing additional services to their communities. Access to public healthcare anywhere in Spain is provided through the Social Security system to all individuals holding a healthcare card issued by any Autonomous Community. This includes access to pharmaceutical benefits.[131]

The pharmacy profession is also highly regulated in Spain. Community pharmacies are defined as "private healthcare facilities of public interest" that can be solely owned and managed by pharmacists. An individual pharmacist can own or co-own only one pharmacy. Community pharmacies are subject to location rules, set according to geographic and demographic criteria, to ensure equal access to medicines among the population.[132, 133]

There are more than 21,000 community pharmacies in Spain.[132] With a population of 46,528,024 residents,[134] there are 2,168 residents per pharmacy. Regardless of whether they live in urban or rural settings, 99% of Spanish inhabitants have access to a community pharmacy within the area in which they live. For this reason, the pharmacist is the only healthcare professional in many towns.[132] Registered pharmacists total 71,119, of which more than 45,000 work in a community pharmacy.[132, 135]

Governmental remuneration to community pharmacies in Spain, for providing the pharmaceutical benefits included in the National Health System portfolio, is almost exclusively prescription-based; a reimbursement linked to the price of medicines or healthcare products. The prices of medicines and healthcare products in Spain are regulated to guarantee equal access to the entire population. The same price is set throughout all pharmacies in Spain for these products.[133] Pharmaceutical benefits are agreed upon between the Autonomous Communities and the Official Pharmacists Associations corresponding to each community.[132] Community pharmacies' viability is still nowadays mostly dependent on products (whether medicines, healthcare products or parapharmaceutical products) and only a few services are financed in certain Autonomous Communities. Interestingly, financed services are mainly related to the improvement of public health (e.g. HIV screening, methadone substitution therapy, colon and rectal cancer screening).[136] There has only been one medication review (with follow-up, aimed at patients with diabetes taking more than 8 medicines) that has been pilot-tested, with remuneration provided to the pharmacists in one Autonomous Community: País Vasco.[137]

Community pharmacists are pushing to be more involved in healthcare teams and to receive remuneration for the services they provide.[132, 138, 139] Despite the situation described above, substantial efforts are made in Spain to show the value of community pharmacy and integrate CPSs with primary care. This is exemplified by the various activities that are carried out in several Autonomous Communities.[140-142]

Several programs have quantified the value that CPSs provide to patients and the healthcare system, such as TOMCOR[143, 144] (for patients affected by coronary disease); ConSIGUE[62, 145-148] (demonstrating the clinical, humanistic and economic impacts of a medication review with follow-up CPS and its implementation); and AdherenciaMed[149-151] (which focuses on using a CPS to improve medication adherence).

A push from the academia was initiated by the University of Granada, with the creation in 1993 of the Pharmaceutical Care Research Group. This group has provided training in pharmacy practice to pharmacists since 1997, the year in which the master's degree in pharmaceutical care was created. They also fostered research by developing, among other projects, terminological consensus[152-154] and the Dader method of medication review with follow-up.[155] Programs specifically applied to community pharmacy, such as ConSIGUE and AdherenciaMed were carried out by this group in collaboration with the General Council of Official Pharmaceutical Associations of Spain, and other actors. The University of Granada also created the first Academic Centre of Pharmaceutical Care and the first Departmental Section on Pharmacy Practice in Spain.[2, 156] Nowadays, several universities provide post-graduate training related to pharmacy practice in Spain (e.g. Barcelona, Sevilla, Valencia). Undergraduate training in pharmacy practice is evolving but is still not compulsory in all universities.

The evolution of community pharmacy in Spain also received a boost from the scientific-professional side with the creation, in 1998, of the Pharmaceutical Care Spain Foundation, which works to promote scientific and professional activities related to pharmaceutical care.[2, 157] Another was the creation, in 2001, of the Spanish Society of Family and Community Pharmacy (SEFAC). SEFAC provides training to pharmacists and carries out research projects; they have been specifically working towards evolving community pharmacy to the patient-centred paradigm.[2, 158]

Central Government support was initially materialised by collaboration with experts in creating, in 2001, a *Consensus Document on Pharmaceutical Care*. This document provides consensus on existing terminology for dispensing, minor ailment management and medication review with follow-up, and acknowledges the value that pharmacists can provide to patient care.[159] The next push came with the introduction of the 2006 *Law on guarantees and rational use of medicines and healthcare products*,[160] according to which pharmacists should be actively involved in ensuring

the effectiveness and safety of medicines in collaboration with other healthcare professionals. Finally, in 2013, a framework agreement was signed with the General Council of Official Pharmaceutical Associations of Spain, in which a collaboration was established in three ways: "an agreement for health, a professional development policy and clinical management".[2]

In terms of professional representation, the General Council of Official Pharmaceutical Associations of Spain promoted the creation of the Pharmaceutical Care Forum (FORO) in 2004. FORO brought institutions related to pharmacy practice at the community, primary and hospital levels of care into a working group. The aim was to further develop the *Consensus Document on Pharmaceutical Care* published in 2001.[2, 161] In 2008, FORO published a consensus document[162] that included recommendations on five areas (i.e., justification, motivations, tools, training and diffusion) to advance the pharmaceutical care generalisation. To specifically apply in community pharmacy the set objectives and contribute to the implementation of CPSs, the Community Pharmacy Pharmaceutical Care Forum (FORO AF-FC) was created in 2010 and published the *Practical guide to pharmaceutical care services in community pharmacy* (i.e., dispensing, minor ailment management and medication review with follow-up). [163] This guide included a glossary, and a description of procedures and an information technology tool to support pharmacists' provision of services to patients. This new group includes the General Council of Official Pharmaceutical Associations of Spain, SEFAC, the Pharmaceutical Care Spain Foundation, the National Group of Deans of Pharmacy Faculties, and the Pharmaceutical Care Research Group of the University of Granada.[164] In 2017, FORO AF-FC published a proposal to unify the content of the undergraduate Pharmaceutical Care subject.[165] In addition to fostering the creation of Forums, the General Council of Official Pharmaceutical Associations of Spain published a *Good Practice in Community Pharmacy in Spain* guide in 2013,[166] which defines the roles that pharmacists may carry out in Spain and procedures for good practice. Additionally, the General Council of Official Pharmaceutical Associations of Spain collaborated with several organisations in carrying out research projects (e.g., ConSIGUE, AdherenciaMed, DValor) and provided continuous professional training to pharmacists.[2, 5, 161]

In Spain, the groundwork done so far by various organisations has set the tone for CPSs to become a part of everyday practice, though more work is needed to achieve adequate integration and remuneration.

Australia and Spain are differed with respect to CPS: "While Australia has remuneration, it lacks a coherent service portfolio and plan. Spain on the other hand, is still pushing for political acceptance and remuneration, but already has a sound theoretical foundation for services".[5] Both countries have experienced challenges in integrating CPSs into the healthcare system. Nowadays, there are examples of collaboration and stakeholder involvement for creating meaningful conceptual frameworks and implementing existing services.[167, 168] The next step is in fostering stakeholder collaboration in the early phases of CPS planning, a point addressed in the present thesis. By carrying out research in these two countries, the aim is to facilitate, as far as possible, the transfer of planning processes, results, methods and lessons learned to other international contexts.

This thesis addresses the development of CPSs by means of participatory research and, as mentioned previously, the early phases of a CPS planning process will be investigated. To set some boundaries within which to develop the research, cardiovascular disease (CVD) was chosen as an overarching CPS focus. CVD is an important public health problem of international interest and represents the leading cause of death globally. The World Health Organization estimated that, in 2016, 17.9 million people died from CVD, which comprises 31% of all deaths worldwide.[169, 170] In Australia, it was estimated that 22% of adults had one or more CVDs in 2014-2015.[171, 172] CVD caused 43,477 deaths in 2017 (27% of the Australian total) and was the principal cause for 576,000 hospitalisations in 2016-2017.[173] CVD is responsible for 15% of the total Australian disease burden.[173] On the other hand, in Spain, around 30% of the working population is at high risk of CVD.[174] CVD caused 101,209 deaths (23.84% of the total) in 2017, being the leading cause of mortality.[175] In addition, CVD was the main cause of 13.7% of hospitalisations in 2016, which had an average stay of 8.82 days.[176] The healthcare cost directly attributable to CVD was 5,900 million euros in 2014 (7.1% of the total healthcare budget).[174]

Thesis objectives

The general objective of this thesis was to produce innovative and in-depth knowledge of the participatory development of CPSs and to put into practice the initial planning steps of a CPS aimed at preventing CVD: (1) identification and initial engagement of stakeholders – for which two different methodologies were tested –, and (2) development of a stakeholder-shared vision.

To achieve this general objective, four research studies were carried out with specific objectives:

- A systematic scoping review was carried out to provide an overview of the use and reporting of stakeholder analyses in health innovation planning processes. Specifically, it aimed to:
  a. Understand what stakeholder analyses are used for;
  b. Identify what are the methods used to perform those analyses;
  c. Know what the stakeholder attributes are analysed;
  d. Develop and pilot a tool to guide future reporting of stakeholder analyses (the Reporting Items for Stakeholder Analysis – RISA – tool).
- A first stakeholder analysis was conducted to identify those key stakeholders that could be part of a leading planning group for the development of a CPS aimed at preventing CVD in New South Wales (NSW), Australia. As a secondary objective of this study, the gaps and needs in cardiovascular care and the role of community pharmacists were explored.

- To put into practice the same step of the planning process, but using a different methodology, a second stakeholder analysis was carried out for the development of a CPS to prevent CVD in Andalucía, Spain. It aimed to identify stakeholders, differentiate/categorise them, and analyse stakeholder relationships to organise a collaborative initiative for the development of the service.

- Finally, the second step of the planning process was put into practice continuing from the participatory CPS planning process initiated in NSW. A visioning exercise was performed to develop a stakeholder-shared vision of an NSW world-leading cardiovascular care which integrates community pharmacists. A key outcome from the visioning process was also to identify the initiatives necessary to achieve this vision.

Research outline and dissertation structure

After introducing the reader to the topic addressed in this thesis (Chapter 1), four research studies are presented as individual chapters (Chapters 2-5) in the form of research articles to achieve the objectives. Therefore, the methods, results, discussion and conclusions for these studies are included in the chapter corresponding to each study.

Chapter 2. Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review. This study uses a systematic scoping review methodology to investigate how stakeholder analyses are used and reported in health innovation planning processes. It details the steps followed in stakeholder analysis, data collection methods, the stakeholder attributes considered when planning and also proposes guidelines for the reporting of stakeholder analyses.

Chapter 3. Stakeholder Analysis for the Development of a Community Pharmacy Service Aimed at Preventing Cardiovascular Disease. This qualitative study describes the first practical step in initiating a collaborative planning process for CPSs (i.e., identification and initial engagement of stakeholders). It presents the first methodology applied for conducting stakeholder analysis: a workshop in which key informants/stakeholders participate in guided discussions. The objective of the study is to identify the key stakeholders that could be part of a planning group that develops a CPS aimed at preventing cardiovascular disease in New South Wales, Australia. The secondary objective of this study is to explore gaps in, and the needs of, cardiovascular care and the role that community pharmacists can play.

Chapter 4. Collaborative Health Service Planning: A Stakeholder Analysis with Social Network Analysis to Develop a Community Pharmacy Service. This is about initiating a collaborative planning process for CPSs again. It comprises the stakeholder identification and initial engagement step but using a different methodology. This mixed-methods study combines qualitative research with social network analysis. The information is now gained from interviews with key informants and questionnaires administered to stakeholders. The objective is to identify stakeholders, differentiate/categorise them, and analyse stakeholder relationships to organise a collaborative initiative for the development of a CPS aimed at preventing CVD in Andalucía, Spain.

Chapter 5. A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services. This is a qualitative study that is a continuation of the CPS planning process initiated with the stakeholder analysis of Chapter 3 and addresses the second step (i.e., the development of a stakeholder-shared vision). It is a practical step to develop a stakeholder-shared vision of a cardiovascular care model which integrates community pharmacists, and to identify the initiatives that stakeholders consider necessary to achieve the vision.

A discussion of lessons learned, and suggestions for future research can be found in Chapter 6. Finally, the main conclusions of this doctoral thesis are presented in Chapter 7.

References

1. Scahill SL, Atif M, Babar ZU. Defining pharmacy and its practice: a conceptual model for an international audience. *Integr Pharm Res Pract.* 2017;6:121-129.

2. Faus-Dáder M, Amariles-Muñoz P, Martínez-Martínez F. *Atención Farmacéutica, Servicios Farmacéuticos Orientados al Paciente.* Granada, Spain: Avicam; 2018.

3. Gastelurrutia MA. *Elementos Facilitadores y Dificultades para la Diseminación e Implantación de Servicios Cognitivos del Farmacéutico en la Farmacia Comunitaria Española* [dissertation]. Madrid: Editorial de la Universidad de Granada Ergon; 2006.

4. Wiedenmayer K, Summers RS, Mackie CA, Gous AGS, Everard M. *Developing Pharmacy Practice, A Focus on Patient Care: Handbook.* World Health Organization and International Pharmaceutical Federation 2006 ed. http://apps.who.int/medicinedocs/documents/s14094e/s14094e.pdf; 2006 Accessed March 25, 2019

5. Moullin J. *Implementation Science in Community Pharmacy. Development of frameworks, models and tools for introducing and integrating professional services* [dissertation]. Sydney, Australia: Graduate School of Health, Discipline of Pharmacy, University of Technology Sydney; 2016.

6. Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health policy.* 2015;119:628-639.

7. Anderson S. The state of the world's pharmacy: a portrait of the pharmacy profession. *J Interprof Care.* 2002;16:391-404.

8. Habeeb IA, Deepak J, Jegan R. Pharmacists in the wider public health workforce--a review. *Arch Pharm Pract.* 2012;3:166-170.

9. Hermansyah A, Sainsbury E, Krass I. Multiple policy approaches in improving community pharmacy practice: the case in Indonesia. *BMC Health Serv Res.* 2018;18:449.

10. McMillan SS, Kelly F, Sav A, King MA, Whitty JA, Wheeler AJ. Australian community pharmacy services: a survey of what people with chronic conditions and their carers use versus what they consider important. *BMJ open.* 2014;4:e006587.

11. Cheema E, Sutcliffe P, Singer DR. The impact of interventions by pharmacists in community pharmacies on control of hypertension: a systematic review and

meta-analysis of randomized controlled trials. *Br J Clin Pharmacol.* 2014;78:1238-1247.

12. Al Hamarneh YN, Hemmelgarn BR, Hassan I, Jones CA, Tsuyuki RT. The effectiveness of pharmacist interventions on cardiovascular risk in adult patients with type 2 diabetes: the multicentre randomized controlled RxEACH trial. *Can J Diabetes.* 2017;41:580-586.

13. Ensing HT, Koster ES, Sontoredjo TAA, van Dooren AA, Bouvy ML. Pharmacists' barriers and facilitators on implementing a post-discharge home visit. *Res Soc Admin Pharm.* 2017;13:811-819.e812.

14. García-Cárdenas V, Benrimoj SI, Ocampo CC, Goyenechea E, Martínez-Martínez F, Gastelurrutia MA. Evaluation of the implementation process and outcomes of a professional pharmacy service in a community pharmacy setting. A case report. *Res Soc Adm Pharm.* 2017;13:614-627.

15. Kaae S, Dam P, Rossing C. Evaluation of a pharmacy service helping patients to get a good start in taking their new medications for chronic diseases. *Res Soc Admin Pharm.* 2016;12:486-495.

16. Malet-Larrea A, García-Cárdenas V, Saez-Benito L, Benrimoj SI, Calvo B, Goyenechea E. Cost-effectiveness of professional pharmacy services in community pharmacy: a systematic review. *Expert Rev Pharmacoecon Outcomes Res.* 2016;16:747-758.

17. Sabater-Hernández D, Sabater-Galindo M, Fernandez-Llimos F, et al. A systematic review of evidence-based community pharmacy services aimed at the prevention of cardiovascular disease. *J Manag Care Spec Pharm.* 2016;22:699-713.

18. Strand MA, Tellers J, Patterson A, Ross A, Palombi L. The achievement of public health services in pharmacy practice: A literature review. *Res Soc Admin Pharm.* 2016;12:247-256.

19. McKenzie JF, Neiger BL, Thackeray R. *Planning, Implementing & Evaluating Health Promotion Programs, A Primer*: 7th ed. United States, WA: Pearson; 2016.

20. Bartholomew LK, Parcel GS, Kok G, Gottlieb NH, Fernández ME. *Planning Health Promotion Programs: An Intervention Mapping Approach.* 3rd ed. San Francisco, CA: Jossey-Bass; 2011.

21. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj.* 2008;337:a1655.

22. Green L, Kreuter M. *Health Program Planning: An Educational and Ecological Approach.* 4th ed. Boston: McGraw-Hill; 2005.

23. Sabater-Hernández D, Moullin J, Hossain L, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. *Am J Health-Syst Pharm.* 2016;73:156-164.

24. Campbell NC, Murray E, Darbyshire J, et al. Designing and evaluating complex interventions to improve health care. *Bmj.* 2007;334:455-459.

25. Bleijenberg N, de Man-van Ginkel JM, Trappenburg JCA, et al. Increasing value and reducing waste by optimizing the development of complex interventions: Enriching the development phase of the Medical Research Council (MRC) Framework. *Int J Nurs Stud.* 2018;79:86-93.

26. Proctor EK, Powell BJ, Baumann AA, Hamilton AM, Santens RL. Writing implementation research grant proposals: ten key ingredients. *Implement Sci.* 2012;7:96.

27. Hughes CM, Cadogan CA, Ryan CA. Development of a pharmacy practice intervention: lessons from the literature. *Int J Clin Pharm.* 2016;38:601-606.

28. Gunter MJ. The role of the ECHO model in outcomes research and clinical practice improvement. *Am J Manag Care.* 1999;5:S217-224.

29. Kozma CM, Reeder CE, Schulz RM. Economic, clinical, and humanistic outcomes: a planning model for pharmacoeconomic research. *Clin Ther.* 1993;15:1121-1132; discussion 1120.

30. Michie S, Fixsen D, Grimshaw JM, Eccles MP. Specifying and reporting complex behaviour change interventions: the need for a scientific method. *Implement Sci.* 2009;4:40.

31. Berbatis CG, Sunderland VB, Joyce A, Bulsara M, Mills C. Enhanced pharmacy services, barriers and facilitators in Australia's community pharmacies: Australia's National Pharmacy Database Project. *Int J Pharm Pract.* 2007;15:185-191.

32. Jokanovic N, Tan EC, van den Bosch D, Kirkpatrick CM, Dooley MJ, Bell JS. Clinical medication review in Australia: A systematic review. *Res Soc Admin Pharm.* 2016;12:384-418.

33. McMillan SS, Wheeler AJ, Sav A, et al. Community pharmacy in Australia: a health hub destination of the future. *Res Soc Admin Pharm.* 2013;9:863-875.

34. Wibowo Y, Berbatis C, Joyce A, Sunderland VB. Analysis of enhanced pharmacy services in rural community pharmacies in Western Australia. *Rural Remote Health.* 2010;10:1400.

35. Chaudoir SR, Dugan AG, Barr CH. Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci.* 2013;8:22.

36. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci.* 2009;4:50.

37. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. *Lancet* 2003;362:1225-1230.

38. Hermansyah A, Sainsbury E, Krass I. The operation of a Research and Development (R&D) program and its significance for practice change in community pharmacy. *PloS One.* 2017;12:e0184954.

39. Ministry of Health. *Draft Pharmacy Action Plan 2015–2020: For consultation.* Wellington: Ministry of Health. https://www.health.govt.nz/system/files/documents/publications/pharmacy-action-plan-2015-2020-consultation-document-oct15.pdf; 2015. Published October 2015. Accessed March 25, 2019

40. Lalonde L, Goudreau J, Hudon É, et al. Development of an interprofessional program for cardiovascular prevention in primary care: A participatory research approach. *SAGE Open Med.* 2014;2:2050312114522788.

41. Mott DA, Martin B, Breslow R, et al. The development of a community-based, pharmacist-provided falls prevention mtm intervention for older adults: Relationship building, methods, and rationale. *Innov Pharm.* 2014;5:140.

42. Sabater-Hernández D, Tudball J, Ferguson C, Franco-Trigo L, Hossain LN, Benrimoj SI. A stakeholder co-design approach for developing a community pharmacy service to enhance screening and management of atrial fibrillation. *BMC Health Serv Res.* 2018;18:145.

43. Sorensen EW, Haugbolle LS. Using an action research process in pharmacy practice research--a cooperative project between university and internship pharmacies. *Res Soc Admin Pharm.* 2008;4:384-401.

44. Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Manag Rev.* 2004;6:21-53.

45. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health.* 2008;29:325-350.

46. Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26:124-128.

47. Moullin JC, Sabater-Hernández D, Benrimoj SI. Model for the evaluation of implementation programs and professional pharmacy services. *Res Soc Adm Pharm.* 2016;12:515-522.

48. Collins LM, Murphy SA, Strecher V. The multiphase optimization strategy (MOST) and the sequential multiple assignment randomized trial (SMART): new methods for more potent eHealth interventions. *Am J Prev Med.* 2007;32:S112-118.

49. Hossain LN, Fernandez-Llimos F, Luckett T, et al. Qualitative meta-synthesis of barriers and facilitators that influence the implementation of community pharmacy services: perspectives of patients, nurses and general medical practitioners. *BMJ Open.* 2017;7:e015471.

50. Riley BL, MacDonald J, Mansi O, et al. Is reporting on interventions a weak link in understanding how and why they work? A preliminary exploration using community heart health exemplars. *Implement Sci.* 2008;3:27.

51. Des Jarlais DC, Lyles C, Crepaz N. Improving the reporting quality of nonrandomized evaluations of behavioral and public health interventions: the TREND statement. *Am J Public Health.* 2004;94:361-366.

52. von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *PLoS Med.* 2007;4:e296.

53. von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *J Clin Epidemiol.* 2008;61:344-349.

54. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. Squire 2.0 (Standards for Quality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process. *Am J Crit Care.* 2015;24:466-473.

55. Hoffmann TC, Glasziou PP, Boutron I, et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *Bmj.* 2014;348:g1687.

56.   Begg C, Cho M, Eastwood S, et al. Improving the quality of reporting of randomized controlled trials. The CONSORT statement. *Jama.* 1996;276:637-639.

57.   Hopewell S, Clarke M, Moher D, et al. CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. *PLoS Med.* 2008;5:e20.

58.   Equator Network. Enhancing the QUAlity and Transparency Of health Research. http://www.equator-network.org/ Accessed March 25, 2019

59.   Moullin JC, Sabater-Hernández D, Benrimoj SI. Qualitative study on the implementation of professional pharmacy services in Australian community pharmacies using framework analysis. *BMC Health Serv Res.* 2016;16:439.

60.   Moullin JC, Sabater-Hernández D, Fernandez-Llimos F, Benrimoj SI. A systematic review of implementation frameworks of innovations in healthcare and resulting generic implementation framework. *Health Res Policy Syst.* 2015;13:5.

61.   Fuller JM, Saini B, Bosnic-Anticevich S, García Cárdenas V, Benrimoj SI, Armour C. Testing evidence routine practice: Using an implementation framework to embed a clinically proven asthma service in Australian community pharmacy. *Res Soc Admin Pharm.* 2017;13:989-996.

62.   Martínez-Martínez F, Faus MJ, Fikri-Benbrahim N, et al. *Informe 2014-2016 conSIGUE: Programa para la implantación y futura sostenibilidad del servicio de Seguimiento Farmacoterapéutico en la Farmacia Comunitaria española.* Madrid: Consejo General de Colegios Oficiales de Farmacéuticos; 2016.

63.   García-Cárdenas V, Pérez-Escamilla B, Fernandez-Llimos F, Benrimoj SI. The complexity of implementation factors in professional pharmacy services. *Res Soc Admin Pharm.* 2018;14:498-500.

64.   Hossain LN, Tudball J, Franco-Trigo L, Durks D, Benrimoj SI, Sabater-Hernández D. A multilevel stakeholder approach for identifying the determinants of implementation of government-funded community pharmacy services at the primary care level. *Res Soc Admin Pharm.* 2018;14:765-775.

65.   Marquis J, Schneider MP, Spencer B, Bugnon O, Du Pasquier S. Exploring the implementation of a medication adherence programme by community pharmacists: a qualitative study. *Int J Clin Pharm.* 2014;36:1014-1022.

66.   Niquille A, Lattmann C, Bugnon O. Medication reviews led by community pharmacists in Switzerland: a qualitative survey to evaluate barriers and facilitators. *Pharm Pract.* 2010;8:35-42.

67.   Saramunee K, Krska J, Mackridge A, Richards J, Suttajit S, Phillips-Howard P. How to enhance public health service utilization in community pharmacy?: General public and health providers' perspectives. *Res Soc Admin Pharm.* 2014;10:272-284.

68.   Durks D, Fernandez-Llimos F, Hossain LN, Franco-Trigo L, Benrimoj SI, Sabater-Hernández D. Use of Intervention Mapping to enhance health care professional practice: A systematic review. *Health Educ Behav.* 2017;44:524-535.

69.   Berman J, Mitambo C, Matanje-Mwagomba B, et al. Building a knowledge translation platform in Malawi to support evidence-informed health policy. *Health Res Policy Syst.* 2015;13:73.

70.   Hyder A, Syed S, Puvanachandra P, et al. Stakeholder analysis for health research: case studies from low-and middle-income countries. *Public Health.* 2010;124:159-166.

71.   Makan A, Fekadu A, Murhar V, et al. Stakeholder analysis of the Programme for Improving Mental health carE (PRIME): baseline findings. *Int J Ment Health Syst.* 2015;9:27.

72.   Brugha R, Varvasovszky Z. Stakeholder analysis: a review. *Health Policy Plan.* 2000;15:239-246.

73.   Namazzi G, N KS, Peter W, et al. Stakeholder analysis for a maternal and newborn health project in Eastern Uganda. *BMC Pregnancy Childbirth.* 2013;13:58.

74.   Preskill H, Jones N. *A Practical Guide for Engaging Stakeholders in Developing Evaluation Questions. Robert Wood Johnson Foundation Evaluation Series*: Robert Wood Johnson Foundation; 2009. http://www.pointk.org/resources/files/rwj.stakeholders.final.1.pdf   Accessed March 25, 2019.

75.   Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. The shifting dynamics of social roles and project ownership over the lifecycle of a community-based participatory research project. *Fam Pract.* 2017;34:305-312.

76.   Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. Engagement strategies that foster community self-determination in participatory research: Insider ownership through outsider championship. *Fam Pract.* 2017;34:336-340.

77. Basaza RK, O'Connell TS, Chapcakova I. Players and processes behind the national health insurance scheme: a case study of Uganda. *BMC Health Serv Res.* 2013;13:357.

78. Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement Stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

79. Ray KN, Miller E. Strengthening stakeholder-engaged research and research on stakeholder engagement. *J Comp Eff Res.* 2017;6:375-389.

80. Kok G, Gurabardhi Z, Gottlieb NH, Zijlstra FR. Influencing organizations to promote health: applying stakeholder theory. *Health Educ Behav.* 2015;42:123s-132s.

81. Lavery JV. Building an evidence base for stakeholder engagement. *Science* 2018;361:554-556.

82. Goodman MS, Sanders Thompson VL. The science of stakeholder engagement in research: classification, implementation, and evaluation. *Transl Behav Med.* 2017;7:486-491.

83. Huang J, Lipman PD, Daniel Mullins C. Bridging the divide: building infrastructure to support community-academic partnerships and improve capacity to conduct patient-centered outcomes research. *Transl Behav Med.* 2017;7:773-782.

84. Bryson JM, Patton MQ, Bowman RA. Working with evaluation stakeholders: A rationale, step-wise approach and toolkit. *Eval Program Plan.* 2011;34:1-12.

85. Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing Public Participation Processes. *Public Adm Rev.* 2013;73:23-34.

86. Salsberg J, Parry D, Pluye P, Macridis S, Herbert CP, Macaulay AC. Successful strategies to engage research partners for translating evidence into action in community health: A critical review. *J Environ Public Health.* 2015;2015:191856.

87. Donaldson T, Preston LE. The stakeholder theory of the corporation: Concepts, evidence, and implications. *Acad Manag Rev.* 1995;20:65-91.

88. Mitchell RK, Agle BR, Wood DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Acad Manag Rev.* 1997;22:853-886.

89. Reed M, Curzon R. Stakeholder mapping for the governance of biosecurity: a literature review. *J Integr Environ Sci.* 2015;12:15-38.

90. Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plan.* 2000;15:338-345.

91. Gilson L, Doherty J, Lake S, McIntyre D, Mwikisa C, Thomas S. The SAZA study: implementing health financing reform in South Africa and Zambia. *Health Policy Plan.* 2003;18:31-46.

92. Gilson L, Erasmus E, Borghi J, Macha J, Kamuzora P, Mtei G. Using stakeholder analysis to support moves towards universal coverage: lessons from the SHIELD project. *Health Policy Plan.* 2012;27 Suppl 1:i64-76.

93. Reed M, Graves A, Dandy N, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. *J Environ Manag.* 2009;90:1933-1949.

94. Vos AA, van Voorst SF, Steegers EA, Denktas S. Analysis of policy towards improvement of perinatal mortality in the Netherlands (2004-2011). *Soc Sci Med.* 2016;157:156-164.

95. Kivits RA. *Multi-dimensional Stakeholder Analysis: A Methodology Applied to Australian Capital City Airports* [dissertation]. Lismore, NSW: Southern Cross University; 2013.

96. Lienert J, Schnetzer F, Ingold K. Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. *J Environ Manag.* 2013;125:134-148.

97. Gilmour J, Beilin R. *Stakeholder Mapping for Effective Risk Communication*. Australian Centre for Excellence in Risk Analysis. https://cebra.unimelb.edu.au/__data/assets/pdf_file/0006/2220990/gilmour0609.pdf; 2007 Accessed March 25, 2019

98. Hernández-Jover M, Gilmour J, Schembri N, et al. Use of stakeholder analysis to inform risk communication and extension strategies for improved biosecurity amongst small-scale pig producers. *Prev Vet Med.* 2012;104:258-270.

99. Ackermann F, Eden C. Strategic management of stakeholders: Theory and practice. *Long Range Plan.* 2011;44:179-196.

100. van Limburg M, Wentzel J, Sanderman R, van Gemert-Pijnen L. Business modeling to implement an eHealth portal for infection control: A reflection on co-creation with stakeholders. *JMIR Res Protoc.* 2015;4:e104.

101. Thomas S, Gilson L. Actor management in the development of health financing reform: Health insurance in South Africa, 1994-1999. *Health Policy Plan.* 2004;19:279-291.

102. Arnstein SR. A ladder of citizen participation. *J Am Inst Planners.* 1969;35:216-224.

103. International Association for Public Participation. *IAP2 Spectrum of Public Participation.* IAP2 International Federation 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x 11_Print.pdf; 2018 Accessed March 25, 2019.

104. Nanus B. Leading the vision team. *The Futurist.* 1996;30:20.

105. National Association of County & City Health Officials. *Visioning. Mobilizing for Action through Planning and Partnerships (MAPP).* http://archived.naccho.org/topics/infrastructure/mapp/upload/visioning_full.pd f; 2016 Accessed September 05, 2016.

106. Boomer C, Collin I, McCormack B. 'I have a dream': A process for visioning in practice development. *Pract Development Health Care.* 2008;7:70-78.

107. Kilpatrick A, Silverman L. The power of vision. *Strategy Leadersh.* 2005;33:24-26.

108. Stewart JM. Future state visioning—A powerful leadership process. *Long Range Plan.* 1993;26:89-98.

109. Ziegler W. Envisioning the future. *Futures.* 1991;23:516-527.

110. Meadows M, O'Brien F. Under pressure: visioning in a regulated environment. *Systemic Pract Action Res.* 2006;19:537-551.

111. McCormack B, Illman A, Culling J, Ryan A, O'Neill S. 'Removing the chaos from the narrative': preparing clinical leaders for practice development. *Educational Action Res.* 2002;10:335-352.

112. O'Brien F, Meadows M. Corporate visioning: a survey of UK practice. *J Operational Res Society.* 2000;51:36-44.

113. Australian Government Department of Health. The Australian Health System. https://beta.health.gov.au/about-us/the-australian-health-system. Updated August 10, 2018. Accessed November 16, 2018

114. Australian Government Department of Health. Medicare. https://beta.health.gov.au/medicare. Updated August 1, 2018 Accessed November 16, 2018

115. Australian Government Department of Health. *Amended and Restated Six Community Pharmacy Agreement.* http://www.pbs.gov.au/general/sixth-cpa-files/sixth-community-pharmacy-agreement-amended-06-2017.pdf; 2017 Accessed March 25, 2019

116.   Hattingh HL. The regulation of pharmacy ownership in Australia: the potential impact of changes to the health landscape. *J Law Med.* 2011;19:147-154.

117.   Australian Government Department of Health. Pharmacy Location Rules (the Rules) and the Australian Community Pharmacy Authority (ACPA). http://www.health.gov.au/acpa. Updated September 20, 2018. Accessed November 16, 2018

118.   Australian Government Department of Human Services. *Department of Human Services Annual Report 2017-18.* https://www.humanservices.gov.au/sites/default/files/2018/10/8802-1810-annual-report-web-2017-2018.pdf; 2018 Accessed November 17, 2018

119.   Australian Bureau of Statistics. Population clock. http://www.abs.gov.au/. Updated February 2, 2019. Accessed February 14, 2019

120.   The Pharmacy Guild of Australia. *Vital facts on community pharmacy.* https://www.guild.org.au/__data/assets/pdf_file/0020/12908/Vital-facts-on-community-pharmacy.pdf; 2018 Accessed November 17, 2018

121.   Pharmacy   Board   of   Australia.   *Registrant   data.* https://www.pharmacyboard.gov.au/about/statistics.aspx;   2018   Accessed November 17, 2018

122.   Australian Government Department of Health. About 6CPA (Sixth Community Pharmacy Agreement). http://6cpa.com.au/about-6cpa/; 2015 Accessed November 17, 2018

123.   Australian Government. *Fifth Community Pharmacy Agreement (2010-2015).* http://6cpa.com.au/about-6cpa/; 2010 Accessed February 14, 2019

124.   Commonwealth of Australia Department of Community Services and Health. *First   Community   Pharmacy   Agreement   (1990-1995).* http://6cpa.com.au/about-6cpa/; 1990 Accessed February 14, 2019

125.   Australian Government. *Fourth Community Pharmacy Agreement (2005-2010).* http://6cpa.com.au/about-6cpa/; 2005 Accessed February 14, 2019

126.   Commonwealth of Australia Department of Human Services and Health. *Second   Community   Pharmacy   Agreement   (1995-2000).* http://6cpa.com.au/about-6cpa/; 1995 Accessed February 14, 2019

127.   Commonwealth of Australia Department of Health and Aged Care. *Third Community Pharmacy Agreement (2000-2005).* http://6cpa.com.au/about-6cpa/; 2000 Accessed February 14, 2019

128. The Pharmacy Guild of Australia. About the Guild. https://www.guild.org.au/about-us. Updated February 18, 2019. Accessed February 18, 2019

129. Pharmaceutical Society of Australia. About PSA. https://www.psa.org.au/about/about-psa/; 2018 Accessed February 18, 2019

130. Jefatura del Estado. Ley 14/1986 de 25 de abril General de Sanidad, *«BOE» núm. 102 de 29 de abril de 1986.* https://www.boe.es/buscar/pdf/1986/BOE-A-1986-10499-consolidado.pdf Accessed November 19, 2018

131. Ministry of Health Social Services and Equality. *National Health System of Spain 2012* [Internet Monograph]. Madrid https://www.mscbs.gob.es/en/organizacion/sns/docs/sns2012/SNS012__Ingles.pdf; 2012 Accessed November 19, 2018

132. Consejo General de Colegios Oficiales de Farmacéuticos. Farmacia Comunitaria en España. https://www.portalfarma.com/Profesionales/organizacionfcolegial/profesionfarma/Paginas/colegiaciondatestadisticos.aspx. Updated June 14, 2017. Accessed November 19, 2018

133. Ministerio de Sanidad, Servicios Sociales e Igualdad. Real Decreto Legislativo 1/2015, de 24 de julio, por el que se aprueba el texto refundido de la Ley de garantías y uso racional de los medicamentos y productos sanitarios. *«BOE» núm. 177, de 25 de julio de 2015.* https://www.boe.es/eli/es/rdlg/2015/07/24/1/con; 2015 Accessed February 15, 2019

134. INE. Demografía. In: *Anuario Estadístico de España 2018.* http://www.ine.es/prodyser/pubweb/anuarios_mnu.htm; 2018 Accessed March 26, 2019

135. INE. Salud. In: *Anuario Estadístico de España 2018.* https://www.ine.es/prodyser/pubweb/anuario18/anu18_05salud.pdf; 2018 Accessed November 19, 2018

136. Gascón MP, Rius P, Guayta-Escolies R, Dronda A, Bagaria G. *Evolució de la Prestació de Serveis d'Atenció Farmacèutica i Serveis Relacionats amb la Salut Comunitària a les Farmàcies de Catalunya 2012-2017. Monogràfics de la Central de Resultats.* Barcelona: Agència de Qualitat i Avaluació Sanitàries de Catalunya. Departament de Salut. Generalitat de Catalunya. http://observatorisalut.gencat.cat/web/.content/minisite/observatorisalut/ossc

_central_resultats/informes/fitxers_estatics/MONOGRAFIC_29_farmacia_co munitaria.pdf; 2018 Accessed November 19, 2018

137. Gobierno Vasco Departamento de Salud. El Departamento de Salud y los Colegios de Farmacéuticos Vascos firman un convenio para la puesta en marcha de un Programa piloto de Seguimiento Farmacoterapéutico Integral a Pacientes Crónicos y Polimedicados. http://www.euskadi.eus/noticia/2017/el-departamento-de-salud-y-los-colegios-de-farmaceuticos-vascos-firman-un-convenio-para-la-puesta-en-marcha-de-un-programa-piloto-de-seguimiento-farmacoterapeutico-integral-a-pacientes-cronicos-y-polimedicados/web01-s2osa/es/. Published May 17, 2017. Accessed February 15, 2019

138. Foro de Atención Farmacéutica Farmacia Comunitaria. Quinto Comunicado del Foro de Atención Farmacéutica en Farmacia Comunitaria (Foro AF-FC). Cartera de servicios farmacéuticos en la farmacia comunitaria. *Pharm Care Esp.* 2012;14:31-32.

139. Foro de Atención Farmacéutica Farmacia Comunitaria. Sexto comunicado Foro AF-FC. Servicios Profesionales Farmacéuticos Asistenciales. Madrid. https://www.pharmaceutical-care.org/archivos/2833/sexto_comunicado_FORO_AF-FC_SPF_A_y_clasificacion_v4_160628.pdf. Published June 14, 2016. Accessed March 26, 2019

140. Consejo General de Colegios Oficiales de Farmacéuticos. Experiencias en comunidades autónomas confirman que la participación de la farmacia aporta eficacia y eficiencia al sistema sanitario. https://www.portalfarma.com/Profesionales/consejoinforma/Paginas/2018-21-CNF-eficiencia-eficacia-farmacia-comunitaria.aspx. Published October 4, 2018. Accessed November 20, 2018

141. Redacción. Galicia: Sanidad incorpora a los farmacéuticos al estudio de un nuevo modelo de Atención Primaria. *Correo Farmacéutico*. https://www.correofarmaceutico.com/politica-sanitaria/galicia-sanidad-incorpora-a-los-farmaceuticos-al-estudio-de-un-nuevo-modelo-de-atencion-primaria.html. Published December 13, 2018. Accessed February 15, 2019

142. Diariofarma. La farmacia catalana aspira a estar más integrada en el sistema sanitario. *Diariofarma*. https://www.diariofarma.com/2018/12/03/la-farmacia-catalana-aspira-a-estar-mas-integrada-en-el-sistema-sanitario. Published December 3, 2018. Accessed February 15, 2019

143. Álvarez de Toledo F, Arcos González P, Eyaralar Riera T, et al. Atención farmacéutica en personas que han sufrido episodios coronarios agudos (estudio TOMCOR). *Rev Esp Salud Publica.* 2001;75:375-388.

144. Cabiedes Miragaya L, Eyaralar Riera T, Arcos González P, Álvarez de Toledo F, Álvarez Sánchez G. Evaluación económica de la atención farmacéutica (AF) en oficinas de farmacia comunitarias (PROYECTO TOMCOR). *Rev Esp Economía Salud.* 2002;1:45-59.

145. Jódar-Sánchez F, Malet-Larrea A, Martin JJ, et al. Cost-utility analysis of a medication review with follow-up service for older adults with polypharmacy in community pharmacies in Spain: the conSIGUE program. *Pharmacoeconomics.* 2015;33:599-610.

146. Malet-Larrea A, Goyenechea E, García-Cárdenas V, et al. The impact of a medication review with follow-up service on hospital admissions in aged polypharmacy patients. *Br J Clin Pharmacol.* 2016;82:831-838.

147. Malet-Larrea A, Goyenechea E, Gastelurrutia MA, et al. Cost analysis and cost-benefit analysis of a medication review with follow-up service in aged polypharmacy patients. *Eur J Health Econ.* 2017;18:1069-1078.

148. Martínez-Martínez F, Farragher T, Faus MJ, et al. *Informe 2011-2014 conSIGUE: Impacto Clínico, Económico y Humanístico del Servicio de Seguimiento Farmacoterapéutico en Mayores Polimedicados en la Farmacia Comunitaria Española.* Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. 2014.

149. Aguilar Santamaria J, Amaro Cendón L, García Cárdenas V, et al. Diseño y evaluación de un servicio profesional de adherencia terapéutica desde el ámbito de la Farmacia Comunitaria – estudio piloto. *X Congreso Nacional de Atención Farmacéutica.* Burgos, Spain. https://www.congresoaf.com/app_services/posters/detalle_poster-web.php?poster=106; 2017 Accessed March 13, 2019

150. Aguilar Santamaria J, Valverde Merino MI, García Cardenas V, Peiro Zorrilla T, Varas Doval R, Benrimoj SI. Evaluation and implementation of an adherence management service for patients with chronic conditions in a community pharmacy setting. *Int J Clin Pharm.* 2018;40:500-500.

151. Peiró Zorrilla T, Pérez Escamilla B, Varas Doval R, et al. Proyecto AdherenciaMED: Diseño y evaluación de un servicio profesional de adherencia terapéutica desde el ámbito de la farmacia comunitaria. Resultados de la fase Impacto. *21 Congreso Nacional Farmacéutico.* Burgos.

https://congresofarmaceuticocgcof.org/wp-content/uploads/2018/11/FC-23.pdf; 2018 Accessed March 13, 2019

152. Consensus Committee. Second consensus of Granada on drug therapy problems. *Ars Pharmaceutica* 2002;43:179-187.

153. Consensus Committee. Third consensus of Granada on drug related problems (DRP) and negative outcomes associated with medication (NOM). *Ars Pharmaceutica* 2007;48:5-17.

154. Consensus Panel ad hoc. Consensus of Granada on drug-related problems. *Pharm Care Esp.* 1999;1:107-112.

155. Sabater Hernández D, Silva Castro MM, Faus Dader MJ. *Método Dáder. Guía de Seguimiento Farmacoterapéutico.* 3rd ed. Granada: Grupo de Investigación en Atención Farmacéutica (CTS-131), Universidad de Granada; 2007.

156. Serrano A. La Universidad de Granada crea la primera Sección de Farmacia Asistencial. *Correo Farmacéutico.* https://www.correofarmaceutico.com/profesion/grado-y-posgrado/la-universidad-de-granada-crea-la-primera-seccion-de-farmacia-asistencial.html. Published March 12, 2019. Accessed March 13, 2019

157. Fundación Pharmaceutical Care España. ¿Qué es la Fundación Pharmaceutical Care España? https://www.pharmaceutical-care.org/controler.php?secc=ficha_detail&cat=15&id=53. Updated March 6, 2014. Accessed Februrary 18, 2019

158. Sociedad Española de Farmacia Familiar y Comunitaria. Misión, Visión y Valores. https://www.sefac.org/mision-vision-y-valores. Updated November 11, 2017. Accessed February 18, 2019

159. Gobierno de España Ministerio de Sanidad y Consumo. *Consenso sobre Atención Farmacéutica.* https://www.mscbs.gob.es/profesionales/farmacia/consenso/consenso.htm#indice; 2001 Accessed February 18, 2019

160. Jefatura del Estado. Ley 29/2006, de 26 de julio, de garantías y uso racional de los medicamentos y productos sanitarios. *«BOE» núm. 178, de 27 de julio de 2006*:28122-28165. https://www.boe.es/eli/es/l/2006/07/26/29 Accessed February 18, 2019

161. Consejo General de Colegios Oficiales de Farmacéuticos. Foro de Atención Farmacéutica.

https://www.portalfarma.com/inicio/serviciosprofesionales/forodeattfarma/Paginas/default.aspx. Updated January 1, 2017. Accessed February 18, 2019

162. Foro de Atención Farmacéutica. *Documento de Consenso*. https://www.pharmaceutical-care.org/archivos/804/foro_at_farma.pdf; 2008 Accessed February 18, 2019

163. Foro de Atención Farmacéutica Farmacia Comunitaria. *Guía Práctica para los Servicios de Atención Farmacéutica en la Farmacia Comunitaria*. Madrid. https://www.portalfarma.com/inicio/serviciosprofesionales//forofarmaciacomunitaria/Documents/ATFC_Guia%20FORO.pdf; 2010 Accessed February 23, 2019

164. Consejo General de Colegios Oficiales de Farmacéuticos. Foro de Atención Farmacéutica en Farmacia Comunitaria. https://www.portalfarma.com/inicio/serviciosprofesionales/forofarmaciacomunitaria/Paginas/default.aspx. Updated February 6, 2019. Accessed February 18, 2019

165. Foro de Atención Farmacéutica-Farmacia Comunitaria. *Propuesta de contenidos específicos en Atención Farmacéutica*. Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. https://www.portalfarma.com/inicio/serviciosprofesionales/forofarmaciacomunitaria/jornadas-atencion-farmaceutica-universidad/Documents/2017-Jornada-Atencion-Farmaceutica-Universidad-Documento-propuesta-contenidos.pdf; 2017 Accessed February 19, 2019

166. Consejo General de Colegios Oficiales de Farmacéuticos. *Buenas Prácticas en Farmacia Comunitaria en España*. Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. https://www.portalfarma.com/Profesionales/Buenas-practicas-profesionales/Documents/Documento-BBPP-DEF.pdf; 2013 Accessed February 18, 2019

167. El-Awaisi A, Joseph S, El Hajj MS, Diack L. A comprehensive systematic review of pharmacy perspectives on interprofessional education and collaborative practice. *Res Soc Admin Pharm.* 2018;14:863-882.

168. World Health Organization. *Framework for Action on Interprofessional Education & Collaborative Practice*. https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HPN_10.3_eng.pdf;jsessionid=9C6D8E25D7922FC78C9E9F0A0C882D04?sequence=1; 2010 Accessed February 23, 2019

169. Mendis S, Puska P, Norrving B. *Global atlas on cardiovascular disease prevention and control*: World Health Organization; 2011.

170. World Health Organization. *Cardiovascular diseases (CVDs).* http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds). Published May 17, 2017. Accessed August 16, 2018

171. Australian Bureau of Statistics. *Australia's leading causes of death 2017.* http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~20 17~Main%20Features~Australia's%20leading%20causes%20of%20death,% 202017~2. Publised September 26, 2018. Accessed December 05, 2018

172. Australian Government Australian Institute of Health and Welfare. *Cardiovascular disease snapshot.* https://www.aihw.gov.au/reports/heart-stroke-vascular-disease/cardiovascular-health-compendium/contents/how-many-australians-have-cardiovascular-disease. Updated July 24, 2018. Accessed November 27, 2018

173. Heart Foundation. *Cardiovascular disease fact sheet.* https://www.heartfoundation.org.au/about-us/what-we-do/heart-disease-in-australia/cardiovascular-disease-fact-sheet. 2018. Accessed November 27, 2018

174. Fundación Española del Corazón. *Disminuir la enfermedad cardiovascular, un objetivo prioritario. Informe sobre la enfermedad cardiovascular en España.* https://fundaciondelcorazon.com/images/stories/informesprensa/ori_informe _fec_2.pdf; 2015 Accessed December 05, 2018

175. INE. Las 15 causas de muerte más frecuentes en España. https://public.tableau.com/views/CAUSASDEMUERTE1/Dashboard1?:show VizHome=no&:embed=true; 2019 Accessed February 18, 2019

176. INE. Encuesta de Morbilidad Hospitalaria. *Año 2016.* https://www.ine.es/prensa/emh_2016.pdf; 2018 Accessed December 05, 2018

Capítulo 1

Introducción y Objetivos

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Introducción

La farmacia comunitaria se puede describir como "una forma colectiva de práctica centrada en una organización que está integrada en una comunidad".[1] En farmacia comunitaria, la profesión ha ido evolucionando a lo largo del tiempo, aumentando el grado de prestación de servicios centrados en el paciente. Como resultado, esta evolución ha implicado un cambio de paradigma.[2-4] En general, el paradigma inicial estaba "centrado en el producto" y los farmacéuticos comunitarios eran percibidos principalmente como "minoristas". Bajo este paradigma, la formulación y dispensación de medicinas eran las principales actividades que los farmacéuticos llevaban a cabo.[2-4] Estas actividades siempre han estado acompañadas por algún grado de consejo y educación sanitaria al paciente.[5] En las últimas décadas, el paradigma ha ido cambiando a estar "centrado en el paciente" y el papel que juegan los farmacéuticos comunitarios está evolucionando hacia "prestadores de servicios sanitarios".[2-4, 6] Bajo este nuevo paradigma, se ha puesto menos atención en las actividades relacionadas con la formulación, se ha mantenido el foco en la dispensación (con consejo y educación sanitaria) y se ha acentuado la atención en la prestación de servicios profesionales.[2-6]

A pesar de producirse una evolución, el papel de los farmacéuticos en farmacia comunitaria sigue siendo dual: actúan como "minoristas" y como prestadores de servicios sanitarios.[1, 6] Fundamentalmente, la falta de remuneración de las actividades asistenciales empuja a los farmacéuticos comunitarios a centrarse y depender de actividades como la dispensación y las ventas.[5, 6] Sin embargo, los cambios en el contexto, como el incremento global de las enfermedades crónicas, han potenciado un uso más efectivo de los recursos disponibles y, por tanto, una reflexión sobre la infrautilización de los farmacéuticos comunitarios en su papel de prestadores de servicios sanitarios.[6-10] Por otro lado, los ingresos y beneficios provenientes de la dispensación y de ventas en las farmacias han ido disminuyendo a lo largo del tiempo debido a las crisis económicas y las políticas gubernamentales. Este cambio en las circunstancias económicas también ha llevado a los farmacéuticos a repensar y acentuar su papel de prestador de servicios.[5] A todo esto hay que añadirle que la propia motivación de los farmacéuticos para crecer profesionalmente y desarrollar todo su potencial para cubrir las necesidades de sus pacientes ha ido en aumento. Como consecuencia, en la actualidad se está

potenciando el desarrollo, implantación y evaluación de servicios profesionales farmacéuticos asistenciales (SPFA) de farmacia comunitaria en todo el mundo.[4, 5]

En general, los SPFA se refieren a aquellas intervenciones llevadas a cabo por farmacéuticos comunitarios para mejorar la salud y calidad de vida de los pacientes. Estas intervenciones incluyen tanto aquellas dirigidas a pacientes que están utilizando medicación como aquellas dirigidas a mejorar la salud pública.[2] Existen muchos ejemplos en la literatura de la implicación de farmacéuticos comunitarios en la prestación de SPFA.[10-18] Dicha implicación incluye proporcionar información a los pacientes sobre problemas de salud o el correcto uso/administración de medicamentos; evaluar parámetros en el paciente (ej. presión arterial, glucosa, hemoglobina A1c, lipoproteínas de alta y baja densidad, etc.); evaluar la adecuación/seguridad de tratamientos o planes de tratamiento (ej. revisiones de la medicación con o sin seguimiento, conciliación de la medicación tras el alta hospitalaria); proporcionar consejo relativo al estilo de vida; evaluar riesgo cardiovascular; evaluar la adherencia al tratamiento; o interaccionar con otros profesionales sanitarios para proporcionarles recomendaciones con respecto al tratamiento o información sobre el estado de salud de los pacientes.[10-18] Como cualquier servicio sanitario, los SPFA se deben planificar siguiendo un proceso sistemático y completo que conduzca, al final, a un servicio que sea valioso para la población y el sistema sanitario, eficiente e integrado con éxito en la práctica.

Para facilitar la comprensión de qué significa "planificar siguiendo un proceso sistemático y completo", en la siguiente sección se introduce un proceso de planificación de un programa sanitario.

Proceso de planificación de un programa sanitario

El desarrollo, implantación y evaluación de nuevos servicios sanitarios conlleva numerosas actividades que deben ser cuidadosamente planificadas y organizadas.[19] Existen distintos marcos teóricos para la planificación de servicios sanitarios que sugieren utilizar varias fases para proporcionar una estructura a estas actividades y así alcanzar la integración de los nuevos servicios en la práctica real.[20-22] Es necesario aclarar que, aunque a veces se usen indistintamente, existe una diferencia clara entre *servicio sanitario* y *programa sanitario*. Un servicio sanitario incluye las intervenciones llevadas a cabo por un profesional sanitario para prevenir, tratar o curar la enfermedad o, en general, mejorar la salud y/o calidad de vida de los

pacientes. Por su parte, un programa sanitario incluye el servicio sanitario como tal pero también las estrategias o intervenciones que se deben llevar a cabo para "respaldar la implantación, sostenibilidad, o efecto general del servicio".[23] Por tanto, los marcos teóricos para la planificación de programas sanitarios no se centran exclusivamente en "desarrollar", "implantar" y "evaluar" servicios sanitarios, sino que también abordan conjuntamente el desarrollo, implantación y evaluación del plan de implantación de los mismos.

A pesar de ser distintos entre ellos, los marcos teóricos de planificación comparten un proceso común subyacente, que McKenzie et al. describieron como el "Modelo Generalizado"[19] (ver fases del proceso en la Figura 1).
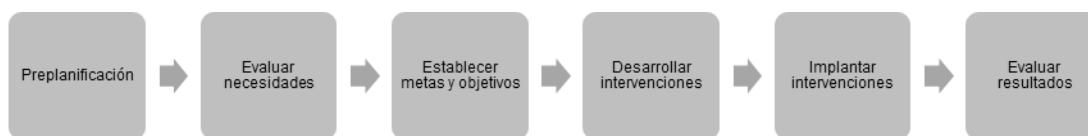
Figura 1. Fases en el proceso de planificación, basadas en el Modelo Generalizado[19]

Cabe destacar que la representación habitual de los marcos de planificación, en forma lineal o circular, es un intento de simplificar el proceso de planificación y así facilitar la comprensión de lo que se debe hacer en cada una de las fases. Sin embargo, los procesos reales pueden requerir refinar de forma iterativa el programa sanitario según los resultados de las evaluaciones y, por tanto, se pueden producir bucles dentro del proceso.[21, 24]

A continuación, se explican las fases que constituyen un proceso de planificación para reflejar la complejidad que tal proceso puede implicar, tomando como referencia el Modelo Generalizado:

La preparación del proceso es la fase donde ocurre la organización de todo el proceso de planificación. Esta fase preparatoria es considerada por McKenzie et al. una "cuasi-fase" (preplanificación) basándose en que estas actividades se llevan a cabo "antes de que la planificación empiece técnicamente". A su vez, esta fase se puede componer de los siguientes pasos[19]:

a) La identificación e implicación inicial de actores[a];
b) El desarrollo de una visión conjunta entre los actores;

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[a]En adelante se utilizará el término *actores* como equivalente al término *stakeholders* en inglés, referido a los individuos, grupos y/u organizaciones que, según Varvasovszky y Brugha, "tienen interés en el tema en cuestión, que se ven afectados por el problema o que, debido a su posición, tienen o podrían tener una influencia activa o pasiva en los procesos de toma de decisiones e implantación". Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plan.* 2000;15:338-345.

c) Definir el papel de los actores implicados y los comités a formar para dotar de estructura organizativa al proceso de planificación; y

d) Evaluar y garantizar el acceso a los recursos necesarios.

Prestar debida atención a estos pasos tempranos de planificación, previos al desarrollo del servicio, se destaca como aspecto crítico para el éxito en los marcos de planificación de programas sanitarios.[19, 20, 22, 23] Del mismo modo, también se considera crucial en planificación sanitaria, el involucrar a distintos actores desde etapas tempranas y a lo largo de todas las fases del proceso de planificación.[19, 20, 23, 25-27]

Evaluación de necesidades. En esta fase se determinan y priorizan las necesidades de la población. Se define un problema de salud basado en esas necesidades, y se realiza un análisis tanto del problema de salud como del entorno en el que éste ocurre. Se selecciona la población prioritaria y se evalúa la capacidad del sistema para responder a dicha necesidad.[19, 23]

Establecimiento de metas y objetivos. Las metas proponen qué se va a lograr con el programa de manera general (definen "qué" y "quién" cambiará). Los objetivos proponen cambios específicos que conducen a la consecución de las metas propuestas y que se pueden monitorizar (definen "qué", "quién", "cuando" y "cuanto" cambiará). Los objetivos se pueden establecer a distintos niveles: objetivos de proceso, objetivos de impacto (es decir, objetivos de aprendizaje, objetivos de comportamiento, objetivos ambientales) y objetivos de resultados.[19]

Desarrollo de las intervenciones y de las estrategias de implantación. Esta fase implica definir las actividades que se requieren para alcanzar las metas y objetivos marcados, es decir, "cómo" se lograrán los cambios especificados en los objetivos. Las intervenciones propuestas deben ser desarrolladas de manera sistemática, basadas en pruebas científicas y en la teoría existente.[19, 21]

Implantación de las intervenciones, considerada como "llevar a la práctica las intervenciones".[19] Las intervenciones se implantan hasta en tres escenarios/condiciones diferentes en los que se evalúan atendiendo a distintos criterios. Secuencialmente, los tres escenarios en los que las intervenciones se implantan y evalúan son:

a) En primer lugar, se implanta la intervención en un entorno controlado de investigación, a pequeña escala, para pilotarla/evaluar su factibilidad. El

propósito es evaluar y refinar los procesos y los componentes de la intervención, es decir, optimizar la intervención;

b) En segundo lugar, se implanta la intervención optimizada en un entorno controlado de investigación, a mayor escala, para evaluar su efectividad (es decir, evaluación del impacto y de los resultados); y

c) En tercer lugar, se implanta la intervención a gran escala, en condiciones reales; es decir, se lleva a cabo la implantación generalizada del servicio. Esta es la fase en que se pretende integrar el servicio en la práctica, evaluando su normalización en el sistema, así como su funcionamiento en condiciones reales.

Evaluación de los resultados. A lo largo del proceso de planificación es necesario realizar diversas evaluaciones que permitan mejorar la calidad del servicio y de las estrategias necesarias para lograr su integración final. Es fundamental poder relacionar los componentes específicos del programa con resultados concretos.[19] Además, debido a que la integración final es importante, se debe tener en cuenta todo el sistema para seleccionar *qué* evaluar y así generar información que sea de valor para diversos actores (ej. profesionales sanitarios, responsables de la toma de decisiones, pacientes).[28, 29] Existen distintos tipos de evaluaciones que, por lo general, se utilizan combinadas. El que predomine una u otra puede variar dependiendo de las necesidades dentro de cada fase del proceso de planificación. Independientemente de la fase en la que se lleven a cabo, las evaluaciones se deberían diseñar en las fases tempranas del proceso de planificación.[19] A continuación se presentan algunos tipos de evaluación descritos por McKenzie et al.[19] que son de utilidad:

a) La *evaluación formativa* tiene como objetivo evaluar los componentes del programa (ej. los métodos, instrumentos utilizados, etc.) y mejorar su calidad, antes o durante la implantación.[19, 22] Se puede llevar a cabo para evaluar componentes individuales de un programa ("pretesting") y para evaluar tanto los componentes como las estrategias de implantación a pequeña escala (pilotaje).[19]

b) La *evaluación de proceso* se lleva a cabo durante la implantación. Tiene como objetivo mejorar el proceso de implantación de un programa y se centra en indicadores que reflejan cuán exitosa fue la implantación. La información generada por este tipo de evaluación es útil para facilitar futuros esfuerzos de implantación.[19]

c) La *evaluación del impacto* tiene como objetivo evaluar la efectividad de un programa implantado a través de sus resultados intermedios. Se centra en los efectos a corto plazo (ej. cambios en indicadores clínicos, cambios en la sensibilización o el comportamiento de pacientes o profesionales sanitarios, o cambios ambientales).[19, 22]

d) La *evaluación de resultados* está orientada al largo plazo y mide la efectividad para alcanzar las metas finales (ej. reducción en eventos clínicos, la ratio coste-efectividad, mejora en la calidad de vida).[19, 22, 29] El modelo ECHO es un ejemplo de marco teórico que ayuda a seleccionar los resultados a incluir en este tipo de evaluación.[29] Este modelo promueve la búsqueda de un equilibrio entre los resultados clínicos, económicos y humanísticos de las evaluaciones.

e) La combinación de las evaluaciones del impacto y de resultados también se conoce en la literatura como *evaluación sumativa*.[19]

La manera en que se lleve a cabo cada una de las fases del proceso de planificación influirá, en última instancia, en las posibilidades que tiene el servicio de ser efectivo (es decir, la capacidad del servicio para mejorar la salud y la calidad de vida de los pacientes) y, finalmente, de que se implante.

Proceso de planificación de los servicios profesionales farmacéuticos asistenciales de farmacia comunitaria

En lo que respecta a los SPFA, la planificación de los mismos normalmente la realiza un solo grupo de actores (ej. investigadores en farmacia asistencial y/u organizaciones profesionales o científicas de farmacia), y con frecuencia sin ser de forma sistemática.[26] En general, la planificación de SPFA podría resumirse en los siguientes pasos secuenciales: (1) identificar una necesidad (basada en la literatura, estadísticas en salud, y/o temas de actualidad en salud); (2) desarrollar el servicio (comúnmente sobre una base práctica; utilizando la literatura disponible, la experiencia o intuición de los planificadores, o algo que "parecía una buena idea en aquel momento")[26, 30]; (3) testar el servicio en un entorno controlado de investigación para ajustar algunos problemas importantes que surjan al aplicar la intervención y probar los métodos de investigación a utilizar en la siguiente fase; (4) evaluar los resultados clínicos, económicos y humanísticos bajo condiciones experimentales (ej. estudios controlados aleatorizados); y, si estos resultados son satisfactorios, a veces (5) desarrollar estrategias de implantación e implantar el servicio de forma

generalizada. A pesar de los esfuerzos realizados, la integración real de los SPFA en atención primaria sigue siendo un reto.[6, 23, 31-34] Muchos servicios, incluso habiendo probado su efectividad, nunca llegan a implantarse.[35-38]

Algunas de las razones que pueden explicar la falta de integración de los SPFA en la práctica salen a la luz al comparar el proceso que habitualmente se sigue para planificar estos servicios con el proceso de planificación de programas sanitarios descrito anteriormente:

- *La atención que se presta a las fases tempranas del proceso de planificación (preparación del proceso, evaluación de necesidades) es insuficiente.* Las fases tempranas contribuyen a sentar las bases adecuadas para todo el proceso de planificación y con frecuencia se pasan por alto en la planificación de SPFA. Por tanto, una mayor atención a estas fases del proceso puede presentar una oportunidad estratégica para fomentar la integración de SPFA en la práctica real.[23]

- *Faltan abordajes colaborativos o se involucra tarde a los actores en el proceso de planificación.* Cuando se planifican SPFA, y se involucra a actores específicos (principalmente del colectivo médico), se suele hacer para consensuar protocolos de actuación. Otro punto en el que se involucran actores es ya en etapas muy tardías, tras haber medido los resultados del servicio y cuando se va a proceder a su implantación generalizada. Aunque en la literatura existen algunos ejemplos de participación de actores relacionados con SPFA,[39-43] los abordajes colaborativos desde etapas tempranas de la planificación son aún escasos. Los farmacéuticos comunitarios, las farmacias y los SPFA no están aislados; están incluidos en un sistema complejo del que forman parte. Lo que ocurre en el sistema influye a los SPFA y, a su vez, los SPFA pueden influir en el sistema. Los actores de todo el sistema son cruciales para entender la cantidad de influencias que los SPFA pueden producir, o a las que están expuestos.[44] Además, dichos actores pueden potenciar o inhibir la integración de los SPFA en el sistema. Por este motivo, es importante entender quiénes son los actores relativos al SPFA desde el principio e involucrarlos de una manera adecuada a lo largo del proceso de planificación. Mediante abordajes colaborativos es posible sacar partido a las aportaciones y perspectivas de los distintos actores, dando como resultado servicios que satisfacen necesidades reales y que presentan una mayor aceptación.[45, 46] La planificación del abordaje colaborativo debe

orientarse hacia entender a los actores y organizar estrategias de participación de éstos a lo largo del proceso de planificación del servicio.

- *La fase de desarrollo se realiza habitualmente de forma no sistemática*. A pesar de los muchos esfuerzos bien intencionados para desarrollar servicios eficientes, confiar casi exclusivamente en abordajes pragmáticos que se basan en la experiencia o intuición de los planificadores deja margen de mejora en esta fase. Es de suma importancia que el desarrollo de servicios se base en evidencia científica y en teoría relevante.[21, 30] En ausencia de una teoría explícita que guíe el desarrollo del servicio, es más difícil establecer relaciones causales entre lo que se hace y los resultados que se obtienen.[30]

- *Los SPFA no se pilotan, entendiendo esto como refinar los procesos y componentes de la intervención (optimización del servicio)*, según se ha explicado con anterioridad. Las evaluaciones se diseñan sin prestar demasiada atención a la optimización del servicio.[47] Ser capaces de entender qué componentes del servicio son responsables de los resultados que se obtienen con él, permite discernir entre cuáles han de mantenerse como están y cuáles han de modificarse para una mejor adaptación al contexto de implantación.[24, 30, 48] La ausencia de optimización, junto con la ausencia de una teoría explícita mencionada en el punto anterior, lleva a que en los SFPA existentes no se conozcan los componentes específicos que son responsables de los efectos de cada servicio.

- *Primero se desarrollan los SPFA y después se diseñan las estrategias de implantación, cuando el servicio se va a implantar de forma generalizada*. Tal y como ocurre con los actores, se debe prestar atención a las demás partes del contexto desde el inicio del proceso de planificación. Desarrollar un entendimiento temprano de qué puede afectar a la implantación de un servicio en un contexto específico (tanto positiva como negativamente) permite la adaptación contextual del servicio durante la fase de desarrollo, y el diseño acorde de estrategias de implantación.[26, 42, 49]. El desarrollo del servicio (adaptado de la mejor forma posible al contexto donde va a implantarse) y del plan de implantación deben ocurrir de forma simultánea.

- *Existen pocas descripciones detalladas de SPFA (de sus componentes, de cómo se ejecutan y de las teorías en las que se basan), de las estrategias de implantación y de los procesos de planificación*. Los SPFA no se describen suficientemente en la literatura científica, al igual que ocurre con otras intervenciones complejas, especialmente aquellas relacionadas con cambios

comportamentales.[17, 26, 30, 50] Existe un mayor énfasis en informar del valor de las intervenciones que en proporcionar descripciones detalladas de las mismas que permitan mejorar la intervención y su proceso de planificación.[50] La variabilidad con la que se describen los servicios/intervenciones dificulta que los estudios se puedan replicar. Además, la falta de información con respecto a los componentes de las intervenciones, las teorías en las que se basan y cómo se ejecutan impide el desarrollo de guías que promuevan la práctica basada en la evidencia.[17, 26, 30] La necesidad de proveer de explicaciones adecuadas en el ámbito sanitario ha llevado al desarrollo de distintas guías para describir estudios variados[51-57] y la creación de la red Equator Network (Enhancing the QUAlity and Transparency Of health Research).[58]

En la actualidad, la necesidad de mejorar la implantación de los SPFA ha hecho que algunos investigadores centren sus esfuerzos en la aplicación de la *Ciencia de la Implantación* —cuyo objetivo es introducir innovaciones en la práctica— en farmacia asistencial.[5] En esta línea, diversos estudios propusieron y promulgaron un marco teórico para guiar la implantación de SPFA,[59, 60] usaron marcos teóricos de implantación para integrar SPFA que ya existen[61, 62] y/o estudiaron los aspectos que afectan a la implantación de los SPFAs.[3, 13, 63-67] Estos estudios revelan, entre otros muchos aspectos, que la implantación de SPFA requiere de cambios a varios niveles (individual, interpersonal, organizacional, comunitario y sistema sanitario) y, por tanto, que los procesos de planificación deben incorporar distintos actores que puedan intervenir para que esos cambios se produzcan.[47, 64] Tiene sentido sugerir que estos actores pueden hacer contribuciones importantes si se les implica desde las fases tempranas del proceso de planificación.

Al mismo tiempo, hay otros investigadores que, para fomentar la implantación de SPFA, están centrando sus esfuerzos en mejorar el desarrollo de los servicios y de los procesos de planificación. Por ejemplo, se ha adaptado un marco teórico para la planificación de programas sanitarios, llamado *Intervention Mapping,[20]* para servicios y programas sanitarios en farmacia.[23] También, en otro trabajo, se han identificado los avances metodológicos para desarrollar intervenciones en farmacia asistencial de manera sistemática.[26] Además, se han llevado a cabo estudios para hacer un análisis temprano del contexto para la implantación futura de un servicio[49] o para entender cómo investigaciones previas habían abordado el establecimiento de los fundamentos para las intervenciones o la justificación de las mismas (fases

tempranas de la planificación).[68] La investigación que se presenta en esta memoria de tesis está alineada con este grupo de esfuerzos, intentando arrojar luz sobre tres de los argumentos ofrecidos anteriormente en relación a la falta de integración de SPFA: las fases tempranas del proceso de planificación, los abordajes colaborativos y la descripción detallada del proceso de planificación.

Fases tempranas del proceso de planificación y planificación del abordaje colaborativo

Dentro de las fases tempranas del proceso de planificación, la fase de preparación sienta las bases para todo el proceso. Los esfuerzos en esta etapa se dirigen a coordinar y organizar dicho proceso.[19] Como se ha explicado anteriormente, la fase de preparación estaría compuesta por los siguientes pasos[19]: (1) identificar e involucrar inicialmente a los actores; (2) desarrollar una visión conjunta entre los actores; (3) definir la estructura organizativa del proceso de planificación (papeles de los actores y comités); y (4) asegurar el acceso a los recursos necesarios. Esta tesis se centrará en los dos primeros pasos de la fase de preparación, poniéndolos en práctica en el contexto de la planificación de SPFA. Versará sobre cómo planificar el abordaje colaborativo, tocando aspectos específicos relacionados con el establecimiento de este.

Importancia y retos de la participación de actores

La participación de diversos actores en investigación en salud tiene el potencial de fomentar la traslación de los resultados de investigación a la práctica, y el aprendizaje colaborativo, al integrar la experiencia teórica y técnica de los investigadores con la experiencia en el mundo real de otros agentes del sistema.[45, 69-71] Además, la participación de actores permite la organización de procesos transparentes, crea oportunidades para construir nuevas relaciones, y estimula sentimientos de pertenencia hacia el programa resultante.[45, 46, 72-75] La incorporación de distintas perspectivas en planificación sanitaria enriquece el proceso al reunir diferentes ideas, habilidades y recursos, aumentando así el conocimiento del contexto en el que el servicio se implantará, e identificando y atendiendo necesidades reales de los pacientes y del sistema sanitario.[70, 73, 76] En aquellos procesos en los que participan los actores adecuados se disminuyen las posibilidades de crear sesgos y se producen resultados que son social y culturalmente válidos y relevantes.[45, 46, 74, 76] La participación de actores en la definición de los límites de la investigación asegura

que el proyecto responda no sólo a necesidades reales, sino también a las prioridades y preocupaciones de dichos actores.[45, 74, 77] La participación facilita la adaptación de la investigación al contexto de implantación, ya que fomenta una mayor comprensión por adelantado de dicho contexto.[45, 46]

A pesar de los beneficios potenciales mencionados, los abordajes participativos no están exentos de riesgos y hay varios aspectos que deben considerarse cuidadosamente:

- *El primer aspecto es el contexto en el que se organiza el proceso participativo.*[78, 79] Los problemas sociales, políticos o relacionados con la salud que afectan al contexto de implantación pueden influir sobre cómo se desarrolla el proceso y sus objetivos.[77, 80, 81] Por este motivo, es necesario entender dicho contexto de antemano.

- *El segundo aspecto es el propio proceso participativo.*[78, 79] Los procesos participativos deben diseñarse cuidadosa y equilibradamente para asegurar la implicación temprana de los actores, y que aquellos que participan sean representativos, creando así procesos justos y transparentes.[73, 79] Se debe prestar especial atención a construir relaciones de confianza y respeto mutuo entre los actores.[73, 79, 82, 83] Trabajar con actores requiere de mucho tiempo y también del desarrollo de habilidades de facilitación para poder hablar de los problemas de forma sincera y abierta, gestionar los conflictos que podrían surgir durante el proceso, lidiar con las dinámicas de poder, y evitar que intereses particulares de los actores arruinen el proceso.[45, 46, 82, 84] Los procesos participativos también son costosos, así que se deben asegurar los recursos necesarios con antelación.[43, 45, 78, 85]

- *El tercer aspecto son los resultados del proceso.*[78] Es necesario planificar el establecimiento de responsabilidades en cuanto al logro de objetivos; asegurar que las actividades de empoderamiento, si existen, se centren en los actores adecuados; potenciar la capacidad de los actores y fomentar que se apropien del proceso.[78, 79] Asimismo, es importante proporcionar a los actores información sobre los resultados que se obtienen y garantizar que se puedan cumplir las promesas que se les hacen para evitar su frustración.[46, 78, 82]

- Finalmente, se debe *planificar a largo plazo la sostenibilidad del proceso participativo, de sus resultados y de las alianzas creadas.*[45, 78, 79, 82, 83] Considerar los plazos y recursos necesarios es fundamental y, además, se

necesita tener en cuenta otros aspectos que pueden contribuir al éxito del proceso participativo a largo plazo. Evaluar la participación de los actores y los resultados del proceso participativo puede ayudar a detectar dificultades con suficiente antelación como para reorientar los esfuerzos a llevar a cabo. Otro aspecto importante es mantener sistemas de documentación adecuados (ej. documentar las responsabilidades de cada participante o las actividades realizadas) y generar informes (ej. crear informes dirigidos a los actores participantes o para llegar al público general).[79, 82]

Los procesos participativos implican un diseño iterativo,[86] ya que los actores y los contextos en los que estos procesos se llevan a cabo están en constante evolución.[75] Por ello, es necesario revisar y actualizar objetivos y resultados a medida que el proceso se desarrolla.[84, 85] También es crucial, para planificar efectivamente procesos participativos, saber a quién involucrar en cada etapa del proceso y asegurar un grado adecuado de participación para cada actor .[78, 84, 85]

Entender a los actores y a quién involucrar: análisis de actores

El primer paso para determinar qué actores involucrar en un proceso participativo es definir qué es un "actor" para esa situación concreta.[82] Este es un aspecto importante, ya que existen muchas definiciones de actor[44, 87-89] y, dependiendo de cuán general o específica sea la definición, habrá más o menos actores a considerar.[88] Para establecer un proceso participativo para el desarrollo de un SPFA, parece razonable definir a los actores de manera un tanto general inicialmente, ya que ser demasiado específico antes de que se determine en qué se va a centrar el servicio podría llevar a la introducción de sesgos o a que se ignoren actores que podrían ser importantes para el proceso.[78, 84] Para este caso, se considera apropiada la definición de "actor" propuesta por Varvasovszky y Brugha[90]: aquellos que "tienen interés en el tema en cuestión, que se ven afectados por el problema o que, debido a su posición, tienen o podrían tener una influencia activa o pasiva en los procesos de toma de decisiones e implantación". Esta definición permite tener en cuenta inicialmente a actores con habilidades, percepciones y recursos variados que pueden contribuir a mejorar o resolver problemas de salud pública.

Cuando se trata de seleccionar actores para un SPFA, los primeros grupos en los que probablemente se piensa son los beneficiarios finales del servicio (pacientes, cuidadores) o aquellos que lo van a prestar (farmacéuticos comunitarios). Sin embargo, también se deben considerar otros profesionales sanitarios y otros actores

que pueden influir indirectamente en la salud de los pacientes debido a que ocupan cargos de toma de decisión (ej. gobierno, organizaciones profesionales, responsables políticos, académicos, etc.).[23] Es importante combinar actores que ocupen tanto puestos de alto nivel como puestos de base para acceder a una amplia gama de conocimientos y para reunir el apoyo y los recursos adecuados para el proceso.[23, 45, 70, 80, 91] Hay que seleccionar la mejor combinación posible de actores para equilibrar la heterogeneidad/representatividad y la complejidad para gestionar el proceso.[71, 92]

No existen criterios preestablecidos que definan qué características ha de tener un actor para participar en la planificación de programas sanitarios; por tanto, los atributos de los actores y los criterios utilizados para su selección en un programa específico deben ser transparentes.[78] Un análisis de actores puede contribuir a lograr tal transparencia, al identificar y analizar sistemáticamente a los actores relacionados con un programa sanitario concreto. "Un análisis de actores es un abordaje, herramienta o conjunto de herramientas para generar conocimiento sobre los actores, individuos u organizaciones, a fin de comprender su comportamiento, intenciones, interrelaciones e intereses; y para evaluar la influencia y los recursos que aportan en los procesos de toma de decisiones o de implantación".[90] La información generada por un análisis de actores es crucial para sentar las bases adecuadas para un proceso de planificación participativo[45, 73, 84, 85] y es esencial para entender y responder correctamente al contexto en el que se desarrollará, implantará y evaluará el programa sanitario.[80, 84, 85]

Llevar a cabo un análisis de actores implica (1) definir el contexto en el que el análisis tendrá lugar y los límites para el análisis; (2) aplicar métodos para identificar a los actores, diferenciarlos/categorizarlos y/o analizar las relaciones entre ellos; y (3) proponer acciones futuras y actividades para la participación de actores.[93] El valor de los análisis de actores está avalado por su uso en diferentes campos, por ejemplo, en gestión de la asistencia sanitaria[72]; en políticas sanitarias[70, 72, 92, 94]; en proyectos de infraestructura en aeropuertos[95] o en el sector del agua[96]; en investigación de riesgos de bioseguridad[97, 98]; o en investigación de la gestión de recursos naturales.[93]

En la literatura, se describen varias técnicas para realizar análisis de actores.[44, 84, 99] Además, diferentes autores han llevado a cabo revisiones para entender mejor este proceso.[44, 72, 89, 97] Los métodos que se usan para el análisis de actores implican recopilar datos de diferentes documentos (ej. sitios de internet y literatura académica); de individuos (ej. mediante entrevistas cara a cara y cuestionarios

estructurados) o de grupos de actores (ej. a través de talleres, grupos focales o discusiones de grupo informales).[90, 93] La elección de los métodos a utilizar depende del propósito del análisis y de los recursos disponibles en cuanto a presupuesto, tiempo y recursos humanos.[72]

Una vez analizados los actores, los planificadores de programas sanitarios deben decidir a quién involucrar y de qué manera. Los actores que se vayan a involucrar no tienen que participar de manera similar y simultánea a lo largo del proceso de planificación,[84, 100] ya que cada fase requiere habilidades diferentes y afecta a diferentes actores. Por otro lado, los actores tienen intereses, capacidades y deseos diversos en cuanto a cómo involucrarse y, por lo tanto, es importante tener en cuenta esta variabilidad al planificar las estrategias de participación.[84, 101] Por todo ello, los planificadores de SPFA deberían esforzarse en organizar niveles adecuados de participación para los actores, al menos para aquellos que son clave para el proceso.[85] Existen diferentes niveles de participación, que van desde simplemente proporcionar información a los actores, hasta que sean los propios actores quienes toman las decisiones.[78, 82, 102, 103] Dado que el diseño e implantación de estrategias de participación de actores es un área amplia y compleja, esta tesis se centrará en la participación necesaria para llevar a cabo los dos primeros pasos de la fase de preparación. Para ampliar la información sobre niveles de participación de actores se pueden consultar los artículos escritos por Arnstein,[102] Goodman y Sanders Thomson,[82] Bryson[84] —aplicado a evaluaciones— o la Asociación Internacional de Participación Pública.[103] Investigar en profundidad la participación de actores a lo largo de todo el proceso de planificación merece especial atención, pero está fuera del alcance de esta tesis.

Desarrollo de una visión conjunta de los actores

Alinear a los actores en términos de visión contribuye al éxito del proceso de planificación.[19, 101] Una visión se puede describir como "una declaración de intenciones cuidadosamente formulada que define un destino o estado de cosas futuro que un individuo o grupo considera particularmente deseable".[104] Las visiones se utilizan para representar los resultados del proceso de planificación a largo plazo.[105] Por tanto, desarrollar una visión proporciona un foco hacia el que dirigir todos los esfuerzos, sienta las bases para la planificación y facilita que los procesos de toma de decisiones sean más transparentes.[105-108] El desarrollo de una visión es

esencial para llevar a cabo una planificación estratégica,[104, 108] ya que sirve de impulso para empujar el proceso hacia sus metas.[104]

En los procesos de planificación, las visiones se pueden desarrollar de manera individual (por los planificadores), o colectiva (con los actores). El abordaje participativo, además de considerar variedad de perspectivas, conlleva una serie de beneficios que lo hacen poderoso. Escuchar a otros actores desafía ideas y prejuicios individuales y amplía, en aquellos que participan, la manera en que perciben el contexto.[93, 109] Además, los actores que desarrollan una visión conjunta desarrollan un sentimiento de apropiación de la misma, lo cual genera entusiasmo y les ayuda a aceptar el desafío de alcanzar y difundir dicha visión.[104-106, 108]

Para desarrollar una visión, es necesario fijar una fecha en el futuro que esté lo suficientemente lejos para permitir que la imaginación fluya sin construir sobre problemas del presente; pero también ha de estar lo suficientemente cerca para que parezca real.[108] Los pasos a seguir varían entre distintos autores[110]; es un proceso flexible que debe adaptarse a las circunstancias específicas, objetivos y recursos disponibles.[108] Por otro lado, dibujar la visión fomenta la creatividad de los actores y facilita la exploración profunda de sus mentes para acceder a ideas que se encuentran en su subconsciente.[106, 111] Para desarrollar visiones se utilizan de forma habitual talleres y conversaciones entre actores.[110, 112] Una vez desarrollada la visión, es crucial identificar las acciones necesarias para alcanzarla.[108]

Contextos de investigación

La investigación que constituye esta tesis se ha llevado a cabo en dos escenarios: Australia y España. A continuación, se proporciona una descripción general de la situación de los SPFA en cada uno de estos países.

En *Australia*, el gobierno australiano y los gobiernos de los distintos estados y territorios administran conjuntamente el sistema sanitario, compartiendo responsabilidades.[113] El Departamento de Salud (Gobierno de Australia) administra Medicare, el sistema de seguro de salud universal que "garantiza a todos los australianos (y algunos visitantes extranjeros) el acceso a una amplia gama de servicios hospitalarios y sanitarios a bajo coste o sin coste alguno".[114] Medicare financia el acceso a la atención sanitaria (para los titulares de tarjetas Medicare) a través del Plan de Beneficios Médicos —que subvenciona los servicios y tratamientos prestados en los hospitales públicos—, y el Plan de Beneficios Farmacéuticos (PBS)

—que subvenciona medicamentos, servicios relacionados y Programas en Farmacia Comunitaria—.[114, 115]

La profesión farmacéutica está altamente regulada en Australia. Existe regulación en cuanto a la propiedad de las farmacias comunitarias a nivel estatal y territorial: la norma general es que sólo pueden ser propietarios de una farmacia los farmacéuticos. Sin embargo, en ocasiones los propietarios de farmacias se unen a grupos que les ofrecen apoyo en gestión y alinean la imagen de su farmacia con aquella del grupo con el que trabajan. El número de farmacias que un farmacéutico puede tener en propiedad o copropiedad varía dependiendo del estado o territorio.[116] Existen unas Reglas de Ubicación de la Farmacia aplicables a aquellas farmacias que suministran medicamentos del PBS y según las cuales se debe obtener aprobación previa a la nueva apertura o traslado de una farmacia.[117]

Existen 5.723 farmacias comunitarias que suministran medicamentos del PBS en Australia.[118] Teniendo en cuenta una población de 25.257.322 residentes,[119] Australia cuenta con 4.413 residentes por farmacia. En las ciudades capital, el 95% de los residentes tiene acceso a una farmacia comunitaria en un rango de 2.5 Km, mientras que el 72% lo hace en áreas regionales.[120] El número de farmacéuticos registrados asciende a 31.212,[121] de los cuales dos tercios trabajan en farmacia comunitaria.[120]

La remuneración del gobierno a las farmacias comunitarias por dispensar medicamentos PBS se ha establecido, desde 1990, a través de acuerdos suscritos cada cinco años entre la Commonwealth y el Pharmacy Guild de Australia (la organización nacional de propietarios de farmacia).[122] Con estos acuerdos (CPAs), ambas instituciones persiguen tres intereses comunes: (1) "promover la sostenibilidad, eficiencia y coste-efectividad del PBS dentro del amplio contexto de la reforma sanitaria"; (2) "asegurar que los recursos de la comunidad se dirijan de forma adecuada a través del sistema sanitario"; y (3) "apoyar la sostenibilidad y viabilidad de un sector de farmacia comunitaria eficiente".[115] El alcance de los CPAs ha evolucionado con el tiempo. La remuneración de los farmacéuticos ha pasado de basarse únicamente en las prescripciones y vinculada a los precios de los medicamentos en el primer CPA, a basarse gradualmente en servicios, aumentando acorde con los servicios prestados a los pacientes hasta el CPA actual, el sexto (Figura 2). Desde el segundo CPA, y aumentando con el tiempo, también se ha incluido remuneración por investigaciones que demostrasen la contribución de los

farmacéuticos a la atención sanitaria del paciente y al desarrollo de programas y servicios en farmacia comunitaria.[115, 123-127]

En el sexto CPA, la remuneración de la farmacia se separó del precio de los medicamentos; a los farmacéuticos ahora se les paga por los servicios que prestan. Actualmente, la remuneración de la farmacia comunitaria se basa fundamentalmente en la dispensación (una tasa de dispensación en reconocimiento a las habilidades específicas necesarias para esta actividad; una tasa de administración, manejo e infraestructura; y una tasa por medicamentos peligrosos), e ingresos que provienen de los programas en farmacia comunitaria. El sexto CPA considera a la farmacia comunitaria como "una parte integral del sistema de atención sanitaria australiano a través de su papel en la prestación del PBS y servicios relacionados" y reconoce la necesidad de que participen actores en la planificación de programas en farmacia comunitaria.[115]

En Australia, los SPFA han sido impulsados por una combinación entre diversos actores y factores contextuales, como la disminución de ingresos por dispensación.[5] Entre estos actores, el gobierno desempeñó un papel importante al reconocer el papel de los farmacéuticos comunitarios como parte del equipo sanitario y proporcionar remuneración para SPFA e investigación. Los farmacéuticos comunitarios, a su vez, contribuyeron a esta evolución a través de su voluntad de crecer profesionalmente y ganar ventaja competitiva. Por otro lado, el mundo académico proporcionó apoyo a través de la investigación y la formación de estudiantes en farmacia asistencial.[5] Finalmente, las organizaciones profesionales de farmacia (el Pharmacy Guild,[128] la Pharmaceutical Society of Australia[129]), entrenaron a los profesionales y desarrollaron material educativo.[5] El Pharmacy Guild, además, desempeñó el papel adicional de servir como enlace y negociar con el gobierno.

Primer CPA (1990)	Segundo CPA (1995)	Tercer CPA (2000)	Cuarto CPA (2005)	Quinto CPA (2010)	Sexto CPA (2015)
• Remuneración basada en la prescripción (tasa de dispensación–reconocimiento de habilidades especializadas en la dispensación+ margen comercial sobre el precio de los medicamentos+ tasa medicamentos peligrosos+ un subsidio esencial a la farmacia para mantener el acceso a los medicamentos)	• Remuneración basada en la prescripción (tasa de dispensación+ tasa de administración+ margen comercial+ subsidio de farmacia aislada, para farmacias en entornos aislados o zonas rurales) • Por primera vez se asignan fondos a servicios profesionales y programas: revisión de la gestión de medicación en residencias • Se asignan fondos para proyectos que demuestren "roles coste-efectivos de la farmacia en atención primaria"	• Remuneración basada en la prescripción (tasa de dispensación + margen comercial + tasa para medicamentos que producen adicción + subsidio para farmacias rurales + subsidio para apoyar a servicios sanitarios aborígenes) • Servicios y programas profesionales en farmacia: revisión de la gestión de la medicación (en residencias y en el hogar del paciente) • Programa de desarrollo para personal de farmacia rural • Se asignan fondos para crear el Programa de Desarrollo de la Farmacia para "promover una mejor involucración de la farmacia comunitaria para conseguir una prestación de servicios de calidad y coste-efectivo	• Remuneración basada en la prescripción (tasa de dispensación + margen comercial + tasa de manejo especial, para medicamentos peligrosos o extemporáneos +pago por prescripción del PBS procesada online + pago por prescripción del PBS procesada de pacientes bajo un convenio específico + incentivo de dispensación por sustituir bioequivalentes cuando es aplicable • Servicios y programas profesionales en farmacia: revisión de la gestión de la medicación (en residencias y en el hogar del paciente); programas para una mejor salud comunitaria (fondos para proyectos de farmacia en atención primaria y salud comunitaria); programas de farmacia rural; programas para Aborígenes y Gentes de las islas Torres Strait; e iniciativas de salud electrónica.	• Remuneración basada en la prescripción (tasa de dispensación + margen comercial + tasa de manejo especial + incentivo de dispensación por sustituir bioequivalentes + tasa por prescripción electrónica. • Servicios y programas profesionales en farmacia: programas de gestión de la medicación; programas de apoyo rural; programas para Aborígenes y Gentes de las islas Torres Strait; incentivo de farmacia asistencial y acreditación; investigación y desarrollo; continuidad de la medicación • Se asignan fondos adicionales a programas que apoyen servicios a pacientes	• Remuneración basada en la prescripción (tasa de dispensación + tasa de administración e infraestructura, que reemplaza el margen comercial + incentivo de dispensación por sustituir bioequivalentes + tasa por medicamentos peligrosos) • Servicios y programas profesionales en farmacia: programas de adherencia a la medicación (ej. sistemas de dosificación personalizados, suministro por etapas); programas de gestión de la medicación (intervenciones clínicas, revisión de la medicación en el hogar del paciente, en residencias, revisión de la medicación a pacientes con diabetes); programas para Aborígenes y Gentes de las islas Torres Strait; programas de apoyo rural y salud electrónica. • Fondos adicionales para apoyar un programa que busca mejorar los resultados

Figura 2. Evolución de los componentes de la remuneración a las farmacias comunitarias bajo los distintos CPA[115, 123-127]

En España, el gobierno central y los gobiernos de las comunidades autónomas (los gobiernos regionales) administran conjuntamente el sistema sanitario; fundamentalmente, es un sistema descentralizado. El Sistema Nacional de Salud integra todas las estructuras públicas y los servicios sanitarios, incluyendo los pertenecientes al gobierno central y los pertenecientes a las comunidades autónomas.[130] El Sistema Nacional de Salud está financiado con fondos públicos, ofrece cobertura universal, y los servicios sanitarios son gratuitos para los usuarios "en el momento de su uso".[131] En general, el gobierno central coordina la asistencia sanitaria entre las comunidades autónomas para garantizar que todos los ciudadanos tengan un acceso adecuado. También establece una cartera común de servicios básicos (prevención, diagnóstico, tratamiento y rehabilitación) y una cartera de servicios suplementaria (que incluye beneficios farmacéuticos entre otros). Las comunidades autónomas se responsabilizan de la planificación sanitaria, la salud pública y la gestión de los servicios sanitarios en su territorio. Pueden complementar la cartera común de servicios básicos prestando servicios adicionales a sus comunidades. El acceso a la sanidad pública en cualquier parte de España se proporciona a través del Sistema de Seguridad Social a todas las personas que posean una tarjeta sanitaria emitida por cualquier comunidad autónoma. Esto incluye el acceso a beneficios farmacéuticos.[131]

La profesión farmacéutica también se encuentra altamente regulada en España. Las farmacias comunitarias se consideran "establecimientos sanitarios privados de interés público" cuya propiedad/titularidad está reservada exclusivamente a farmacéuticos. Cada farmacéutico puede ser titular o cotitular de una sola farmacia. Existe regulación en cuanto a la ubicación de las farmacias comunitarias, basada en criterios geográficos y demográficos, para garantizar un igual acceso a los medicamentos para toda la población.[132, 133]

En España, hay más de 21.000 farmacias comunitarias.[132] Teniendo en cuenta una población de 46.528.024 residentes,[134] corresponden unos 2.168 residentes por farmacia. El 99% de los habitantes españoles tiene acceso a una farmacia comunitaria en el área en la que viven, independientemente de si viven en entornos rurales o urbanos. Por este motivo, el farmacéutico es el único profesional sanitario en muchos pueblos.[132] Hay un total de 71.119 farmacéuticos colegiados, de los que más de 45.000 trabajan en farmacia comunitaria.[132, 135]

La remuneración que perciben las farmacias comunitarias del gobierno por prestar los beneficios farmacéuticos incluidos en la cartera del Sistema Nacional de Salud se basa casi exclusivamente en las prescripciones, un reembolso vinculado al precio de los medicamentos o productos sanitarios. Los precios de medicamentos y productos sanitarios en España están regulados para garantizar la igualdad de acceso a toda la población. Para estos productos, todas las farmacias de España tienen el mismo precio.[133] Los beneficios farmacéuticos se acuerdan entre las comunidades autónomas y los Colegios Oficiales de Farmacéuticos correspondientes a cada comunidad.[132] Hoy en día, la viabilidad de las farmacias comunitarias aún depende mayoritariamente de productos (sea medicamentos, productos sanitarios o productos de parafarmacia) y sólo algunos servicios están financiados en algunas comunidades autónomas. Curiosamente, los servicios financiados están relacionados principalmente con la mejora de la salud pública (ej. cribados de VIH, terapia de sustitución con metadona, cribado de cáncer de colon y recto).[136] Sólo ha habido un caso en el que el seguimiento farmacoterapéutico (para pacientes con diabetes utilizando más de 8 medicamentos) se ha testado remunerando a los farmacéuticos que lo prestaba en una comunidad autónoma: el País Vasco.[137]

Los farmacéuticos comunitarios están presionando para involucrarse más en los equipos de atención sanitaria y para percibir una remuneración por los servicios que prestan.[132, 138, 139] A pesar de la situación descrita anteriormente, en España se

realizan esfuerzos sustanciales para mostrar el valor de la farmacia comunitaria e integrar los SPFA en atención primaria. Como ejemplo sirven las diversas actividades que se están llevando a cabo en varias comunidades autónomas.[140-142] Varios programas han cuantificado el valor que aportan los SPFA a los pacientes y al sistema sanitario, como TOMCOR[143, 144] (para pacientes afectados de enfermedad coronaria); ConSIGUE[62, 145-148] (demostrando el impacto clínico, económico y humanístico del seguimiento farmacoterapéutico y su implantación); y AdherenciaMed[149-151](que se centra en utilizar un SPFA para mejorar la adherencia al tratamiento). Desde la academia, se inició un impulso en la Universidad de Granada, con la creación en 1993 del Grupo de Investigación en Atención Farmacéutica. Este grupo ha proporcionado formación a farmacéuticos en farmacia asistencial desde 1997, año en el que se creó el máster en atención farmacéutica. También han fomentado la investigación en este área al desarrollar, entre otros proyectos, consensos terminológicos[152-154] y el Método Dáder de Seguimiento Farmacoterapéutico.[155] Este grupo, junto con el Consejo General de Colegios Oficiales de Farmacéuticos y otros actores, han puesto en marcha programas específicos para farmacia comunitaria como ConSIGUE y AdherenciaMed. La Universidad de Granada también creó la primera Cátedra de Atención Farmacéutica y la primera Sección de Departamento de Farmacia Asistencial en España.[2, 156] En la actualidad, varias universidades ofrecen formación de posgrado relacionada con la farmacia asistencial en España (ej. Barcelona, Sevilla, Valencia). La formación de pregrado en farmacia asistencial está progresando, pero aún no es obligatoria en todas las facultades.

La evolución de la farmacia comunitaria en España también recibió impulso desde la parte científica-profesional, con la creación, en 1998, de la Fundación Pharmaceutical Care, que trabaja para promover actividades científicas y profesionales relacionadas con la atención farmacéutica.[2, 157] Otro impulso fue la creación, en 2001, de la Sociedad Española de Farmacia Familiar y Comunitaria (SEFAC). SEFAC proporciona formación a farmacéuticos y lleva a cabo diversos proyectos de investigación; ha estado trabajando específicamente en el avance de la farmacia comunitaria hacia el paradigma centrado en el paciente.[2, 158]

El apoyo desde el gobierno central se materializó inicialmente al colaborar con expertos para crear, en 2001, un *Documento de Consenso sobre Atención Farmacéutica*. Este documento proporcionó consenso en la terminología existente para dispensación, indicación y seguimiento farmacoterapéutico, y reconoció el valor

que el farmacéutico puede aportar en el cuidado al paciente.[159] El siguiente impulso vino de la mano de la introducción de la Ley de Garantías y Uso Racional del Medicamento en 2006,[160] según la cual los farmacéuticos deben participar activamente para garantizar la efectividad y seguridad de los medicamentos en colaboración con otros profesionales sanitarios. Finalmente, en 2013, se firmó un Acuerdo Marco con el Consejo General de Colegios Oficiales de Farmacéuticos de España, en el que se estableció una colaboración en tres líneas: "pacto por la sanidad, política de desarrollo profesional y gestión clínica".[2]

En cuanto a la representación profesional, el Consejo General de Colegios Oficiales de Farmacéuticos promovió la creación del Foro de Atención Farmacéutica (FORO) en 2004. FORO reunió en un grupo de trabajo a instituciones relacionadas con la atención farmacéutica a nivel comunitario, de primaria y de hospital. El objetivo era continuar el desarrollo del *Documento de Consenso sobre Atención Farmacéutica* publicado en 2001.[2, 161] En 2008, FORO publicó un documento de consenso[162] que incluía recomendaciones en cinco áreas para impulsar la generalización de la atención farmacéutica: justificación, motivaciones, herramientas, formación y difusión. Para aplicar específicamente los objetivos establecidos en farmacia comunitaria y contribuir a la implantación de los SPFA, en 2010 se creó Foro de Atención Farmacéutica en Farmacia Comunitaria (FORO AF-FC) que publicó la *Guía práctica para los Servicios de Atención Farmacéutica en la Farmacia Comunitaria* (dispensación, indicación y seguimiento farmacoterapéutico).[163] Esta guía incluía un glosario, y una descripción de los procedimientos y de una herramienta informática para respaldar la prestación de servicios a los pacientes por parte de los farmacéuticos. Este nuevo grupo incluye el Consejo General de Colegios Oficiales de Farmacéuticos, SEFAC, la Fundación Pharmaceutical Care España, la Conferencia Nacional de Decanos de Facultades de Farmacia, y el Grupo de Investigación en Atención Farmacéutica de la Universidad de Granada.[164] En 2017, FORO AF-FC publicó una propuesta para unificar los contenidos de la asignatura de Atención Farmacéutica en el grado.[165] Además de fomentar la creación de los Foros, el Consejo General de Colegios Oficiales de Farmacéuticos publicó, en 2013, una Guía de Buenas Prácticas en Farmacia Comunitaria en España[166] que define las funciones que pueden ejercer los farmacéuticos en España y los procedimientos de buenas prácticas. Adicionalmente, el Consejo General de Colegios Oficiales de Farmacéuticos en España colaboró con varias organizaciones para llevar a cabo proyectos de investigación (ej. ConSIGUE, AdherenciaMed, DValor) y ha proporcionado formación continua a farmacéuticos.[2, 5, 161]

En España, el trabajo realizado por varias organizaciones hasta ahora ha sentado las bases para que los SPFA sean una realidad en la práctica diaria, aunque se necesita seguir trabajando para lograr una integración y remuneración adecuadas.

La situación de los SPFA en Australia y España es diferente: "Si bien Australia cuenta con remuneración, carece de un plan y una cartera de servicios coherente. Por otro lado, España sigue presionando en busca de aceptación política y remuneración, pero ya tiene una base teórica sólida para los servicios".[5] Ambos países han experimentado desafíos en la integración de los SPFA en el sistema sanitario. Actualmente, existen ejemplos del establecimiento de colaboraciones y la participación de actores para crear marcos conceptuales significativos y para implantar los servicios existentes.[167, 168] El siguiente paso es fomentar la colaboración de actores desde las fases iniciales de la planificación de SPFA, punto que se aborda en esta tesis. Llevando a cabo investigaciones en estos dos países se pretende, en la medida de lo posible, que se puedan transferir los procesos de planificación, resultados, métodos y lecciones aprendidas, a otros contextos internacionales.

Esta tesis aborda el desarrollo de SPFA mediante investigación participativa y, según se ha mencionado anteriormente, se investigarán las fases iniciales de un proceso de planificación de un SPFA. Para establecer algunos límites dentro de los que desarrollar la investigación, se ha elegido la enfermedad cardiovascular (ECV) como foco general del servicio. La ECV es un importante problema de salud pública de interés internacional y representa la principal causa de muerte a nivel mundial. La Organización Mundial de la Salud estimó que, en 2016, 17'9 millones de personas murieron debido a ECV, que representa el 31% de todas las muertes en el mundo.[169, 170] En Australia, se estimó que el 22% de adultos tenía una o más ECVs en 2014-2015.[171, 172] La ECV causó 43.477 muertes en 2017 (27% del total de Australia) y fue la principal causa de 576.000 hospitalizaciones en 2016-2017.[173] La ECV es la responsable del 15% de la carga total de enfermedad en Australia.[173] Por otro lado, en España, alrededor del 30% de la población activa presenta riesgo de ECV.[174] La ECV causó 101.209 muertes (23'84% del total) en 2017, siendo la principal causa de mortalidad.[175] Además, la ECV fue la principal causa del 13'7% de las hospitalizaciones en 2016, con una estancia media que 8'82 días.[176] El coste sanitario directamente atribuible a la ECV fue de 5.900 millones de euros en 2014 (7'1% del total de presupuesto sanitario).[174]

Objetivos de la tesis

El objetivo general de esta tesis es generar conocimiento innovador y sólido sobre el desarrollo participativo de los SPFA y poner en práctica los pasos iniciales de planificación de un SPFA orientado a prevenir la ECV: (1) identificación e involucración inicial de actores —para lo que se testaron dos metodologías diferentes—, y (2) desarrollo de una visión conjunta de los actores.

Para alcanzar este objetivo general, se llevaron a cabo cuatro estudios con objetivos específicos:

- Se realizó una *scoping review* sistemática para proporcionar una visión general del uso y descripción de los análisis de actores en los procesos de planificación de innovaciones sanitarias. Específicamente, esta revisión se encaminó a:
    a. Entender para qué se usan los análisis de actores
    b. Identificar cuáles son los métodos para realizar estos análisis
    c. Conocer cuáles son los atributos que se analizan de los actores
    d. Desarrollar y testar una herramienta para guiar descripciones futuras de análisis de actores (la herramienta Reporting Items for Stakeholder Analysis —RISA—)

- Se llevó a cabo un primer análisis de actores con el objetivo de identificar aquellos que podrían ser clave y formar parte de un grupo de planificación para el desarrollo de un SPFA orientado a la prevención cardiovascular en New South Wales (NSW) Australia. Como objetivo secundario de este estudio, se exploraron las carencias y necesidades en el cuidado cardiovascular y el papel que podían jugar los farmacéuticos comunitarios.

- Para poner en práctica el mismo paso del proceso de planificación, pero utilizando una metodología diferente, se llevó a cabo un segundo análisis de actores para el desarrollo de un SPFA orientado a prevenir la ECV en Andalucía, España. Su objetivo era identificar a los actores, diferenciarlos/categorizarlos, y analizar las relaciones entre ellos para organizar una iniciativa colaborativa para el desarrollo del servicio.

- Finalmente, se puso en práctica el segundo paso del proceso de planificación, continuando el proceso de planificación del SPFA iniciado en NSW. Se llevó a cabo un ejercicio de visualización para desarrollar la visión conjunta de los actores sobre una atención cardiovascular en NSW, líder a nivel mundial, que

integrase a los farmacéuticos comunitarios. Un resultado clave de este proceso era identificar también las iniciativas necesarias para alcanzar dicha visión.

Esquema de investigación y estructura de la memoria de tesis

Tras introducir al lector al tema abordado en esta tesis (Capítulo 1), se presentan cuatro estudios de investigación como capítulos en forma de artículos para alcanzar los objetivos específicos (Capítulos 2-5). Esto implica que los métodos, resultados, discusión y conclusiones de estos estudios se encuentran incluidos en el capítulo que corresponde a cada estudio.

Capítulo 2. Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review. En este estudio se utiliza la metodología de *scoping review* sistemática para investigar cómo son usados y reportados los análisis de actores en los procesos de planificación de innovaciones sanitarias. Se detallan los pasos seguidos en los análisis de actores, los métodos para la recolección de datos, los atributos que se consideran de los actores para planificar y también se propone una guía para describir análisis de actores.

Capítulo 3. Stakeholder Analysis for the Development of a Community Pharmacy Service Aimed at Preventing Cardiovascular Disease. Este estudio cualitativo describe el primer paso para iniciar un proceso de planificación colaborativo para SPFA (la identificación e involucración inicial de actores). Presenta la primera metodología aplicada para llevar a cabo análisis de actores: un taller en el que informantes clave/actores participan en conversaciones guiadas. El objetivo del estudio es identificar actores clave que podrían formar parte de un grupo de planificación que desarrolle un SPFA orientado a la prevención cardiovascular en New South Wales, Australia. El objetivo secundario de este estudio es explorar carencias y necesidades de la atención cardiovascular y el papel que los farmacéuticos comunitarios pueden jugar.

Capítulo 4. Collaborative Health Service Planning: A Stakeholder Analysis with Social Network Analysis to Develop a Community Pharmacy Service. De nuevo se inicia un proceso de planificación colaborativo. Este capítulo se vuelve a centrar en el paso de identificación e involucración inicial de los actores, pero usando una metodología diferente. Este estudio de método mixto combina investigación cualitativa con análisis de redes sociales. La información en este caso se obtiene de entrevistas con informantes clave y cuestionarios administrados a actores. El objetivo es identificar actores, diferenciarlos/categorizarlos, y analizar las relaciones entre ellos para

organizar una iniciativa colaborativa para el desarrollo de un SPFA orientado a la prevención cardiovascular en Andalucía, España.

Capítulo 5. A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services. Éste es un estudio cualitativo que continua el proceso de planificación de SPFA iniciado con el análisis de actores del Capítulo 3 y aborda el segundo paso (el desarrollo de una visión conjunta de los actores). Es un paso práctico para desarrollar una visión conjunta de los actores, un modelo cardiovascular que integra a los farmacéuticos comunitarios, e identificar las iniciativas que los actores consideran necesarias para alcanzar dicha visión.

Tras estos capítulos, en el Capítulo 6 se puede encontrar una discusión de las lecciones aprendidas y sugerencias para investigaciones futuras. Finalmente, el Capítulo 7 presenta las principales conclusiones de esta tesis doctoral.

Referencias

1. Scahill SL, Atif M, Babar ZU. Defining pharmacy and its practice: a conceptual model for an international audience. *Integr Pharm Res Pract.* 2017;6:121-129.
2. Faus-Dáder M, Amariles-Muñoz P, Martínez-Martínez F. *Atención Farmacéutica, Servicios Farmacéuticos Orientados al Paciente.* Granada, Spain: Avicam; 2018.
3. Gastelurrutia MA. *Elementos Facilitadores y Dificultades para la Diseminación e Implantación de Servicios Cognitivos del Farmacéutico en la Farmacia Comunitaria Española* [dissertation]. Madrid: Editorial de la Universidad de Granada Ergon; 2006.
4. Wiedenmayer K, Summers RS, Mackie CA, Gous AGS, Everard M. *Developing Pharmacy Practice, A Focus on Patient Care: Handbook.* World Health Organization and International Pharmaceutical Federation 2006 ed. http://apps.who.int/medicinedocs/documents/s14094e/s14094e.pdf; 2006 Accessed March 25, 2019
5. Moullin J. *Implementation Science in Community Pharmacy. Development of frameworks, models and tools for introducing and integrating professional services* [dissertation]. Sydney, Australia: Graduate School of Health, Discipline of Pharmacy, University of Technology Sydney; 2016.
6. Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health policy.* 2015;119:628-639.
7. Anderson S. The state of the world's pharmacy: a portrait of the pharmacy profession. *J Interprof Care.* 2002;16:391-404.
8. Habeeb IA, Deepak J, Jegan R. Pharmacists in the wider public health workforce--a review. *Arch Pharm Pract.* 2012;3:166-170.
9. Hermansyah A, Sainsbury E, Krass I. Multiple policy approaches in improving community pharmacy practice: the case in Indonesia. *BMC Health Serv Res.* 2018;18:449.
10. McMillan SS, Kelly F, Sav A, King MA, Whitty JA, Wheeler AJ. Australian community pharmacy services: a survey of what people with chronic conditions and their carers use versus what they consider important. *BMJ open.* 2014;4:e006587.
11. Al Hamarneh YN, Hemmelgarn BR, Hassan I, Jones CA, Tsuyuki RT. The effectiveness of pharmacist interventions on cardiovascular risk in adult

patients with type 2 diabetes: the multicentre randomized controlled RxEACH trial. *Can J Diabetes.* 2017;41:580-586.

12. Cheema E, Sutcliffe P, Singer DR. The impact of interventions by pharmacists in community pharmacies on control of hypertension: a systematic review and meta-analysis of randomized controlled trials. *Br J Clin Pharmacol.* 2014;78:1238-1247.

13. Ensing HT, Koster ES, Sontoredjo TAA, van Dooren AA, Bouvy ML. Pharmacists' barriers and facilitators on implementing a post-discharge home visit. *Res Soc Admin Pharm.* 2017;13:811-819.e812.

14. García-Cárdenas V, Benrimoj SI, Ocampo CC, Goyenechea E, Martínez-Martínez F, Gastelurrutia MA. Evaluation of the implementation process and outcomes of a professional pharmacy service in a community pharmacy setting. A case report. *Res Soc Adm Pharm.* 2017;13:614-627.

15. Kaae S, Dam P, Rossing C. Evaluation of a pharmacy service helping patients to get a good start in taking their new medications for chronic diseases. *Res Soc Admin Pharm.* 2016;12:486-495.

16. Malet-Larrea A, García-Cárdenas V, Saez-Benito L, Benrimoj SI, Calvo B, Goyenechea E. Cost-effectiveness of professional pharmacy services in community pharmacy: a systematic review. *Expert Rev Pharmacoecon Outcomes Res.* 2016;16:747-758.

17. Sabater-Hernández D, Sabater-Galindo M, Fernandez-Llimos F, et al. A systematic review of evidence-based community pharmacy services aimed at the prevention of cardiovascular disease. *J Manag Care Spec Pharm.* 2016;22:699-713.

18. Strand MA, Tellers J, Patterson A, Ross A, Palombi L. The achievement of public health services in pharmacy practice: A literature review. *Res Soc Admin Pharm.* 2016;12:247-256.

19. McKenzie JF, Neiger BL, Thackeray R. *Planning, Implementing & Evaluating Health Promotion Programs, A Primer*: 7th ed. United States, WA: Pearson; 2016.

20. Bartholomew LK, Parcel GS, Kok G, Gottlieb NH, Fernández ME. *Planning Health Promotion Programs: An Intervention Mapping Approach.* 3rd ed. San Francisco, CA: Jossey-Bass; 2011.

21. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj.* 2008;337:a1655.

22. Green L, Kreuter M. *Health Program Planning: An Educational and Ecological Approach.* 4th ed. Boston: McGraw-Hill; 2005.

23. Sabater-Hernández D, Moullin J, Hossain L, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. *Am J Health-Syst Pharm.* 2016;73:156-164.

24. Campbell NC, Murray E, Darbyshire J, et al. Designing and evaluating complex interventions to improve health care. *Bmj.* 2007;334:455-459.

25. Bleijenberg N, de Man-van Ginkel JM, Trappenburg JCA, et al. Increasing value and reducing waste by optimizing the development of complex interventions: Enriching the development phase of the Medical Research Council (MRC) Framework. *Int J Nurs Stud.* 2018;79:86-93.

26. Hughes CM, Cadogan CA, Ryan CA. Development of a pharmacy practice intervention: lessons from the literature. *Int J Clin Pharm.* 2016;38:601-606.

27. Proctor EK, Powell BJ, Baumann AA, Hamilton AM, Santens RL. Writing implementation research grant proposals: ten key ingredients. *Implement Sci.* 2012;7:96.

28. Gunter MJ. The role of the ECHO model in outcomes research and clinical practice improvement. *Am J Manag Care.* 1999;5:S217-224.

29. Kozma CM, Reeder CE, Schulz RM. Economic, clinical, and humanistic outcomes: a planning model for pharmacoeconomic research. *Clin Ther.* 1993;15:1121-1132; discussion 1120.

30. Michie S, Fixsen D, Grimshaw JM, Eccles MP. Specifying and reporting complex behaviour change interventions: the need for a scientific method. *Implement Sci.* 2009;4:40.

31. Berbatis CG, Sunderland VB, Joyce A, Bulsara M, Mills C. Enhanced pharmacy services, barriers and facilitators in Australia's community pharmacies: Australia's National Pharmacy Database Project. *Int J Pharm Pract.* 2007;15:185-191.

32. Jokanovic N, Tan EC, van den Bosch D, Kirkpatrick CM, Dooley MJ, Bell JS. Clinical medication review in Australia: A systematic review. *Res Soc Admin Pharm.* 2016;12:384-418.

33. McMillan SS, Wheeler AJ, Sav A, et al. Community pharmacy in Australia: a health hub destination of the future. *Res Soc Admin Pharm.* 2013;9:863-875.

34. Wibowo Y, Berbatis C, Joyce A, Sunderland VB. Analysis of enhanced pharmacy services in rural community pharmacies in Western Australia. *Rural Remote Health.* 2010;10:1400.

35. Chaudoir SR, Dugan AG, Barr CH. Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implement Sci.* 2013;8:22.

36. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci.* 2009;4:50.

37. Grol R, Grimshaw J. From best evidence to best practice: effective implementation of change in patients' care. *Lancet* 2003;362:1225-1230.

38. Hermansyah A, Sainsbury E, Krass I. The operation of a Research and Development (R&D) program and its significance for practice change in community pharmacy. *PloS One.* 2017;12:e0184954.

39. Lalonde L, Goudreau J, Hudon É, et al. Development of an interprofessional program for cardiovascular prevention in primary care: A participatory research approach. *SAGE Open Med.* 2014;2:2050312114522788.

40. Ministry of Health. *Draft Pharmacy Action Plan 2015–2020: For consultation.* Wellington: Ministry of Health. https://www.health.govt.nz/system/files/documents/publications/pharmacy-action-plan-2015-2020-consultation-document-oct15.pdf; 2015. Published October 2015. Accessed March 25, 2019

41. Mott DA, Martin B, Breslow R, et al. The development of a community-based, pharmacist-provided falls prevention mtm intervention for older adults: Relationship building, methods, and rationale. *Innov Pharm.* 2014;5:140.

42. Sabater-Hernández D, Tudball J, Ferguson C, Franco-Trigo L, Hossain LN, Benrimoj SI. A stakeholder co-design approach for developing a community pharmacy service to enhance screening and management of atrial fibrillation. *BMC Health Serv Res.* 2018;18:145.

43. Sorensen EW, Haugbolle LS. Using an action research process in pharmacy practice research--a cooperative project between university and internship pharmacies. *Res Soc Admin Pharm.* 2008;4:384-401.

44. Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Manag Rev.* 2004;6:21-53.

45. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health.* 2008;29:325-350.

46. Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26:124-128.

47. Moullin JC, Sabater-Hernández D, Benrimoj SI. Model for the evaluation of implementation programs and professional pharmacy services. *Res Soc Adm Pharm.* 2016;12:515-522.

48. Collins LM, Murphy SA, Strecher V. The multiphase optimization strategy (MOST) and the sequential multiple assignment randomized trial (SMART): new methods for more potent eHealth interventions. *Am J Prev Med.* 2007;32:S112-118.

49. Hossain LN, Fernandez-Llimos F, Luckett T, et al. Qualitative meta-synthesis of barriers and facilitators that influence the implementation of community pharmacy services: perspectives of patients, nurses and general medical practitioners. *BMJ Open.* 2017;7:e015471.

50. Riley BL, MacDonald J, Mansi O, et al. Is reporting on interventions a weak link in understanding how and why they work? A preliminary exploration using community heart health exemplars. *Implement Sci.* 2008;3:27.

51. Des Jarlais DC, Lyles C, Crepaz N. Improving the reporting quality of nonrandomized evaluations of behavioral and public health interventions: the TREND statement. *Am J Public Health.* 2004;94:361-366.

52. von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *PLoS Med.* 2007;4:e296.

53. von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandenbroucke JP. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *J Clin Epidemiol.* 2008;61:344-349.

54. Ogrinc G, Davies L, Goodman D, Batalden P, Davidoff F, Stevens D. Squire 2.0 (Standards for Quality Improvement Reporting Excellence): revised publication guidelines from a detailed consensus process. *Am J Crit Care.* 2015;24:466-473.

55. Hoffmann TC, Glasziou PP, Boutron I, et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *Bmj.* 2014;348:g1687.

56. Begg C, Cho M, Eastwood S, et al. Improving the quality of reporting of randomized controlled trials. The CONSORT statement. *Jama.* 1996;276:637-639.

57. Hopewell S, Clarke M, Moher D, et al. CONSORT for reporting randomized controlled trials in journal and conference abstracts: explanation and elaboration. *PLoS Med.* 2008;5:e20.

58. Equator Network. Enhancing the QUAlity and Transparency Of health Research. http://www.equator-network.org/ Accessed March 25, 2019

59. Moullin JC, Sabater-Hernández D, Benrimoj SI. Qualitative study on the implementation of professional pharmacy services in Australian community pharmacies using framework analysis. *BMC Health Serv Res.* 2016;16:439.

60. Moullin JC, Sabater-Hernández D, Fernandez-Llimos F, Benrimoj SI. A systematic review of implementation frameworks of innovations in healthcare and resulting generic implementation framework. *Health Res Policy Syst.* 2015;13:5.

61. Fuller JM, Saini B, Bosnic-Anticevich S, García Cárdenas V, Benrimoj SI, Armour C. Testing evidence routine practice: Using an implementation framework to embed a clinically proven asthma service in Australian community pharmacy. *Res Soc Admin Pharm.* 2017;13:989-996.

62. Martínez-Martínez F, Faus MJ, Fikri-Benbrahim N, et al. *Informe 2014-2016 conSIGUE: Programa para la implantación y futura sostenibilidad del servicio de Seguimiento Farmacoterapéutico en la Farmacia Comunitaria española.* Madrid: Consejo General de Colegios Oficiales de Farmacéuticos; 2016.

63. García-Cárdenas V, Pérez-Escamilla B, Fernandez-Llimos F, Benrimoj SI. The complexity of implementation factors in professional pharmacy services. *Res Soc Admin Pharm.* 2018;14:498-500.

64. Hossain LN, Tudball J, Franco-Trigo L, Durks D, Benrimoj SI, Sabater-Hernández D. A multilevel stakeholder approach for identifying the determinants of implementation of government-funded community pharmacy services at the primary care level. *Res Soc Admin Pharm.* 2018;14:765-775.

65. Marquis J, Schneider MP, Spencer B, Bugnon O, Du Pasquier S. Exploring the implementation of a medication adherence programme by community pharmacists: a qualitative study. *Int J Clin Pharm.* 2014;36:1014-1022.

66. Niquille A, Lattmann C, Bugnon O. Medication reviews led by community pharmacists in Switzerland: a qualitative survey to evaluate barriers and facilitators. *Pharm Pract.* 2010;8:35-42.

67. Saramunee K, Krska J, Mackridge A, Richards J, Suttajit S, Phillips-Howard P. How to enhance public health service utilization in community pharmacy?: General public and health providers' perspectives. *Res Soc Admin Pharm.* 2014;10:272-284.

68. Durks D, Fernandez-Llimos F, Hossain LN, Franco-Trigo L, Benrimoj SI, Sabater-Hernández D. Use of Intervention Mapping to enhance health care professional practice: A systematic review. *Health Educ Behav.* 2017;44:524-535.

69. Berman J, Mitambo C, Matanje-Mwagomba B, et al. Building a knowledge translation platform in Malawi to support evidence-informed health policy. *Health Res Policy Syst.* 2015;13:73.

70. Hyder A, Syed S, Puvanachandra P, et al. Stakeholder analysis for health research: case studies from low-and middle-income countries. *Public Health.* 2010;124:159-166.

71. Makan A, Fekadu A, Murhar V, et al. Stakeholder analysis of the Programme for Improving Mental health carE (PRIME): baseline findings. *Int J Ment Health Syst.* 2015;9:27.

72. Brugha R, Varvasovszky Z. Stakeholder analysis: a review. *Health Policy Plan.* 2000;15:239-246.

73. Namazzi G, N KS, Peter W, et al. Stakeholder analysis for a maternal and newborn health project in Eastern Uganda. *BMC Pregnancy Childbirth.* 2013;13:58.

74. Preskill H, Jones N. *A Practical Guide for Engaging Stakeholders in Developing Evaluation Questions. Robert Wood Johnson Foundation Evaluation Series*: Robert Wood Johnson Foundation; 2009. http://www.pointk.org/resources/files/rwj.stakeholders.final.1.pdf Accessed March 25, 2019.

75. Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. The shifting dynamics of social roles and project ownership over the lifecycle of a community-based participatory research project. *Fam Pract.* 2017;34:305-312.

76. Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. Engagement strategies that foster community self-determination in participatory research: Insider ownership through outsider championship. *Fam Pract.* 2017;34:336-340.

77. Basaza RK, O'Connell TS, Chapcakova I. Players and processes behind the national health insurance scheme: a case study of Uganda. *BMC Health Serv Res.* 2013;13:357.

78. Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement Stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

79. Ray KN, Miller E. Strengthening stakeholder-engaged research and research on stakeholder engagement. *J Comp Eff Res.* 2017;6:375-389.

80. Kok G, Gurabardhi Z, Gottlieb NH, Zijlstra FR. Influencing organizations to promote health: applying stakeholder theory. *Health Educ Behav.* 2015;42:123s-132s.

81. Lavery JV. Building an evidence base for stakeholder engagement. *Science* 2018;361:554-556.

82. Goodman MS, Sanders Thompson VL. The science of stakeholder engagement in research: classification, implementation, and evaluation. *Transl Behav Med.* 2017;7:486-491.

83. Huang J, Lipman PD, Daniel Mullins C. Bridging the divide: building infrastructure to support community-academic partnerships and improve capacity to conduct patient-centered outcomes research. *Transl Behav Med.* 2017;7:773-782.

84. Bryson JM, Patton MQ, Bowman RA. Working with evaluation stakeholders: A rationale, step-wise approach and toolkit. *Eval Program Plan.* 2011;34:1-12.

85. Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing Public Participation Processes. *Public Adm Rev.* 2013;73:23-34.

86. Salsberg J, Parry D, Pluye P, Macridis S, Herbert CP, Macaulay AC. Successful strategies to engage research partners for translating evidence into action in community health: A critical review. *J Environ Public Health.* 2015;2015:191856.

87. Donaldson T, Preston LE. The stakeholder theory of the corporation: Concepts, evidence, and implications. *Acad Manag Rev.* 1995;20:65-91

88. Mitchell RK, Agle BR, Wood DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Acad Manag Rev.* 1997;22:853-886.

89. Reed M, Curzon R. Stakeholder mapping for the governance of biosecurity: a literature review. *J Integr Environ Sci.* 2015;12:15-38.

78

90. Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plan.* 2000;15:338-345.

91. Gilson L, Doherty J, Lake S, McIntyre D, Mwikisa C, Thomas S. The SAZA study: implementing health financing reform in South Africa and Zambia. *Health Policy Plan.* 2003;18:31-46.

92. Gilson L, Erasmus E, Borghi J, Macha J, Kamuzora P, Mtei G. Using stakeholder analysis to support moves towards universal coverage: lessons from the SHIELD project. *Health Policy Plan.* 2012;27 Suppl 1:i64-76.

93. Reed M, Graves A, Dandy N, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. *J Environ Manag.* 2009;90:1933-1949.

94. Vos AA, van Voorst SF, Steegers EA, Denktas S. Analysis of policy towards improvement of perinatal mortality in the Netherlands (2004-2011). *Soc Sci Med.* 2016;157:156-164.

95. Kivits RA. *Multi-dimensional Stakeholder Analysis: A Methodology Applied to Australian Capital City Airports* [dissertation]. Lismore, NSW: Southern Cross University; 2013.

96. Lienert J, Schnetzer F, Ingold K. Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. *J Environ Manag.* 2013;125:134-148.

97. Gilmour J, Beilin R. *Stakeholder Mapping for Effective Risk Communication*. Australian Centre for Excellence in Risk Analysis. https://cebra.unimelb.edu.au/__data/assets/pdf_file/0006/2220990/gilmour0609.pdf; 2007 Accessed March 25, 2019

98. Hernández-Jover M, Gilmour J, Schembri N, et al. Use of stakeholder analysis to inform risk communication and extension strategies for improved biosecurity amongst small-scale pig producers. *Prev Vet Med.* 2012;104:258-270.

99. Ackermann F, Eden C. Strategic management of stakeholders: Theory and practice. *Long Range Plan.* 2011;44:179-196.

100. van Limburg M, Wentzel J, Sanderman R, van Gemert-Pijnen L. Business modeling to implement an eHealth portal for infection control: A reflection on co-creation with stakeholders. *JMIR Res Protoc.* 2015;4:e104.

101. Thomas S, Gilson L. Actor management in the development of health financing reform: Health insurance in South Africa, 1994-1999. *Health Policy Plan.* 2004;19:279-291.

102. Arnstein SR. A ladder of citizen participation. *J Am Inst Planners.* 1969;35:216-224.

103. International Association for Public Participation. *IAP2 Spectrum of Public Participation.* IAP2 International Federation 2018. https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x 11_Print.pdf; 2018 Accessed March 25, 2019.

104. Nanus B. Leading the vision team. *The Futurist.* 1996;30:20.

105. National Association of County & City Health Officials. *Visioning. Mobilizing for Action through Planning and Partnerships (MAPP).* http://archived.naccho.org/topics/infrastructure/mapp/upload/visioning_full.pd f; 2016 Accessed September 05, 2016.

106. Boomer C, Collin I, McCormack B. 'I have a dream': A process for visioning in practice development. *Pract Development Health Care.* 2008;7:70-78.

107. Kilpatrick A, Silverman L. The power of vision. *Strategy Leadersh.* 2005;33:24-26.

108. Stewart JM. Future state visioning—A powerful leadership process. *Long Range Plan.* 1993;26:89-98.

109. Ziegler W. Envisioning the future. *Futures.* 1991;23:516-527.

110. Meadows M, O'Brien F. Under pressure: visioning in a regulated environment. *Systemic Pract Action Res.* 2006;19:537-551.

111. McCormack B, Illman A, Culling J, Ryan A, O'Neill S. 'Removing the chaos from the narrative': preparing clinical leaders for practice development. *Educational Action Res.* 2002;10:335-352.

112. O'Brien F, Meadows M. Corporate visioning: a survey of UK practice. *J Operational Res Society.* 2000;51:36-44.

113. Australian Government Department of Health. The Australian Health System. https://beta.health.gov.au/about-us/the-australian-health-system. Updated August 10, 2018. Accessed November 16, 2018

114. Australian Government Department of Health. Medicare. https://beta.health.gov.au/medicare. Updated August 1, 2018 Accessed November 16, 2018

115. Australian Government Department of Health. *Amended and Restated Six Community Pharmacy Agreement.* http://www.pbs.gov.au/general/sixth-cpa-files/sixth-community-pharmacy-agreement-amended-06-2017.pdf; 2017 Accessed March 25, 2019

116. Hattingh HL. The regulation of pharmacy ownership in Australia: the potential impact of changes to the health landscape. *J Law Med.* 2011;19:147-154.

117. Australian Government Department of Health. Pharmacy Location Rules (the Rules) and the Australian Community Pharmacy Authority (ACPA). http://www.health.gov.au/acpa. Updated September 20, 2018. Accessed November 16, 2018

118. Australian Government Department of Human Services. *Department of Human Services Annual Report 2017-18.* https://www.humanservices.gov.au/sites/default/files/2018/10/8802-1810-annual-report-web-2017-2018.pdf; 2018 Accessed November 17, 2018

119. Australian Bureau of Statistics. Population clock. http://www.abs.gov.au/. Updated February 2, 2019. Accessed February 14, 2019

120. The Pharmacy Guild of Australia. *Vital facts on community pharmacy.* https://www.guild.org.au/__data/assets/pdf_file/0020/12908/Vital-facts-on-community-pharmacy.pdf; 2018 Accessed November 17, 2018

121. Pharmacy Board of Australia. *Registrant data.* https://www.pharmacyboard.gov.au/about/statistics.aspx; 2018 Accessed November 17, 2018

122. Australian Government Department of Health. About 6CPA (Sixth Community Pharmacy Agreement). http://6cpa.com.au/about-6cpa/; 2015 Accessed November 17, 2018

123. Commonwealth of Australia Department of Community Services and Health. *First Community Pharmacy Agreement (1990-1995).* http://6cpa.com.au/about-6cpa/; 1990 Accessed February 14, 2019

124. Commonwealth of Australia Department of Human Services and Health. *Second Community Pharmacy Agreement (1995-2000).* http://6cpa.com.au/about-6cpa/; 1995 Accessed February 14, 2019

125. Commonwealth of Australia Department of Health and Aged Care. *Third Community Pharmacy Agreement (2000-2005).* http://6cpa.com.au/about-6cpa/; 2000 Accessed February 14, 2019

126. Australian Government. *Fourth Community Pharmacy Agreement (2005-2010).* http://6cpa.com.au/about-6cpa/; 2005 Accessed February 14, 2019

127. Australian Government. *Fifth Community Pharmacy Agreement (2010-2015).* http://6cpa.com.au/about-6cpa/; 2010 Accessed February 14, 2019

128. The Pharmacy Guild of Australia. About the Guild. https://www.guild.org.au/about-us. Updated February 18, 2019. Accessed February 18, 2019

129. Pharmaceutical Society of Australia. About PSA. https://www.psa.org.au/about/about-psa/; 2018 Accessed February 18, 2019

130. Jefatura del Estado. Ley 14/1986 de 25 de abril General de Sanidad, *«BOE» núm. 102 de 29 de abril de 1986.* https://www.boe.es/buscar/pdf/1986/BOE-A-1986-10499-consolidado.pdf Accessed November 19, 2018

131. Ministry of Health Social Services and Equality. *National Health System of Spain 2012* [Internet Monograph]. Madrid https://www.mscbs.gob.es/en/organizacion/sns/docs/sns2012/SNS012__Ingl es.pdf; 2012 Accessed November 19, 2018

132. Consejo General de Colegios Oficiales de Farmacéuticos. Farmacia Comunitaria en España. https://www.portalfarma.com/Profesionales/organizacionfcolegial/profesionfa rma/Paginas/colegiaciondatestadisticos.aspx. Updated June 14, 2017. Accessed November 19, 2018

133. Ministerio de Sanidad, Servicios Sociales e Igualdad. Real Decreto Legislativo 1/2015, de 24 de julio, por el que se aprueba el texto refundido de la Ley de garantías y uso racional de los medicamentos y productos sanitarios. *«BOE» núm. 177, de 25 de julio de 2015.* https://www.boe.es/eli/es/rdlg/2015/07/24/1/con; 2015 Accessed February 15, 2019

134. INE. Demografía. In: *Anuario Estadístico de España 2018.* http://www.ine.es/prodyser/pubweb/anuarios_mnu.htm; 2018 Accessed March 26, 2019

135. INE. Salud. In: *Anuario Estadístico de España 2018.* https://www.ine.es/prodyser/pubweb/anuario18/anu18_05salud.pdf; 2018 Accessed November 19, 2018

136. Gascón MP, Rius P, Guayta-Escolies R, Dronda A, Bagaria G. *Evolució de la Prestació de Serveis d'Atenció Farmacèutica i Serveis Relacionats amb la Salut Comunitària a les Farmàcies de Catalunya 2012-2017. Monogràfics de la Central de Resultats.* Barcelona: Agència de Qualitat i Avaluació Sanitàries de Catalunya. Departament de Salut. Generalitat de Catalunya. http://observatorisalut.gencat.cat/web/.content/minisite/observatorisalut/ossc

_central_resultats/informes/fitxers_estatics/MONOGRAFIC_29_farmacia_co munitaria.pdf; 2018 Accessed November 19, 2018

137.   Gobierno Vasco Departamento de Salud. El Departamento de Salud y los Colegios de Farmacéuticos Vascos firman un convenio para la puesta en marcha de un Programa piloto de Seguimiento Farmacoterapéutico Integral a Pacientes Crónicos y Polimedicados. http://www.euskadi.eus/noticia/2017/el-departamento-de-salud-y-los-colegios-de-farmaceuticos-vascos-firman-un-convenio-para-la-puesta-en-marcha-de-un-programa-piloto-de-seguimiento-farmacoterapeutico-integral-a-pacientes-cronicos-y-polimedicados/web01-s2osa/es/. Published May 17, 2017. Accessed February 15, 2019

138.   Foro de Atención Farmacéutica Farmacia Comunitaria. Quinto Comunicado del Foro de Atención Farmacéutica en Farmacia Comunitaria (Foro AF-FC). Cartera de servicios farmacéuticos en la farmacia comunitaria. *Pharm Care Esp.* 2012;14:31-32.

139.   Foro de Atención Farmacéutica Farmacia Comunitaria. Sexto comunicado Foro AF-FC. Servicios Profesionales Farmacéuticos Asistenciales. Madrid. https://www.pharmaceutical-care.org/archivos/2833/sexto_comunicado_FORO_AF-FC_SPF_A_y_clasificacion_v4_160628.pdf. Published June 14, 2016. Accessed March 26, 2019

140.   Consejo General de Colegios Oficiales de Farmacéuticos. Experiencias en comunidades autónomas confirman que la participación de la farmacia aporta eficacia y eficiencia al sistema sanitario. https://www.portalfarma.com/Profesionales/consejoinforma/Paginas/2018-21-CNF-eficiencia-eficacia-farmacia-comunitaria.aspx. Published October 4, 2018. Accessed November 20, 2018

141.   Redacción. Galicia: Sanidad incorpora a los farmacéuticos al estudio de un nuevo modelo de Atención Primaria. *Correo Farmacéutico*. https://www.correofarmaceutico.com/politica-sanitaria/galicia-sanidad-incorpora-a-los-farmaceuticos-al-estudio-de-un-nuevo-modelo-de-atencion-primaria.html. Published December 13, 2018. Accessed February 15, 2019

142.   Diariofarma. La farmacia catalana aspira a estar más integrada en el sistema sanitario. *Diariofarma*. https://www.diariofarma.com/2018/12/03/la-farmacia-catalana-aspira-a-estar-mas-integrada-en-el-sistema-sanitario. Published December 3, 2018. Accessed February 15, 2019

143. Álvarez de Toledo F, Arcos González P, Eyaralar Riera T, et al. Atención farmacéutica en personas que han sufrido episodios coronarios agudos (estudio TOMCOR). *Rev Esp Salud Publica.* 2001;75:375-388.

144. Cabiedes Miragaya L, Eyaralar Riera T, Arcos González P, Álvarez de Toledo F, Álvarez Sánchez G. Evaluación económica de la atención farmacéutica (AF) en oficinas de farmacia comunitarias (PROYECTO TOMCOR). *Rev Esp Economía Salud.* 2002;1:45-59.

145. Jódar-Sánchez F, Malet-Larrea A, Martin JJ, et al. Cost-utility analysis of a medication review with follow-up service for older adults with polypharmacy in community pharmacies in Spain: the conSIGUE program. *Pharmacoeconomics.* 2015;33:599-610.

146. Malet-Larrea A, Goyenechea E, García-Cárdenas V, et al. The impact of a medication review with follow-up service on hospital admissions in aged polypharmacy patients. *Br J Clin Pharmacol.* 2016;82:831-838.

147. Malet-Larrea A, Goyenechea E, Gastelurrutia MA, et al. Cost analysis and cost-benefit analysis of a medication review with follow-up service in aged polypharmacy patients. *Eur J Health Econ.* 2017;18:1069-1078.

148. Martínez-Martínez F, Farragher T, Faus MJ, et al. *Informe 2011-2014 conSIGUE: Impacto Clínico, Económico y Humanístico del Servicio de Seguimiento Farmacoterapéutico en Mayores Polimedicados en la Farmacia Comunitaria Española.* Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. 2014.

149. Aguilar Santamaria J, Amaro Cendón L, García Cárdenas V, et al. Diseño y evaluación de un servicio profesional de adherencia terapéutica desde el ámbito de la Farmacia Comunitaria – estudio piloto. *X Congreso Nacional de Atención Farmacéutica.* Burgos, Spain. https://www.congresoaf.com/app_services/posters/detalle_poster-web.php?poster=106; 2017 Accessed March 13, 2019

150. Aguilar Santamaria J, Valverde Merino MI, García Cardenas V, Peiro Zorrilla T, Varas Doval R, Benrimoj SI. Evaluation and implementation of an adherence management service for patients with chronic conditions in a community pharmacy setting. *Int J Clin Pharm.* 2018;40:500-500.

151. Peiró Zorrilla T, Pérez Escamilla B, Varas Doval R, et al. Proyecto AdherenciaMED: Diseño y evaluación de un servicio profesional de adherencia terapéutica desde el ámbito de la farmacia comunitaria. Resultados de la fase Impacto. *21 Congreso Nacional Farmacéutico.* Burgos.

https://congresofarmaceuticocgcof.org/wp-content/uploads/2018/11/FC-23.pdf; 2018 Accessed March 13, 2019

152. Consensus Committee. Second consensus of Granada on drug therapy problems. *Ars Pharmaceutica* 2002;43:179-187.

153. Consensus Committee. Third consensus of Granada on drug related problems (DRP) and negative outcomes associated with medication (NOM). *Ars Pharmaceutica* 2007;48:5-17.

154. Consensus Panel ad hoc. Consensus of Granada on drug-related problems. *Pharm Care Esp.* 1999;1:107-112.

155. Sabater Hernández D, Silva Castro MM, Faus Dader MJ. *Método Dáder. Guía de Seguimiento Farmacoterapéutico.* 3rd ed. Granada: Grupo de Investigación en Atención Farmacéutica (CTS-131), Universidad de Granada; 2007.

156. Serrano A. La Universidad de Granada crea la primera Sección de Farmacia Asistencial. *Correo Farmacéutico.* https://www.correofarmaceutico.com/profesion/grado-y-posgrado/la-universidad-de-granada-crea-la-primera-seccion-de-farmacia-asistencial.html. Published March 12, 2019. Accessed March 13, 2019

157. Fundación Pharmaceutical Care España. ¿Qué es la Fundación Pharmaceutical Care España? https://www.pharmaceutical-care.org/controler.php?secc=ficha_detail&cat=15&id=53. Updated March 6, 2014. Accessed Februrary 18, 2019

158. Sociedad Española de Farmacia Familiar y Comunitaria. Misión, Visión y Valores. https://www.sefac.org/mision-vision-y-valores. Updated November 11, 2017. Accessed February 18, 2019

159. Gobierno de España Ministerio de Sanidad y Consumo. *Consenso sobre Atención Farmacéutica.* https://www.mscbs.gob.es/profesionales/farmacia/consenso/consenso.htm#indice; 2001 Accessed February 18, 2019

160. Jefatura del Estado. Ley 29/2006, de 26 de julio, de garantías y uso racional de los medicamentos y productos sanitarios. *«BOE» núm. 178, de 27 de julio de 2006*:28122-28165. https://www.boe.es/eli/es/l/2006/07/26/29 Accessed February 18, 2019

161. Consejo General de Colegios Oficiales de Farmacéuticos. Foro de Atención Farmacéutica.

https://www.portalfarma.com/inicio/serviciosprofesionales/forodeattfarma/Paginas/default.aspx. Updated January 1, 2017. Accessed February 18, 2019

162. Foro de Atención Farmacéutica. *Documento de Consenso*. https://www.pharmaceutical-care.org/archivos/804/foro_at_farma.pdf; 2008 Accessed February 18, 2019

163. Foro de Atención Farmacéutica Farmacia Comunitaria. *Guía Práctica para los Servicios de Atención Farmacéutica en la Farmacia Comunitaria*. Madrid. https://www.portalfarma.com/inicio/serviciosprofesionales//forofarmaciacomunitaria/Documents/ATFC_Guia%20FORO.pdf; 2010 Accessed February 23, 2019

164. Consejo General de Colegios Oficiales de Farmacéuticos. Foro de Atención Farmacéutica en Farmacia Comunitaria. https://www.portalfarma.com/inicio/serviciosprofesionales/forofarmaciacomunitaria/Paginas/default.aspx. Updated February 6, 2019. Accessed February 18, 2019

165. Foro de Atención Farmacéutica-Farmacia Comunitaria. *Propuesta de contenidos específicos en Atención Farmacéutica*. Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. https://www.portalfarma.com/inicio/serviciosprofesionales/forofarmaciacomunitaria/jornadas-atencion-farmaceutica-universidad/Documents/2017-Jornada-Atencion-Farmaceutica-Universidad-Documento-propuesta-contenidos.pdf; 2017 Accessed February 19, 2019

166. Consejo General de Colegios Oficiales de Farmacéuticos. *Buenas Prácticas en Farmacia Comunitaria en España*. Madrid: Consejo General de Colegios Oficiales de Farmacéuticos. https://www.portalfarma.com/Profesionales/Buenas-practicas-profesionales/Documents/Documento-BBPP-DEF.pdf; 2013 Accessed February 18, 2019

167. El-Awaisi A, Joseph S, El Hajj MS, Diack L. A comprehensive systematic review of pharmacy perspectives on interprofessional education and collaborative practice. *Res Soc Admin Pharm.* 2018;14:863-882.

168. World Health Organization. *Framework for Action on Interprofessional Education & Collaborative Practice*. https://apps.who.int/iris/bitstream/handle/10665/70185/WHO_HRH_HPN_10.3_eng.pdf;jsessionid=9C6D8E25D7922FC78C9E9F0A0C882D04?sequence=1; 2010 Accessed February 23, 2019

169. Mendis S, Puska P, Norrving B. *Global atlas on cardiovascular disease prevention and control*: World Health Organization; 2011.

170. World Health Organization. *Cardiovascular diseases (CVDs)*. http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds). Published May 17, 2017. Accessed August 16, 2018

171. Australian Bureau of Statistics. *Australia's leading causes of death 2017*. http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~20 17~Main%20Features~Australia's%20leading%20causes%20of%20death,% 202017~2. Publised September 26, 2018. Accessed December 05, 2018

172. Australian Government Australian Institute of Health and Welfare. *Cardiovascular disease snapshot*. https://www.aihw.gov.au/reports/heart-stroke-vascular-disease/cardiovascular-health-compendium/contents/how-many-australians-have-cardiovascular-disease. Updated July 24, 2018. Accessed November 27, 2018

173. Heart Foundation. *Cardiovascular disease fact sheet*. https://www.heartfoundation.org.au/about-us/what-we-do/heart-disease-in-australia/cardiovascular-disease-fact-sheet. 2018. Accessed November 27, 2018

174. Fundación Española del Corazón. *Disminuir la enfermedad cardiovascular, un objetivo prioritario. Informe sobre la enfermedad cardiovascular en España*. https://fundaciondelcorazon.com/images/stories/informesprensa/ori_informe _fec_2.pdf; 2015 Accessed December 05, 2018

175. INE. Las 15 causas de muerte más frecuentes en España. https://public.tableau.com/views/CAUSASDEMUERTE1/Dashboard1?:show VizHome=no&:embed=true; 2019 Accessed February 18, 2019

176. INE. Encuesta de Morbilidad Hospitalaria. *Año 2016*. https://www.ine.es/prensa/emh_2016.pdf; 2018 Accessed December 05, 2018

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Chapter 2

Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review

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Preface

This chapter presents a systematic scoping review that was performed to gather existing evidence on the use of stakeholder analyses in health innovation planning processes. The review broadened the scope beyond health program planning to include any health innovation and so address the literature more extensively in order to build an in-depth understanding of the application of stakeholder analyses in planning processes. It attempted to shed light on the methods used in these analyses and the stakeholder attributes to consider when planning. There was a focus on the importance of accurately reporting these analyses. A tool was proposed to guide the systematic reporting of future stakeholder analyses.

Prefacio

En este capítulo se presenta una *scoping review* sistemática que sintetiza la información disponible sobre el uso de los análisis de actores en los procesos de planificación de innovaciones en salud. El ámbito de la revisión se amplió más allá de la planificación de programas sanitarios para incluir cualquier innovación en salud; esto permitió acceder a una mayor cantidad de literatura que permitió desarrollar una compresión más profunda del uso de los análisis de actores en procesos de planificación. La revisión intentó arrojar luz sobre los métodos utilizados en estos análisis y los atributos de los actores que han de considerarse al planificar. Igualmente, la revisión hace énfasis en la importancia de proporcionar descripciones detalladas de los análisis de actores. Para contribuir a este fin, se propuso una herramienta para guiar la descripción sistemática de los análisis de actores.

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Stakeholder Analysis in Health Innovation Planning Processes: A Systematic Scoping Review

Abstract

Integrating health innovations into the health system is a complex endeavour that requires a well-designed planning process engaging key stakeholders. Stakeholder analyses lay the foundations to inform appropriate planning processes and undertake strategic actions. A systematic scoping review was performed to explore how stakeholder analyses are applied in health innovation planning processes and a guideline to report stakeholder analyses was developed. The literature search was conducted in PubMed, Scopus and DOAJ; grey literature was sought using Google. Articles reporting stakeholder analyses during the planning process of health policies, systems, products and technologies, and services and delivery methods were included. Fifty-one records were incorporated in the qualitative synthesis. Stakeholder analyses were conducted worldwide, used in all types of health innovations, applied in all phases of the planning process and conducted both prospectively and retrospectively. The steps followed to perform stakeholder analysis, the methods used, the stakeholder attributes analysed and how authors reported the analyses were heterogeneous. Forty-one studies reported the identification of stakeholders, 50 differentiated/categorised them and 25 analysed stakeholder relationships. Only some authors proposed future actions based on the results obtained in their stakeholder analysis. A list of Reporting Items for Stakeholder Analysis (i.e., the RISA tool) is proposed to contribute to the reporting guidelines to enhancing the quality and transparency of health research.

Keywords

Stakeholder Analysis, Stakeholder Mapping, Health Innovation, Scoping Review, Health Planning [MeSH], Strategic Planning [MeSH]

Introduction

Since population needs and health systems are continuously evolving, integrating health innovations in such systems is essential in order to provide solutions to both existing and emerging needs. According to the WHO, "health innovation identifies new or improved health policies, systems, products and technologies, and services and delivery methods that improve people's health and wellbeing" (1). However, modifying usual care and introducing health innovations into the health system is a complex endeavour. To enhance the integration and future success of any health innovation, comprehensive planning is required. Health innovations' planning processes usually share an underlying structure that encompasses a set of sequential phases (2). Following a planning process allows for developing effective health innovations, but also for addressing aspects other than effectiveness that are necessary for successful scale-up (3). Additionally, to achieve successful integration, health innovation's planning processes must include the perspectives, experiences and opinions of stakeholders that have an interest, influence, or are affected by the innovation to be implemented (4-6).

Examples of stakeholder participation across the different phases of health innovations' planning processes can be found in the literature (7-9). However, participatory studies do not usually report why or how the stakeholders involved in such processes were selected, or whether the engaged stakeholders were appropriate (i.e., presented desirable attributes) to be involved in health innovation planning (10-12). To organise participatory planning processes that are fair and transparent, in which the right stakeholders are engaged, these processes must be designed based on the results of a stakeholder analysis (13, 14). Stakeholder analyses are key actions that help: (1) understand the context in which the innovation will be developed and implemented; (2) inform the planning process and the individuals, groups or organisations to be involved; and (3) develop strategies to both support a suitable development and implementation of the innovation and avoid potential barriers to its integration into the system (15-17).

The key steps to carry out stakeholder analyses were organised by Reed et al. (18): (1) Defining the context and boundaries for the analysis; (2) Applying stakeholder methods; and (3) Recommending future actions and stakeholder engagement. Moreover, within the second step (i.e., applying stakeholder methods) three activities should be conducted: (2a) the identification of stakeholders; (2b) the differentiation or

categorization of stakeholders based on the study of stakeholder attributes (e.g. power, position, level of interest, etc.); and (2c) the investigation of stakeholder relationships. It is important to note that stakeholder attributes may change over time, due to variations in the context or the phase of the health innovation planning process, causing new stakeholders to emerge and others to fade (19-22). For this reason, stakeholder analyses must be updated over the planning process and so allow for appropriate changes in the key stakeholders to be engaged in the process (9, 19, 21).

Due to their value and interest, it would be useful to report stakeholder analyses thoroughly. Existing reviews of the literature and guidelines on stakeholder analysis provide information on different aspects of these analyses, such as: the methods to use (18, 23); the necessary steps and aspects to take into account to perform the analysis (17, 18, 24, 25); the theoretical approaches to stakeholder analysis (21); or, the uses of stakeholder analysis in the policy, healthcare management and development literature (15). However, to the best of our knowledge, there are no reviews in the literature focusing on the application of stakeholder analyses in health innovation planning processes. Understanding the applicability of stakeholder analyses in these processes and the methods used to select the right stakeholders may help improve the design of planning processes and decision-making. Thus, addressing this topic may facilitate policy-makers, researchers and practitioners to better design and manage the processes. Scoping reviews are a useful approach, as they help understand the evidence in a field not yet widely reviewed, especially when the research question is broad and the existing literature is heterogeneous (26, 27). Scoping reviews are acknowledged for having "potential to advance healthcare practice, policy and research" (28). Therefore, the general purpose of this systematic scoping review was to provide an overview of the use and reporting of stakeholder analyses in health innovation planning processes. Specifically, it aimed to:

1) Understand what are stakeholder analyses used for
2) Identify what are the methods used to perform those analyses
3) Know what are the attributes analysed for the stakeholders
4) Develop and pilot a tool to guide future reporting of stakeholder analyses (the Reporting Items for Stakeholder Analysis –RISA– tool).

Methods

A systematic scoping review of studies reporting a stakeholder analysis carried out in a health innovation planning process was performed. The Arskey and O'Malley framework (26) and the Joanna Briggs Institute's recommendations for conducting systematic scoping reviews (27) were used.

Literature search

A search was conducted to identify original papers that included a stakeholder analysis in health. Search strategies (Figure 1) were kept sensitive to ensure breadth of coverage (26, 27) and no time or language limits were set. Different sources were explored to ensure wide access to the existing research evidence (26). A search in PubMed – which includes Medline and PubMed Central databases –, Scopus and DOAJ (Directory of Open Access Journals) was performed in June 2017. Grey literature was sought using the Google search engine, and the first 25 results were explored. Additionally, the reference lists of the included articles were also scanned to identify other relevant articles. Since no key specific journals to this topic were identified, hand searching of journals was not performed.

PubMed (02/06/2017)

"stakeholder theory" OR "stakeholder interviews" OR "stakeholder involvement" OR "stakeholder engagement" OR "stakeholder analysis" OR "stakeholder mapping" OR "actor analysis" OR "stakeholder identification"
OR
(("stakeholder groups" OR "stakeholder group")
AND
(identification OR involvement OR engagement OR analysis OR mapping))
OR
((stakeholder[TIAB] OR actor[TIAB]) AND "network analysis"[TIAB])

Scopus (02/06/2017)

(TITLE-ABS-KEY(("health" OR "healthcare"))) AND (TITLE-ABS-KEY(("stakeholder involvement" OR "stakeholder engagement" OR "stakeholder analysis" OR "stakeholder mapping" OR "stakeholder theory")))

DOAJ (02/06/2017)

"stakeholder analysis" OR "stakeholder mapping"

Google (19/02/2018)

"stakeholder analysis" AND health filetype:pdf
"stakeholder mapping" AND health filetype:pdf

Figure 1. Search Strategies

Eligibility criteria and study selection

Articles were included if they reported a stakeholder analysis conducted during a health innovation planning process. The terms *stakeholder analysis*, *health innovation* and *planning process* were considered, as defined below:

Stakeholder analysis, adapted from Reed et al. (18)

The process that is made in a specific context to systematically: i) identify stakeholders (individuals, groups or organisations); ii) differentiate or categorise stakeholders; or iii) investigate the relationships between the stakeholders to prioritise them and know who to involve/has been involved in a decision-making or planning process.

Health innovation (1)

"Health innovation identifies new or improved health policies, systems, products and technologies, and services and delivery methods that improve people's health and wellbeing."

Planning process, adapted from (2, 4, 29)

The health innovation planning process was considered here a process composed of the following phases: (1) preparatory phase, where the organisational structure and the resources for setting up the planning process are prepared; (2) needs assessment and setting objectives, where the health needs, its causes and contributing factors, the individual, organisational and community resources to tackle them are analysed (30), and the aim of the innovation defined; (3) development, where the innovation is theoretically developed, modelled and piloted for refinement; (4) impact assessment, where the clinical, economic and humanistic impact of the innovation is measured; and (5) implementation, including the adoption, implementation and sustainability of the innovation.

Articles were excluded if: (1) the procedure/methodology to perform the stakeholder analysis was not specified in the article (i.e. no methods were specified for none of the identification, categorisation or analysis of stakeholder relationships steps); (2) the article did not report original data of a stakeholder analysis; or (3) the article was written in non-Roman characters.

Titles and abstracts were reviewed against the inclusion criteria by one author. Articles meeting these criteria and those in doubt were considered for the full-text screening. At this stage, inclusion and exclusion criteria were applied. Any uncertainty related to the study selection was resolved through discussions between two authors and, when agreement in these discussions was not achieved, a third author intervened.

Data extraction

A data extraction form was developed including general information about the study and a list of Reporting Items for Stakeholder Analysis to include in the RISA tool. The list of reporting items was initially chosen considering the "key methodological steps necessary for stakeholder analysis" proposed by Reed et al. (18), the stakeholder analysis guidelines developed by Schmeer (17), the framework for stakeholder analysis developed by Gilmour and Beilin (24), and the questions discussed by Varvasovszky and Brugha in their explanation on how to do a stakeholder analysis (25). The data extraction form was then piloted and refined with five of the included studies (27, 31). A version of the final data collection tool can be found in Supplementary appendix 1. One author carried out the data extraction; any doubts were discussed with a second author, and a third one was consulted when discrepancies between the first two authors existed. The Reporting Items for Stakeholder Analysis were used for the data extraction of all included articles and discussed by two authors to generate the final tool presented in the results.

Data analysis and synthesis

In accordance with the literature on the methodology to conduct scoping reviews (31), a qualitative content analysis of the articles included in the study was performed. A deductive, descriptive approach was used in which data was primarily coded to the pre-defined categories contained in the data extraction form and, when needed, further organised in subcategories to classify and clarify the information contained in each of the categories. Microsoft Word and Excel 2016 were used to perform the analysis.

The results of the review were organized following the structure provided by Reed et al. (18) on key methodological steps for stakeholder analysis: (1) Context of the studies; (2) Application of stakeholder methods, which involves (a) stakeholder identification; (b) stakeholder differentiation/categorisation; and (c) analysis of

stakeholder relationships; and (3) Recommendation of future actions and stakeholder engagement.

Results

Characteristics and context of included studies

The literature search returned 2261 records after removing duplicates. The screening of titles and abstracts yielded 116 records for full-text eligibility, of which 51 were finally included in the qualitative synthesis. A search and decision diagram along with the reasons for exclusion can be found in Figure 2 (based on the PRISMA flowchart (32)). Publication dates denoted a substantial increase in studies reporting stakeholder analyses for health innovation planning processes in the last three decades: from four studies published from 1990-2000, to 11 published from 2001-2010, to 36 published from 2011-search date. Stakeholder analyses were carried out in a variety of countries in Africa, America, Asia, Europe, and in Australia. Supplementary appendix 2 provides further details on the authors, year of the study, country, prospective/retrospective direction and scope of the analysis, health innovation and planning process for the included studies.

Stakeholder analyses were used in the planning processes of all types of health innovations. Policies were the innovation for which these analyses were more reported and used in all phases, followed by services and delivery methods. Table 1 classifies each stakeholder analysis according to the health innovation, the phase of the planning process in which the stakeholder analysis was conducted, and whether the study was prospective or retrospective. Prospective stakeholder analyses were more frequent in the early phases of the planning process (i.e., before implementing and evaluating the innovation). Their applications included: understanding the context where the innovation was to be implemented (33); identifying a group of people that could lead the planning process (19); knowing who to involve in the planning process (34, 35); undertaking strategic planning (36-39); or understanding whose wants and needs should be reflected in the innovation (16, 40). Stakeholder analyses were performed retrospectively in latter phases of the planning process (i.e., when the innovation was already developed). Examples of their applications were: understanding what happened in previous phases of the planning process to assess success or failure (41, 42); understanding how stakeholders shaped the planning

process or the innovation (43-45); or understanding the context in which the planning process took place and the process of change (46).
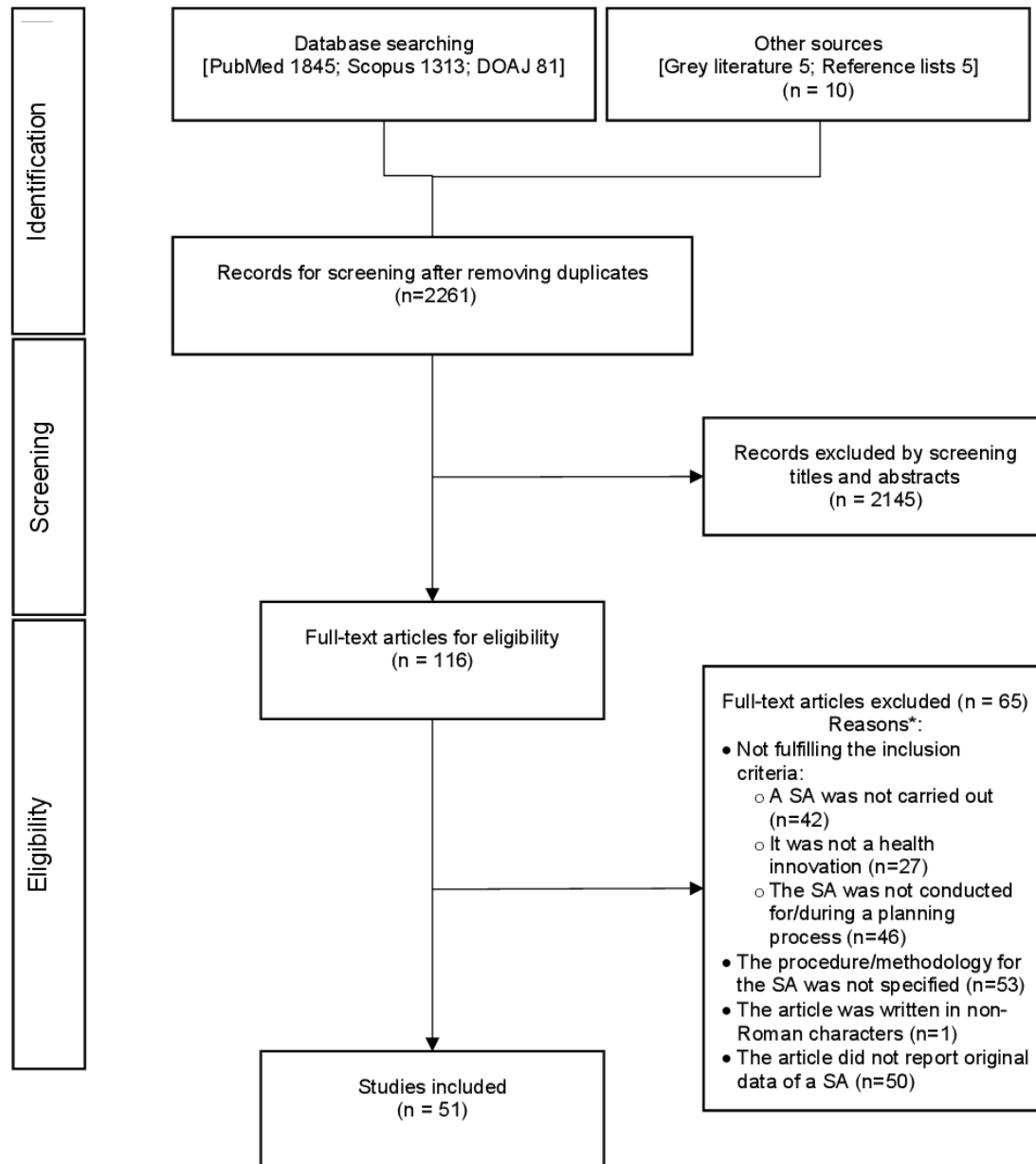
Figure 2. Study selection, based on the PRISMA flowchart [32]. *More than one reason may apply simultaneously; SA: stakeholder analysis

Application of stakeholder analysis methods

The studies were heterogeneous in the processes and steps followed to perform the stakeholder analysis, the methods used and the way authors reported these analyses.

Stakeholder identification

The stakeholder identification methods were not reported in four studies (34, 41, 42, 47). In another 10, these methods were not clearly reported (16, 37, 44, 48-54). The most frequent approaches used to identify stakeholders were the combination of at least two of the following methods: the review of literature/documents/media/web (used in 28 studies); individual interviews (n=20); snowballing (n=16); research team discussions/brainstorming (n=13); group interviews/meetings/brainstorming (n=10); expert or stakeholder consultation (n=8); surveys/questionnaires (n=4); and Delphi method (n=1). Table 2 shows the variability on how methods were combined for each of the studies, finding the greatest variability for prospective stakeholder analysis in policies.

The results of the stakeholder identification were usually presented in the articles in a descriptive manner, combined in tables with the information obtained in the categorisation step, or using stakeholder maps.

Stakeholder differentiation/categorisation or prioritisation

The differentiation/categorization of stakeholders was the step of the stakeholder analysis that received more attention in the literature. All the included studies, except one (39), reported the analysis of stakeholder attributes to differentiate or categorise them. A high variability was found in both the attributes analysed and attributes combinations in the analyses. The most frequent stakeholder attributes analysed were: power or influence (analysed in 39 studies); attitude or position (n=33); level of interest (n=15); the role the stakeholder played or their contribution (n=13); stakeholder knowledge or awareness (n=5); impact of the issue on the stakeholder (n=5); stakeholder legitimacy (n=4); and stakeholder urgency (n=4). Stakeholder stakes were identified in 22 of the 47 studies included. As shown in Table 3, stakeholder power and position were analysed together in 27 of the studies, and combined with stakeholder stakes (n=8), stakeholder level of interest (n=7) or both (n=4). Some tendencies for the combination of attributes were found depending on the type of innovation:

- the combination of power, position and stakeholder stakes for policy studies;
- power, position and level of interest for services and delivery methods;
- power, legitimacy and urgency for products and technologies; and
- power and position for systems.

Some authors combined the attributes to create analytical stakeholder categories, oriented towards the design of stakeholder engagement strategies. Some examples were: a) population, subjects, leaders and players (42); b) drivers, blockers, supporters, bystanders (55); c) dormant, discretionary, demanding, dominant, dangerous, dependent, definitive, non-stakeholder (56); or d) saviour, sleeping giant, friend, observer, saboteur, trap, irritant, time-bomb (57).

Some forms of data display for the stakeholder differentiation/categorisation were also distinctive, such as: power vs interest matrix (41, 42, 58), influence maps (33, 59), forcefield analysis or position map (16, 50, 53, 60, 61), stakeholder support vs resources (62), and importance vs influence matrix (63).

The most common data collection methods for the stakeholder categorisation were individual interviews (n=37), literature/documents/media review (n=20), surveys/questionnaires (n=13), focus groups (n=10), workshops (n=6), expert consultations (n=5), group consensus (n=4) and observations (n=4). In prospective studies, the variability in data collection methods and how they are combined is higher than in retrospective studies (see Table 3).

Investigation of the relationships between stakeholders

The relationships between stakeholders were analysed in 25 of the 51 studies, two of which reported analysing the relationships but not the results of these analyses (64, 65). Most of these studies performed a qualitative analysis of stakeholders' relationships, except for six that analysed relationships using social network analysis (38, 66-70). The most common approach to analyse relationships was to gather stakeholders' interactions, with no specific interaction defined, six studies (33, 43, 52, 60, 65, 71-74); followed by collaboration or cooperation between stakeholders, four studies (34, 46, 59), and stakeholder coalitions or partnerships, three studies (64, 75, 76). Studies performing Social Network Analysis clearly defined the type of relationship to analyse, and identified communication, involvement in public health actions and strategic collaboration networks (67); information, position and action networks (38); financial resources flows, cooperation and information sharing (68); funding flows (70); research and advocacy networks (66); and stakeholder exchanges –information, resources-, and type of interactions –cooperation, conflict- (69). Moreover, two of the included studies analysed future potential relationships, such as willingness to form alliances (62), and links that needed to be built (77).

The relationships were mostly reported in a descriptive manner. The exceptions to this were two articles representing the relationships as lines in an influence map (33, 59); and the articles that performed Social Network Analysis reporting relationships in sociograms (38, 66-70). In terms of the data collection methods, those most commonly used to perform this step of the analysis were: individual interviews; questionnaires; literature/document review; Net Map participatory interview; and direct communication.

Future actions and stakeholder engagement

Although the implications of the stakeholder analyses and their results were generally discussed in the included studies, only some authors made explicit the future actions based on the results obtained in the stakeholder analysis. Examples of these actions included: developing strategic approaches to achieve the desired change (54); select and implement policy measures to foster the adoption of an intervention (61); reach identified stakeholders with a communication intervention that addressed barriers and facilitators to support the implementation of the desired strategy (39); carry out stakeholder interviews to cross-verify the stakeholder network identified (66); or approach stakeholders to organise a workshop to develop a shared vision (19). Only six studies explicitly commented on strategies to engage or deal with stakeholders based on the results obtained (34, 53-55, 68, 78). Additionally, two more studies provided recommendations related to specific stakeholders: activities to secure decision makers' support (75), or to adequately represent and empower the public (51). Other type of recommendations were also provided: recommendations on performing stakeholder analysis (9), on how to use the results of a prospective stakeholder analysis (16); lessons identified by stakeholders for successful policy processes (46), or lessons for stakeholder engagement in health-sector reforms (60). Finally, some studies reported reflections on how to address complexity, such as addressing health issues in fragmented environments (79) or addressing "wicked problems" co-creating with stakeholders (56).

Reporting Items for Stakeholder Analysis (the RISA tool)

As a result of reviewing the literature, the experience of data extraction for this review and discussions between two authors, a comprehensive list of Reporting Items for Stakeholder Analysis was summarised in a tool (i.e., RISA; Table 4) to guide future systematic reporting of stakeholder analyses. The items in the RISA tool are

structured in three main domains, corresponding to the steps for stakeholder analysis by Reed et al. (18) that were used to present the results of this review. Next to the items, three columns were created. The first column provides clarifications on the items. The second was created to introduce the page in which the information in each of the items is reported in a manuscript. The third column allows introducing the page of the manuscript stating why the information corresponding to a specific item is considered not necessary in a particular case.

Discussion

This systematic scoping review provides valuable insights on how stakeholder analyses have been used in practice across all phases of health innovation planning processes. It also shows the different applications of stakeholder analyses, which can vary from assessing the feasibility of an innovation, to understand the key stakeholders to involve in health planning, to design specific strategies to support the design or implementation of an innovation or to understand how interventions were developed or implemented. This review allows for easily locate practical examples of stakeholder analysis for inspiration and so may assist policy-makers, researchers or health planners to better understand the interest and usefulness of these analyses to enhance health innovation planning. Moreover, the review highlights shortcomings in the report of stakeholder analysis and the existing room for methodological improvement in this area. In this regard, the information in this article was organized following the key steps for stakeholder analysis (18) and a new guideline (i.e., the RISA tool) has been proposed to enhance the quality and transparency of stakeholder analysis.

Context of stakeholder analyses

The exponential growth in stakeholder analysis reports in the last three decades may indicate that these analyses are increasingly being recognised as an intrinsic part of health innovation planning processes. It also highlights the fact that stakeholders are inherent to health innovation planning processes. Moreover, the variety of countries across the world in which stakeholder analyses were performed show that their usefulness has no geographical restrictions and that they are applicable in different contexts and countries with highly disparate income levels and cultures. The stakeholder analysis information gathered in this paper for each of the phases of any health innovation planning process contributes to advance the overall knowledge of

these processes. Looking at the results, the fact that stakeholder analyses are more used in the policy arena, both with a prospective and a retrospective direction, could be related to the existence of the seminal works published by Brugha and Varvasovszky (15, 25) in this area. In general, given stakeholder analysis usefulness and despite the growth in reports, there is still room for improvement in the use of these analyses in health innovation planning processes.

Methodological considerations for stakeholder analyses

Out of the three activities comprising the application of stakeholder analysis methods, the categorisation and differentiation of stakeholders is the one in which more emphasis was placed. It is somewhat surprising, that the identification of stakeholders was at times overlooked, when stakeholders were going to be classified or categorised, fact that has previously been called to the attention of other authors (9, 18). The identification of stakeholders is critical and avoiding it may lead to the omission of stakeholders that could be important for the process (21, 24). On the other hand, the analysis of stakeholder relationships provides information on stakeholder dynamics that helps to better explain the complexity of the context in which the innovation takes place, and provides direction to develop and apply stakeholder management strategies (21). Although the extent and the thoroughness of the stakeholder analysis may be influenced by external circumstances, such as time, funding and human resources (19, 25), an effort should be made to ensure access to the information needed for the planning process.

The array of methods found in the studies and their multiple combinations highlight the flexibility of stakeholder analyses. At the same time, this variability also points out the challenge of deciding how many and which methods to use when planning for a stakeholder analysis. Conducting methodological research jointly assessing the methods and the usefulness of the results they yield for the planning process would be helpful to guide the future selection of methods. On the other hand, the heterogeneity also applies to the stakeholder attributes used in the analyses. Although power is the attribute that is first thought about and the most used in stakeholder analyses, the most powerful stakeholders are not always the most interested or the ones that need more attention (80). This may explain why several stakeholder attributes are usually combined in the studies. Therefore, it is helpful to decide upfront on the most useful information for a specific situation when choosing the right attributes to analyse. It is also necessary to consider who is going to carry

out the analysis (i.e., experts vs stakeholders), since some of the attributes may be more complex to understand for a lay audience (e.g., stakeholder salience approach (20) analysing power, urgency and legitimacy) (9). Besides, it is important to clearly define the attributes that will be used and make them understandable to all participants to enable consistency throughout the analysis. This is illustrated by examples on how the same attribute can be used with different meanings, such as: the use of power and influence interchangeably (60) or as different attributes (48); or the use of impact both to refer to the impact the stakeholder has on the project (37, 49) or the impact the project has on the stakeholder (53, 81).

Future actions and stakeholder engagement

It would be useful that future actions and stakeholder engagement strategies based on the results of stakeholder analyses be recommended more often in papers. It is true that not all processes are similar, and that reality makes it necessary sometimes to consider a balance between the information released and that which is kept internal (25). In addition, stakeholder engagement is broad and complex enough to be considered on its own. However, providing some recommendations, even if these cannot delve into the specifics, would complete the analyses, as well as increase the knowledge in the area and the understanding of stakeholder analyses applications. A good example is provided by Thomas and Gilson (22) on proposals to manage stakeholders based on the results of a stakeholder analysis. Although excluded from the review because the methods for the stakeholder analysis were not specified, this article may serve as inspiration, along with the examples provided in the results of this review.

Reporting stakeholder analyses and the RISA tool

The systematic reporting of studies is being promoted internationally by the Equator Network to enhance the quality and transparency of health research (82). As per the information in this study, stakeholder analyses have enough entity to be reported independently. Therefore, the RISA tool is proposed as a reporting guideline for stakeholder analyses. The items composing this tool come from the existing literature and have been piloted by their application to the 51 studies included in this scoping review. This tool may assist in providing solutions to different issues affecting the reporting of stakeholder analyses, as encountered in the conduct of this systematic scoping review. For example, in some of the articles assessed throughout the

selection process, the authors declared doing a stakeholder analysis as part of their studies but did not report the methodology or results of this analysis (83-85). Besides, the heterogeneity found on the reporting of stakeholder analysis among those studies included in the review makes it a challenge to compare or even reproduce studies. Although confidentiality, or even strategy, could be reason to argue the level of detail or how the findings of a stakeholder analysis should be presented, there is no excuse to not clearly report the definitions, the context, and the methods used during the analysis. If this effort is undertaken, these analyses could be reproduced, evaluated and improved. At this stage, the RISA tool could also assist in defining future criteria to assess the quality of stakeholder analyses. Finally, the availability of systematic reports of stakeholder analyses may enhance the possibilities to compare studies and carry out systematic reviews in the future. This would, in turn, allow for improvement of the quality and transparency of the processes in which stakeholder analyses are used.

Limitations and strengths

Some limitations should be considered together with the results of this systematic scoping review. First, the terminology in this area is not clear. The term "stakeholder analysis" is used in the literature with two different meanings: analysing stakeholders' characteristics vs having stakeholders analysing something. Moreover, some studies conducted a stakeholder analysis, although the term "stakeholder analysis" is not mentioned as part of the article; one study identified key stakeholders, their roles, incentives and power (44); another identified and categorised stakeholders (74); and yet another studied the actors and their interactions (69). To retrieve these articles, a combination of different terms and a sensitive search strategy was used. Creating MeSH terms for "stakeholder", "stakeholder analysis" and "stakeholder mapping" would contribute to use consistent terminology, and thus ease the identification of literature related to this topic in the future. Second, the heterogeneity in the methods and reporting of stakeholder analyses precluded the synthesis of the results. To offset this inconvenience, detailed results are organised in tables that readers could easily consult. Third, excluding studies written in non-Roman characters could have introduced some language bias; however, this is a broadly used exclusion criteria in systematic reviews. Finally, it is considered that only one author extracted data, which was compensated by discussions of any uncertainty with a second author, and when no agreement was achieved between the two authors, a third one joined the discussion. The main strength of this scoping review is its comprehensiveness. The

information compiled about stakeholder analyses in health innovation planning processes can be applied to future processes. In addition, the organisation of the results, following the key methodological steps for stakeholder analysis (18), provides structure to the heterogeneity found in the literature and makes the results easier to find and apply in practice.

Conclusion

Stakeholder analyses are used throughout the entire planning process of health innovations, more frequently for policies and services and delivery methods. They are used in a variety of countries with disparate income levels. There is great heterogeneity on how stakeholder analyses are carried out, and the attributes analysed for the stakeholders. This heterogeneity suggests that stakeholder analyses are a flexible technique and so it is important to report them thoroughly. It also highlights the need for methodological research in this area jointly assessing the methods and the usefulness of the results they yield for the planning process. The information gathered in this review may help policy makers, practitioners and researchers improve their understanding of stakeholder analyses and their application in planning processes; it provides them with practical information on the methods, attributes and relationships used so far in stakeholder analyses. The RISA tool is provided to guide and foster the systematic reporting of stakeholder analysis. This, in turn, would enhance the quality and transparency of the research and planning processes in which stakeholder analyses are used.

Acknowledgements

Tables

Table 1. Included studies, considering the health innovation and the phase of the planning process in which the stakeholder analysis was conducted

	Preparatory phase	Needs assessment + setting objectives	Development (including piloting the innovation)	Impact assessment (clinical, economic and humanistic impact)	Implementation (adoption, implementation & sustainability)
Policies (n=27; P=15;R=12)	P=2 Morone et al., 2014 [75]; Ancker and Rechel, 2015 [36]	P=10 Varvasovszky and Mckee, 1998 [59]; Glassman et al.,1999 [50]; Aliyu, 2002 [64] ;Gil et al., 2010 [33]; Chao-Yin et al., 2010 [38]; Surjadjaja and Mayhew, 2011 [54]; Ardalan et al., 2012 [37] ; Abiiro and McIntyre, 2013 [48]; Mitropoulou et al., 2014 [61]; Phillips et al., 2016 [76]	P=2 Hoeijmakers et al., 2007 [67]; Gilson et al., 2012 [16] R=1 Williams et al., 2009 [46]	R=1 Mohamadi et al. (In Press) [72]	P=1 Kimani et al., 2016 [68] R=10 Horev and Babad, 2005 [51]; da Silva Santos et al., 2011 [42]; Basaza et al., 2013 [60]; Machado, 2013 [52]; Lim et al., 2014 [43]; Nabyonga-Orem et al., 2014 [77]; Onoka et al., 2015 [45]; Nigenda et al., 2016 [44]; Silva et al., 2016 [74]; Vos et al., 2016 [79]
Products & Technologies (n=4;P=4)		P=2 Costa et al., 2012 [40]; van Woezik et al., 2016 [56]	P=2 van Limburg et al., 2015 [9]; Pouloudi et al., 2016 [73]		
Services & Delivery methods (n=15;P=12;R=3)	P=2 Auvinen et al., 2012 [58]; Franco-Trigo et al., 2017 [19]	P=4 Kumar et al., 1997 [63]; Petruney et al., 2010 [39]; Transform Nutrition, 2011 [70]; Shahandeh el al., 2012 [35]	P=2 Ten Asbroek et al., 2005 [47]; Yassoub et al. (2017) R=1 Henriksen et al., 2005 [41]		P=4 Namazzi et al., 2013 [55]; Alive & Thrive, 2014 [66]; Haidari et al., 2014 [81]; Makan et al., 2015 [53] R=2 Park et al., 2014 [69]; Suryoputro and Isarabhakdi, 2016 [57]
Systems (n=5;P=5))		P=1 Drake et al., 2011 [71]			P=4 Burton, 1999 [49]; Harpham et al. 2001 [34]; Drake et al., 2010 [65]; Shao et al., 2015 [78]

P: prospective; R: retrospective

Table 2. Methods used for stakeholder analysis identification

Health innovation	Study	Research team discussion / brainstorming / previous knowledge	Literature / documents / media /web /review	Expert / stakeholder consultation (other than interviews)	Individual interviews	Group interviews / meetings /brainstorming	Delphi	Survey / Questionnaire	Snowballing technique	Not reported
Policies	Varvasovszky and McKee, 1998 [59] [P]				✓				✓	
	Glassman et al., 1999 [50] [P]		✓		✓ (guided interviews)					Not clearly reported
	Aliyu, 2002 [64] [P]		✓		✓					(+consensus opinion)
	Hoeijmakers et al., 2007 [67] [P]							✓	✓	
	Gil et al., 2010 [33] [P]	✓			✓				✓	
	Chao-Yin et al., 2010 [38] [P]	✓		✓						
	Surjadjaja and Mayhew, 2011 [54] [P]	✓			✓ (in-depth)				✓	Not clearly reported
	Ardalan et al., 2012 [37] [P]	✓			✓					Not clearly reported
	Gilson et al., 2012 [16] [P]		✓		✓	✓ (brainstorm)				Not clearly reported
	Abiiro and McIntyre, 2013 [48] [P]	✓							✓	Not clearly reported
	Mitropoulou et al., 2014 [61] [P]	✓	✓	✓						
	Morone et al., 2014 [75] [P]							✓		
	Ancker and Rechel, 2015 [36] [P]		✓		✓ (semi-struct in-depth)				✓	
	Kimani et al., 2016 [68] [P]	✓				✓			✓	
	Phillips et al., 2016 [76] [P]	✓			✓				✓	
	Horev and Babad, 2005 [51] [R]		✓							Stakeholder identification

Table 2. Methods used for stakeholder analysis identification (continued)

Health innovation	Study	Research team discussion / brainstorming / previous knowledge	Literature / documents / media /web /review	Expert / stakeholder consultation (other than interviews)	Individual interviews	Group interviews / meetings /brainstorming	Delphi	Survey / Questionnaire	Snowballing technique	Not reported
										not clear
	Williams et al., 2009 [46] [R]			✓	✓				✓	
	da Silva Santos et al., 2011 [42] [R]									✓
	Basaza et al., 2013 [60] [R]		✓					✓		
	Machado, 2013 [52] [R]		✓		✓					Not clearly reported
	Lim et al., 2014 [43] [R]		✓	✓						
	Nabyonga-Orem et al., 2014 [77] [R]		✓		✓				✓	
	Onoka et al., 2015 [45] [R]		✓		✓					
	Nigenda et al., 2016 [44] [R]		✓							Not clearly reported (no steps)
	Silva et al., 2016 [74] [R]		✓							
	Vos et al. (2016) [R]	✓	✓							
	Mohamadi et al. (In Press) [72] [R]		✓		✓					
Products and Technologies	Costa et al., 2012 [40] [P]			✓						
	van Limburg et al., 2015 [9] [P]		✓			✓ (researchers+expert recommendations brainstorm)		✓	✓	
	Pouloudi et al., 2016 [73] [P]		✓		✓ (semi-structured and un-structured in-depth)				✓	

Table 2. Methods used for stakeholder analysis identification (continued)

Health innovation	Study	Research team discussion / brainstorming / previous knowledge	Literature / documents / media /web /review	Expert / stakeholder consultation (other than interviews)	Individual interviews	Group interviews / meetings /brainstorming	Delphi	Survey / Questionnaire	Snowballing technique	Not reported
	van Woezik et al., 2016 [56] [P]		✓	✓					✓	
Services and Delivery methods	Kumar et al., 1997 [63] [P]	✓								
	Ten Asbroek et al., 2005 [47] [P]									✓
	Petruney et al., 2010 [39] [P]		✓							
	Transform Nutrition, 2011 [70] [P]		✓			✓				
	Auvinen et al., 2012 [58] [P]		✓							
	Shahandeh el al., 2012 [35] [P]		✓		✓	✓				
	Namazzi et al., 2013 [55] [P]	✓								
	Alive & Thrive, 2014 [66] [P]					✓				
	Haidari et al., 2014 [81] [P]	✓			✓				✓	
	Makan et al., 2015 [53] [P]		✓		✓ (in-depth)	✓				Not clearly reported
	Franco-Trigo et al., 2017 [19] [P]	✓				✓				
	Yassoub et al., 2017 [62] [P]		✓	✓						
	Henriksen et al., 2005 [41] [R]									✓
	Park et al., 2014 [69] [R]							✓	✓	
	Suryoputro and Isarabhakdi, 2016 [57] [R]				✓ (in-depth)					

Table 2. Methods used for stakeholder analysis identification (continued)

Health innovation	Study	Research team discussion / brainstorming / previous knowledge	Literature / documents / media /web /review	Expert / stakeholder consultation (other than interviews)	Individual interviews	Group interviews / meetings /brainstorming	Delphi	Survey / Questionnaire	Snowballing technique	Not reported
Systems	Burton, 1999 [49] [P]		✓		✓ (semi-structured and structured)	✓				Not clearly reported, data collection for the entire process
	Harpham et al., 2001 [34] [P]									✓
	Drake et al., 2010 [65] [P]		✓			✓ (informational meetings)				
	Drake et al., 2011 [71] [P]	✓				✓			✓	
	Shao et al., 2015 [78] [P]	✓	✓							

[P]: Prospective; [R]: Retrospective; semi-struc: semi-structured

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritization

Health innovation	Study	Stakeholder attributes										Data collection methods for the categorisation/prioritisation									
		Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
Policies	Varvasovszky and McKee, 1998 [59] [P]	✓	✓		✓			✓			✓ a					✓	✓			✓	
	Glassman et al., 1999 [50] [P]	✓	✓					✓			✓ a					✓	✓				
	Aliyu, 2002 [64] [P]		✓		✓			✓							✓ Consensus opinion	✓	✓				
	Hoeijmakers et al., 2007 [67] [P]	✓				✓		✓	✓		✓ b					✓		✓			
	Gil et al., 2010 [33] [P]	✓	✓					✓			✓ a					✓					
	Chao-Yin et al., 2010 [38] [P]		✓								✓ c					✓				✓	
	Surjadjaja and Mayhew, 2011 [54] [P]		✓					✓			✓ d					✓	✓	✓			
	Ardalan et al., 2012 [37] [P]				✓						✓ e				✓						
	Gilson et al., 2012 [16] [P]	✓	✓					✓								✓			✓		

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakeholder attributes											Data collection methods for the categorisation/prioritisation								
		Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
	Abiiro and McIntyre, 2013 [48] [P]	✓	✓		✓	✓		✓						✓		✓	✓				
	Mitropoulou et al., 2014 [61] [P]	✓	✓					✓	✓		✓ f					✓	✓			✓	
	Morone et al., 2014 [75] [P]		✓								✓ g									✓	
	Ancker and Rechel, 2015 [36] [P]	✓	✓					✓	✓							✓	✓				
	Kimani et al., 2016 [68] [P]							✓	✓		✓ h			✓						✓	
	Phillips et al., 2016 [76] [P]	✓	✓ (change over time)		✓			✓			✓ i			✓		✓	✓	✓			
	Horev and Babad, 2005 [51] [R]	✓						✓	✓		✓ j									✓	
	Williams et al., 2009 [46] [R]			✓	✓			✓	✓					✓		✓					
	da Silva Santos et al., 2011 [42] [R]				✓			✓								✓	✓	✓			

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Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
	Basaza et al., 2013 [60] [R]		✓		✓			✓									✓			✓	
	Machado, 2013 [52] [R]	✓					✓	✓	✓							✓	✓				
	Lim et al., 2014 [43] [R]	✓	✓								✓ k		✓			✓					
	Nabyonga-Orem et al., 2014 [77] [R]		✓					✓	✓							✓	✓				
	Onoka et al., 2015 [45] [R]	✓	✓			✓		✓								✓					
	Nigenda et al., 2016 [44] [R]	✓						✓	✓		✓ l					✓	✓				
	Silva et al., 2016 [74] [R]										✓ m					✓					
	Vos et al. (2016) [R]		✓	✓				✓								✓	✓		✓		
	Mohamadi et al. (In Press) [72] [R]	✓	✓		✓			✓	✓		✓ o					✓	✓	✓			

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
		Stakeholder attributes											Data collection methods for the categorisation/prioritisation								
Products and Technologies	Costa et al., 2012 [40] [P]										✓ p		✓								
	van Limburg et al., 2015 [9] [P]	✓			✓ (importance of values)		✓	✓		✓	✓ q		✓ (brainstorm session)	✓		✓				✓	
	Pouloudi et al., 2016 [73] [P]	✓	✓					✓								✓	✓				
	van Woezik et al., 2016 [56] [P]	✓					✓	✓	✓							✓				✓	
Services and Delivery methods	Kumar et al., 1997 [63] [P]	✓	✓					✓			✓ r				✓	✓					
	Ten Asbroek et al., 2005 [47] [P]		✓				✓						✓								
	Petruney et al., 2010 [39] [P]							✓								✓					

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakeholder attributes											Data collection methods for the categorisation/prioritisation								
		Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
	Transform Nutrition, 2011 [70] [P]		✓					✓		✓ s										✓ Net-Map (participatory interview technique)
	Auvinen et al., 2012 [58] [P]		✓	✓				✓		✓ t					✓					
	Shahandeh el al., 2012 [35] [P]	✓		✓				✓		✓ u			✓		✓	✓				
	Namazzi et al., 2013 [55] [P]	✓	✓					✓					✓		✓					✓
	Alive & Thrive, 2014 [66] [P]		✓					✓		✓ a										✓ Net-Map (participatory interview technique)

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
	Haidari et al., 2014 [81] [P]	✓	✓	✓				✓								✓	✓				
	Makan et al., 2015 [53] [P]	✓	✓	✓				✓	✓					✓	✓	✓				✓	✓
	Franco-Trigo et al., 2017 [19] [P]							✓			✓ v										✓
	Yassoub et al., 2017 [62] [P]		✓			✓					✓ w						✓			✓ (questionnaire in the interviews)	
	Henriksen et al., 2005 [41] [R]	✓	✓		✓			✓	✓		✓ x		✓								
	Park et al., 2014 [69] [R]										✓ y									✓	

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakeholder attributes											Data collection methods for the categorisation/prioritisation								
		Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop
	Suryoputro and Isarabhakdi, 2016 [57] [R]		✓		✓ (interest in being involved: active, passive)			✓			✓ z					✓					
Systems	Burton, 1999 [49] [P]	✓						✓			✓ aa					✓	✓				✓ meetings
	Harpham et al., 2001 [34] [P]										✓ ab					✓					
	Drake et al., 2010 [65] [P]		✓					✓			✓ ac					✓			✓	✓ (questionnaires)	
	Drake et al., 2011 [71] [P]		✓					✓			✓ ad					✓			✓	✓	
	Shao et al., 2015 [78] [P]		✓		✓	✓	✓			✓					✓ Delphi					✓	

Table 3. Stakeholder attributes and data collection methods for stakeholder categorisation/prioritisation (continued)

Health innovation	Study	Stakeholder attributes											Data collection methods for the categorisation/prioritisation								
		Stakes (identification)	Attitude / Position	Impact on stakeholder	Interest (level)	Knowledge / awareness	Legitimacy	Power / Influence	Roles / contribution	Urgency	Other	Not reported	Expert consultation	Focus group	Group consensus	Individual interviews	Literature/document/media	Observation	Research team knowledge/brainstorming	Survey/Questionnaire	Workshop

[P]: Prospective; [R]: Retrospective; Sth: stakeholder

[a]Strength of position; [b]Interests; [c]Level of support, preferences; [d]Priority sth give to the issue; [e]Internal/external, sth impact on the issue; [f]Territorial level, sector; [g]Involvement and area of action; [h]Sector; [i]Understanding of proposed policies; [j]Actions, sth impact on the goals of the reform (positive, indifferent, negative); [k]Issues causing conflict; [l]Incentives; how they adapted/interpreted the policy; [m]Sth involvement (direct, indirect); [o]Winner/loser, opportunities and challenges of sth; [p]Internal/external; [q]Value; [r]Institutional capacities, sth importance to the success of the project, sth perception on different issues, preferred mechanism to build and implement new system; [s]Level of support; [t]Internal/interface/external; [u]Importance, sth impact on the project, primary/secondary sth, key sth; [v]Key sth; [w]Resources, sth promptness, mode of support, alliances, conditions to offering support; [x]Area of interest; benefits, advantages, consequences, rewards, expectations; motives, commitments, satisfaction; attitude to other sth; [y]Public/private; [z]Identity (age, level of education, occupation, length of employment, organization's origin), involvement; [aa]Sth impact on the project (positive/negative), importance or level of priority given to the sth, primary/secondary; [ab]primary, secondary; [ac]Opportunities and obstacles to key players; [ad]Perceived opportunities and obstacles; strength of position;

Table 4. Reporting Items for Stakeholder Analysis: the RISA tool

Reporting Items for Stakeholder Analysis* (RISA)			
Context	Clarifications	Information reported on page #	Reason why this information was deemed not necessary on page/line #
Aim of the stakeholder analysis	What were the specific objectives of the stakeholder analysis?		
Reasons for conducting the stakeholder analysis	How was the stakeholder analysis meant to help for planning?		
System boundaries for the analysis	Scope or level of the stakeholder analysis	At what level were the stakeholders analysed? Were they local, regional, state, national or international stakeholders?	
	Direction of the analysis (prospective vs retrospective)	Was the analysis performed looking forward or backwards?	
Individuals conducting the stakeholder analysis	Who identified stakeholders, classified them, identified relationships and performed the data analysis? All the individuals stated in the specific items "source of information" (see below) should be part of the answer to this question.		
Data collection duration	How long did data collection last?		
Application of stakeholder analysis methods	Clarifications	Information reported on page #	Reason why this information was deemed not necessary on page/line #
Stakeholder identification	Stakeholder definition applied for the analysis		
	Steps carried out/process followed	What was the specific sequence of steps followed to identify stakeholders (if any)?	
	Source of information	Who provided the information for the stakeholder identification or where was it obtained?	

Table 4. Reporting Items for Stakeholder Analysis: the RISA tool (continued)

	Data collection methods	What were the methods used to collect data to identify stakeholders? (E.g., literature review, interviews, etc.)		
	Data display / Presentation of results	How are the findings of the stakeholder identification presented? (E.g., description, tables, maps, etc.)		
Identification of stakeholders' stakes	Steps carried out/process followed	What was the specific sequence of steps followed to identify stakeholder stakes (if any)?		
	Source of information	Who provided the information for the stakeholder stakes or where was it obtained?		
	Data collection methods	What were the methods used to collect data on stakeholder stakes? (E.g., literature review, interviews, etc.)		
	Data analysis	What were the techniques used to analyse the stakes?		
	Data display / Presentation of results	How are the findings for the stakeholder stakes presented? (E.g., description, tables, figures, etc.)		
Stakeholder differentiation/ categorisation or prioritisation	Stakeholder attributes and attributes definitions	What were the stakeholder attributes used to differentiate/categorise or prioritise stakeholders? What are the attributes definitions?		
	Steps carried out/process followed	What was the specific sequence of steps followed to differentiate/categorise or prioritise stakeholders (if any)?		
	Source of information	Who provided the information for the stakeholder attributes or where was it obtained?		

Table 4. Reporting Items for Stakeholder Analysis: the RISA tool (continued)

	Data collection methods	What were the methods used to collect data on stakeholder attributes? (E.g., literature review, interviews, etc.)		
	Data analysis	What were the techniques used to analyse stakeholder attributes / To come up with the stakeholder categories?		
	Data display/Presentation of results	How are the findings for the stakeholder differentiation/categorisation presented? (E.g., description, tables, matrices, etc.)		
Investigation of the relationships between stakeholders	Steps carried out/process followed	What was the specific sequence of steps followed to identify stakeholder relationships?		
	Relationships analysed	What were the specific relationships analysed? (E.g., alliances, communication, collaboration…)		
	Timeframe for the relationships analysed	E.g., relationships in the last year, at present, potential relationships. If the relationship analysed was collaboration, was it collaboration in the last year? At present? Willingness to collaborate?		
	Source of information	Who provided the information for the stakeholder relationships or where was it obtained?		
	Data collection methods	What were the methods used to collect data on stakeholder relationships? (E.g., literature review, interviews, surveys, etc.)		
	Data analysis	What were the techniques used to analyse stakeholder relationships? Were there any indicators used? (e.g. density, centrality, centralization in social network analysis)		

Table 4. Reporting Items for Stakeholder Analysis: the RISA tool (continued)

	How are the findings for the stakeholder relationships presented? (E.g., description, sociograms, maps, etc.)		
Data display/Presentation of results			
Measures to ensure the trustworthiness or validity and reliability of the stakeholder analysis	Arguments that show why the results of the analyses are credible/valid, reliable, etc.		
Future actions and stakeholder engagement	Clarifications	Information reported on page #	Reason why this information was deemed not necessary on page/line #
How the results will be used; strategies for stakeholder engagement based on the results of the stakeholder analysis / how findings influenced the stakeholder engagement; recommendations for the future			

*The items in this checklist were chosen from Gilmour and Beilin [24]; Reed et al. [18]; Schmeer [17]; and Varvasovszky and Brugha [25]. Additionally, they were piloted and refined through their use for data extraction of the 51 studies included in the scoping review and authors discussions. The structure derives from the "key methodological steps necessary for stakeholder analysis" by Reed et al. [18].

References

1.   World Health Organization. Innovation 2018 [Available from: http://www.who.int/topics/innovation/en/] [Accessed 2018, June 9].

2.   McKenzie JF, Neiger BL, Thackeray R. Planning, implementing & evaluating health promotion programs: A primer: Pearson; 2016.

3.   Milat AJ, Newson R, King L, Rissel C, Wolfenden L, Bauman A, et al. A guide to scaling up population health interventions. Public health research & practice. 2016;26(1):e2611604.

4.   Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. Bmj. 2008;337:a1655.

5.   Green L, Kreuter M. Health program planning: An educational and ecological approach. 4th ed. Boston: McGraw-Hill; 2005.

6.   Sabater-Hernández D, Moullin J, Hossain L, Durks D, Franco-Trigo L, Fernández-Llimos F, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. Am J Health-Syst Pharm. 2016;73:156-64.

7.   Lalonde L, Goudreau J, Hudon É, Lussier M-T, Bareil C, Duhamel F, et al. Development of an interprofessional program for cardiovascular prevention in primary care: A participatory research approach. SAGE Open Med. 2014;2:2050312114522788.

8.   Noyes J, Lewis M, Bennett V, Widdas D, Brombley K. Realistic nurse-led policy implementation, optimization and evaluation: novel methodological exemplar. Journal of advanced nursing. 2014;70(1):220-37.

9.   van Limburg M, Wentzel J, Sanderman R, van Gemert-Pijnen L. Business Modeling to Implement an eHealth Portal for Infection Control: A Reflection on Co-Creation With Stakeholders. JMIR research protocols. 2015;4(3):e104.

10.   Ennis L, Robotham D, Denis M, Pandit N, Newton D, Rose D, et al. Collaborative development of an electronic Personal Health Record for people with severe and enduring mental health problems. BMC psychiatry. 2014;14:305.

11.   Heinen MM, Bartholomew LK, Wensing M, van de Kerkhof P, van Achterberg T. Supporting adherence and healthy lifestyles in leg ulcer patients: systematic development of the Lively Legs program for dermatology outpatient clinics. Patient Educ Couns. 2006;61(2):279-91.

12.   Rutten GM, Harting J, Bartholomew LK, Braspenning JC, van Dolder R, Heijmans MF, et al. Development of a theory-and evidence-based intervention to enhance implementation of physical therapy guidelines for the management of low back pain. Arch Public Health. 2014;72(1):1-12.

13.   Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing Public Participation Processes. Public Adm Rev. 2013;73(1):23-34.

14.   Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. Annu Rev Public Health. 2008;29:325-50.

15.   Brugha R, Varvasovszky Z. Stakeholder analysis: a review. Health Policy and Planning. 2000;15(3):239-46.

16.   Gilson L, Erasmus E, Borghi J, Macha J, Kamuzora P, Mtei G. Using stakeholder analysis to support moves towards universal coverage: lessons from the SHIELD project. Health Policy Plan. 2012;27 Suppl 1:i64-76.

17.   Schmeer K. Guidelines for conducting a stakeholder analysis: Bethesda, MD: Partnerships for Health Reform, Abt Associates Inc.; 1999.

18.   Reed M, Graves A, Dandy N, Posthumus H, Hubacek K, Morris J, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. J Environ Manage. 2009;90(5):1933-49.

19.   Franco-Trigo L, Hossain LN, Durks D, Fam D, Inglis SC, Benrimoj SI, et al. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. Research in social & administrative pharmacy : RSAP. 2017;13(3):539-52.

20.   Mitchell RK, Agle BR, Wood DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. Acad Manage Rev. 1997;22(4):853-86.

21.   Reed M, Curzon R. Stakeholder mapping for the governance of biosecurity: a literature review. J Integr Environ Sci. 2015;12(1):15-38.

22.   Thomas S, Gilson L. Actor management in the development of health financing reform: health insurance in South Africa, 1994-1999. Health Policy Plan. 2004;19(5):279-91.

23.   Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. Public Manag Rev. 2004;6(1):21-53.

24.   Gilmour J, Beilin R. Stakeholder mapping for effective risk communication: Australian Centre for Excellence in Risk Analysis; 2007 [Available from: https://cebra.unimelb.edu.au/__data/assets/pdf_file/0006/2220990/gilmour0609.pdf] [Accessed 2018, June 27].

25. Varvasovszky Z, Brugha R. A stakeholder analysis. Health Policy Plann. 2000;15(3):338-45.

26. Arksey H, O'Malley L. Scoping Studies: Towards a Methodological Framework. International Journal of Social Research Methodology. 2005;8(1):19-32.

27. Peters MD, Godfrey CM, Khalil H, McInerney P, Parker D, Soares CB. Guidance for conducting systematic scoping reviews. International journal of evidence-based healthcare. 2015;13(3):141-6.

28. Colquhoun HL, Levac D, O'Brien KK, Straus S, Tricco AC, Perrier L, et al. Scoping reviews: time for clarity in definition, methods, and reporting. J Clin Epidemiol. 2014;67(12):1291-4.

29. Bartholomew LK, Parcel GS, Kok G, Gottlieb NH, Fernández ME. Planning health promotion programs: An Intervention Mapping approach. Third ed. San Francisco, CA: Jossey-Bass; 2011.

30. Smith BJ, Tang KC, Nutbeam D. WHO Health Promotion Glossary: new terms. Health promotion international. 2006;21(4):340-5.

31. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. Implement Sci. 2010;5:69.

32. Moher D, Liberati A, Tetzlaff J, Altman DG, The Prisma Group. Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLOS Medicine. 2009;6(7):e1000097.

33. Gil A, Polikina O, Koroleva N, Leon DA, McKee M. Alcohol policy in a Russian region: a stakeholder analysis. European journal of public health. 2010;20(5):588-94.

34. Harpham T, Burton S, Blue I. Healthy city projects in developing countries: the first evaluation. Health promotion international. 2001;16(2):111-25.

35. Shahandeh K, Majdzadeh R, Jamshidi E, Loori N. Community capacity assessment in preventing substance abuse: a participatory approach. Iranian journal of public health. 2012;41(9):48-55.

36. Ancker S, Rechel B. HIV/AIDS policy-making in Kyrgyzstan: a stakeholder analysis. Health Policy Plan. 2015;30(1):8-18.

37. Ardalan A, Rajaei MH, Masoumi G, Azin A, Zonoobi V, Sarvar M, et al. 2012-2025 Roadmap of I.R.Iran's Disaster Health Management. PLoS currents. 2012;4:e4f93005fbcb34.

38. Chao-Yin L, Don-Yun C, I-Chun L, Naiyi H. Political Feasibility Analysis of the New Financing Scheme for the National Health Insurance Reform in Taiwan: An Application of Stakeholder Analysis. Asian Social Work and Policy Review. 2010;4(3):163-83.

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39.   Petruney T, Harlan SV, Lanham M, Robinson ET. Increasing support for contraception as HIV prevention: stakeholder mapping to identify influential individuals and their perceptions. PloS one. 2010;5(5):e10781.

40.   Costa CJ, Aparicio M, Figueiredo JP. Health Portal: An Alternative Using Open Source Technology. International Journal of Web Portals (IJWP). 2012;4(4):1-18.

41.   Henriksen E, Johansen M, Deraas T, Arild E. Difficulties in moving routine medical checks from the specialist level to the general practitioner level. Journal of telemedicine and telecare. 2005;11 Suppl 2:S47-50.

42.   da Silva Santos FA, Carvalho de Sousa IM, Gomes Dantas Gurgel I, Falangola Benjamin Bezerra A, de Barros NF. Integrative practice policy in Recife, northeastern Brazil: an analysis of stakeholder involvement. Revista de saude publica. 2011;45(6):1154-9.

43.   Lim S, Lee KH, Suh HS, Bae KH. To whom do bureaucrats need to respond? Two faces of civil society in health policy. Social science & medicine (1982). 2014;123:269-77.

44.   Nigenda G, Gonzalez-Robledo LM, Juarez-Ramirez C, Adam T. Understanding the dynamics of the Seguro Popular de Salud policy implementation in Mexico from a complex adaptive systems perspective. Implement Sci. 2016;11:68.

45.   Onoka CA, Hanson K, Hanefeld J. Towards universal coverage: a policy analysis of the development of the National Health Insurance Scheme in Nigeria. Health Policy Plan. 2015;30(9):1105-17.

46.   Williams HA, Vincent-Mark A, Herrera Y, Chang OJ. A retrospective analysis of the change in anti-malarial treatment policy: Peru. Malaria journal. 2009;8:85.

47.   ten Asbroek AH, Delnoij DM, Niessen LW, Scherpbier RW, Shrestha N, Bam DS, et al. Implementing global knowledge in local practice: a WHO lung health initiative in Nepal. Health Policy Plan. 2005;20(5):290-301.

48.   Abiiro GA, McIntyre D. Universal financial protection through National Health Insurance: a stakeholder analysis of the proposed one-time premium payment policy in Ghana. Health Policy Plan. 2013;28(3):263-78.

49.   Burton S. Evaluation of healthy city projects: Stakeholder analysis of two projects in Bangladesh. Environment and Urbanization. 1999;11(1):41-50.

50.   Glassman A, Reich MR, Laserson K, Rojas F. Political analysis of health reform in the Dominican Republic. Health Policy Plan. 1999;14(2):115-26.

51.   Horev T, Babad YM. Healthcare reform implementation: stakeholders and their roles-the Israeli experience. Health policy. 2005;71(1):1-21.

52.   Machado SHS. O uso da teoria de stakeholders em uma análise da etapa de formulação da Política Nacional de Medicamentos. Revista de Administração Pública. 2013;47:543-65.

53.   Makan A, Fekadu A, Murhar V, Luitel N, Kathree T, Ssebunya J, et al. Stakeholder analysis of the Programme for Improving Mental health carE (PRIME): baseline findings. Int J Ment Health Syst. 2015;9:27.

54.   Surjadjaja C, Mayhew SH. Can policy analysis theories predict and inform policy change? Reflections on the battle for legal abortion in Indonesia. Health Policy Plan. 2011;26(5):373-84.

55.   Namazzi G, N KS, Peter W, John B, Olico O, A AK, et al. Stakeholder analysis for a maternal and newborn health project in Eastern Uganda. BMC pregnancy and childbirth. 2013;13:58.

56.   van Woezik AF, Braakman-Jansen LM, Kulyk O, Siemons L, van Gemert-Pijnen JE. Tackling wicked problems in infection prevention and control: a guideline for co-creation with stakeholders. Antimicrobial resistance and infection control. 2016;5:20.

57.   Suryoputro A, Isarabhakdi P. Stakeholder mapping in the provision of youth-friendly reproductive health service in Indonesia. Journal of Health Research. 2016;30(6):377-86.

58.   Auvinen AM, Kohtamaki K, Ilvesmaki Msc A. Workplace health promotion and stakeholder positions: a Finnish case study. Archives of environmental & occupational health. 2012;67(3):177-84.

59.   Varvasovszky Z, McKee M. An analysis of alcohol policy in Hungary. Who is in charge? Addiction (Abingdon, England). 1998;93(12):1815-27.

60.   Basaza RK, O'Connell TS, Chapcakova I. Players and processes behind the national health insurance scheme: a case study of Uganda. BMC health services research. 2013;13:357.

61.   Mitropoulou C, Mai Y, van Schaik RH, Vozikis A, Patrinos GP. Stakeholder analysis in pharmacogenomics and genomic medicine in Greece. Public health genomics. 2014;17(5-6):280-6.

62.   Yassoub R, Alameddine M, Saleh S. The Path Toward Universal Health Coverage. International journal of health services : planning, administration, evaluation. 2017;47(2):352-73.

63.   Kumar Y, Chaudhury NR, Vasudev N. Stakeholder Analysis: The Women's and Children's Health Project in India. 1997. Report No.: Technical Report No. 13.

64.   Aliyu ZY. Policy mapping for establishing a national emergency health policy for Nigeria. BMC international health and human rights. 2002;2(1):5.

65.   Drake JK, Thi Thanh LH, Suraratdecha C, Thi Thu HP, Vail JG. Stakeholder perceptions of a total market approach to family planning in Viet Nam. Reproductive health matters. 2010;18(36):46-55.

66.   Alive & Thrive. Nutrition Stakeholder Analysis: Bihar, India. Washington, D.C., USA; 2014.

67.   Hoeijmakers M, De Leeuw E, Kenis P, De Vries NK. Local health policy development processes in the Netherlands: an expanded toolbox for health promotion. Health promotion international. 2007;22(2):112-21.

68.   Kimani T, Ngigi M, Schelling E, Randolph T. One Health stakeholder and institutional analysis in Kenya. Infection ecology & epidemiology. 2016;6:31191.

69.   Park Y, Kim CY, You MS, Lee KS, Park E. Public participation in the process of local public health policy, using policy network analysis. Journal of preventive medicine and public health = Yebang Uihakhoe chi. 2014;47(6):298-308.

70.   Transform Nutrition. Transform Nutrition: Kenya Stakeholder Mapping Report. 2011.   [Available   from: http://www.transformnutrition.org/wp-content/uploads/sites/3/2011/11/Stakeholder-Mapping-Report-Kenya.pdf] [Accessed 2018, June 27]

71.   Drake JK, Espinoza H, Suraratdecha C, Lacayo Y, Keith BM, Vail JG. Stakeholder perceptions of a total market approach to family planning in Nicaragua. Revista panamericana de salud publica = Pan American journal of public health. 2011;29(5):329-36.

72.   Mohamadi E, Manesh AO, Rashidian A, Hassanzadeh A, Razavi M, Foroushani AR. Stakeholders Analysis of Health Insurance Benefit Package Policy in Iran. Health Scope. 2017(In Press).

73.   Pouloudi N, Currie W, Whitley EA. Entangled stakeholder roles and perceptions in health information systems: A longitudinal study of the U.K. NHS N3 Network. Journal of the Association of Information Systems. 2016;17(2):107-61.

74.   Silva ML, Perrier L, Paget JW, Mosnier A, Buthion V, Cohen JM, et al. Influenza vaccination policy-making processes in France and The Netherlands: Framework and determinants. Health policy. 2016;120(3):293-305.

75.   Morone P, Camacho Cuena E, Kocur I, Banatvala N. Securing support for eye health policy in low- and middle-income countries: identifying stakeholders through a multi-level analysis. Journal of public health policy. 2014;35(2):185-203.

76.   Phillips S, Pholsena S, Gao J, Oliveira Cruz V. Stakeholder learning for health sector reform in Lao PDR. Health Policy Plan. 2016;31(7):910-8.

77.   Nabyonga-Orem J, Nanyunja M, Marchal B, Criel B, Ssengooba F. The roles and influence of actors in the uptake of evidence: the case of malaria treatment policy change in Uganda. Implement Sci. 2014;9:150.

78.   Shao H, Li S, Xu L, Yang S, Thomas NJ, Mir MU, et al. Mapping and Analyzing Stakeholders in China's Essential Drug System by Using a Circular Model: Who We Should Deal with Next? Value in health regional issues. 2015;6:111-7.

79.   Vos AA, van Voorst SF, Steegers EA, Denktas S. Analysis of policy towards improvement of perinatal mortality in the Netherlands (2004-2011). Social science & medicine (1982). 2016;157:156-64.

80.   Ackermann F, Eden C. Strategic Management of Stakeholders: Theory and Practice. Long Range Planning. 2011;44(3):179-96.

81.   Haidari AM, Zaidi S, Gul R. Prospects for the sustainability of delivering the Basic Package of Health Services in Afghanistan: a stakeholder analysis. Eastern Mediterranean health journal = La revue de sante de la Mediterranee orientale = al-Majallah al-sihhiyah li-sharq al-mutawassit. 2014;20(5):300-8.

82.   Equator Network. Enhancing the QUAlity and Transparency Of health Research [Available from: http://www.equator-network.org/] [Accessed 2018, June 14].

83.   Currie LM, Clancy L. The road to smoke-free legislation in Ireland. Addiction (Abingdon, England). 2011;106(1):15-24.

84.   Duysburgh E, Kerstens B, Kouanda S, Kabore CP, Belemsaga Yugbare D, Gichangi P, et al. Opportunities to improve postpartum care for mothers and infants: design of context-specific packages of postpartum interventions in rural districts in four sub-Saharan African countries. BMC pregnancy and childbirth. 2015;15:131.

85.   Logishetty K. Adopting and sustaining a Virtual Fracture Clinic model in the District Hospital setting - a quality improvement approach. BMJ quality improvement reports. 2017;6(1)

Appendices

Supplementary appendix 1. Data extraction form

Article characteristics	
Article Id	
Article Title	
Reference	
Country	
Health innovation	
Planning process phase	

Supplementary appendix 1. Data extraction form (continued)

Items to consider for the checklist (This is the data extraction form as used by the authors to perform the review. The items in this checklist were chosen from Gilmour and Beilin, 2007; Reed et al., 2009; Schmeer, 1999; and Varvasovszky and Brugha, 2000. The structure derives from the "key methodological steps necessary for stakeholder analysis" by Reed et al., 2009.)		Reviewer comments
Context		
Aim or focus of the analysis (e.g. issue, organisation or intervention)		
System boundaries for the analysis	Scope or level of the analysis (e.g. local, regional, national or international)	
	Time dimension (prospective vs retrospective)	
Stakeholder definition applied for the analysis		
Analyst or analysis team (an individual, an individual with the support of a supervisor, an individual with the support of key informants -stakeholders or not-, a team, a team with the support of key informants -stakeholders or not-)		
Data collection duration		
Application of stakeholder analysis methods		
Stakeholder identification	Steps/criteria used to identify stakeholders	
	Data collection methods used for the stakeholder identification	

Supplementary appendix 1. Data extraction form (continued)

	Data analysis and display (e.g. tables, maps, matrices…)		
Identification of stakeholders' stakes	How stakes were identified and by whom (cite methods/no identification reported)		
	Data collection methods used for the identification of the stakes		
Stakeholder differentiation/ categorisation or prioritisation	Steps/criteria used to differentiate/categorise or prioritise stakeholders during the stakeholder analysis (+ stakeholder attributes analysed)		
	Data collection methods used for the categorisation/prioritisation (e.g. brainstorming, interviews, literature review)		
	Data analysis and display (e.g. tables, maps, matrices…)		
	Timeframe for the relationships analysed		

Supplementary appendix 1. Data extraction form (continued)

Investigation of the relationships between stakeholders	Relationships analysed (e.g. communication, collaboration…)		
	Data collection methods used for the relationships between stakeholders (e.g. interviews, surveys…)		
	Data analysis (indicators used: e.g. density, centrality, centralization…) and how they were displayed (e.g. tables, sociograms…)		
Actions			
How the findings were used; strategies/recommendations for the future; how findings influenced the stakeholder engagement			

References for manual search

Supplementary appendix 2. Characteristics of included studies

Health innovation	Study: authors, year [P vs R]	Country [scope of the SA]	Health Innovation	Planning process phase
Policies	Varvasovszky and McKee, 1998 [59] [P]	Hungary [National]	Policy: alcohol policy	Needs assessment
	Glassman et al., 1999 [50] [P]	Dominican Republic [National]	Policy: health reform policy	Needs assessment
	Aliyu, 2002 [64] [P]	Nigeria [National]	Policy: National Emergency Health Policy	Needs assessment
	Hoeijmakers et al., 2007 [67] [P]	The Netherlands [Local: 4 municipalities within Central Limburg PHS]	Policy: local health policy	Development
	Gil et al., 2010 [33] [P]	Russia [Regional: an oblast of 1.5 million inhabitants close to the Urals]	Policy: alcohol policy	Needs assessment
	Chao-Yin et al., 2010 [38] [P]	Taiwan [National]	Policy: new financing scheme for the National Health Insurance	Needs assessment
	Surjadjaja and Mayhew, 2011 [54] [P]	Indonesia [National]	Policy: amendment of the Health Law in Indonesia	Needs assessment
	Ardalan et al., 2012 [37] [P]	Iran [National]	Policy (set of rules and objectives): A 2012-2025 Roadmap of Disaster Health Management	Needs assessment
	Gilson et al., 2012 [16] [P]	South Africa and Tanzania [National]	Policy: National health policy	Development
	Abiiro and McIntyre, 2013 [48] [P]	Ghana [National]	Policy: a policy for extending NHI cover to all those outside the formal sector and achieve universal coverage through a one-time premium payment rate	Needs assessment
	Mitropoulou et al., 2014 [61] [P]	Greece [National]	Policy: policy for the adoption of genomics into conventional medical interventions	Needs assessment
	Morone et al., 2014 [75] [P]	Mexico, Pakistan, and Kenya [International: 121 WHO member states]	Policy: eye health policy	Preparatory phase
	Ancker and Rechel, 2015 [36] [P]	Kyrgyzstan [National]	Policy: HIV/AIDS policy	Preparatory phase
	Kimani et al., 2016 [68] [P]	Kenya [National + province and district-based in Garissa County]	Policy: One Health	Implementation (adoption)
	Phillips et al., 2016 [76] [P]	Lao PDR [National]	Policy: policy for health sector reform in Lao PDR	Needs assessment
	Horev and Babad, 2005 [51] [R]	Israel [National]	Policy: policy for 1995 Healthcare reform	Implementation
	Williams et al., 2009 [46] [R]	Peru [National and two regional areas: Amazon Region and Northern Coast]	Policy: policy for new antimalarial treatment	Development
	da Silva Santos et al., 2011 [42] [R]	Brazil [Local: city of Recife]	Policy: the National Policy for Integrative and Complementary Practices (PNPIC)	Implementation
	Basaza et al., 2013 [60] [R]	Uganda [National]	Policy: the National Health Insurance Scheme	Implementation (adoption)

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Supplementary appendix 2. Characteristics of included studies (continued)

Health innovation	Study: authors, year [P vs R]	Country [scope of the SA]	Health Innovation	Planning process phase
	Machado, 2013 [52] [R]	Brazil [National]	Policy: Politica Nacional de Medicamentos	Implementation
	Lim et al., 2014 [43] [R]	South Korea [National]	Policy: health policy separating dispensing and prescribing	Implementation
	Nabyonga-Orem et al., 2014 [77] [R]	Uganda [National]	Policy: the malaria treatment policy change	Implementation
	Onoka et al., 2015 [45] [R]	Nigeria [National]	Policy: a national health insurance policy targeting universal health coverage	Implementation
	Nigenda et al., 2016 [44] [R]	Mexico [National]	Policy: Seguro Popular de Salud financial reform policy	Implementation
	Silva et al., 2016 [74] [R]	France The Netherlands [National]	Policy: seasonal influenza vaccination policy	Implementation
	Vos et al. (2016) [R]	The Netherlands [National]	Policy: policy towards improvement of perinatal mortality	Implementation
	Mohamadi et al. (In Press) [72] [R]	Iran [National]	Policy: Health Insurance Benefit Package Policy	Impact assessment
Products and Technologies	Costa et al., 2012 [40] [P]	Portugal [National]	Products and technologies: a model of a health portal user-centred	Needs assessment
	van Limburg et al., 2015 [9] [P]	The Netherlands [International and local, in a specific ward of a hospital]	Products and Technologies: eHealth Portal for Infection Control	Development
	Pouloudi et al., 2016 [73] [P]	United Kingdom [National]	Products and Technologies: a large private information systems network in the U.K. National Health Service	Development
	van Woezik et al., 2016 [56] [P]	The Netherlands [National]	Products and technologies: an online platform ("eZoon" platform) that emphasizes interdisciplinary collaboration and communication in order to prevent and control zoonoses	Needs assessment
Services and Delivery Methods	Kumar et al., 1997 [63] [P]	India [State: Madhya Pradesh Division: Bhopal Division District: Raisen District]	Services and delivery methods: the Women's and Children's Health (WACH) Project focusing on reducing neonatal mortality. (Design of new approaches to health care delivery and financing)	Needs assessment
	Ten Asbroek et al., 2005 [47] [P]	Nepal [National]	Services and delivery methods: clinical practice guideline adaptation to a new context (PAL guidelines)	Development (pilot)
	Petruney et al., 2010 [39] [P]	United States of America [International]	Services and delivery methods: to strengthen Support for family planning as HIV prevention	Needs assessment
	Transform Nutrition, 2011 [70] [P]	Kenya [National]	Services and delivery methods: a research programme to strengthen the content and use of nutrition-relevant evidence to accelerate undernutrition reduction - scaling up interventions to address undernutrition	Needs assessment
	Auvinen et al., 2012 [58] [P]	Finland [National]	Services and delivery methods: new workplace health promotion services	Preparatory phase
	Shahandeh el al., 2012 [35] [P]	Iran [Local: southwest of Tehran city]	Services and delivery methods: program for preventing substance abuse	Needs assessment

Health innovation	Study: authors, year [P vs R]	Country [scope of the SA]	Health Innovation	Planning process phase
	Namazzi et al., 2013 [55] [P]	Uganda [National level and local, four districts of Eastern Uganda: Buyende, Kamuli, Iganga and Pallisa]	Services and delivery methods: two community based maternal/new-born interventions	Implementation
	Alive & Thrive, 2014 [66] [P]	India [State: Bihar]	Services and delivery methods: Alive & Thrive program to improve breastfeeding and complementary feeding practices - service delivery of key nutrition and health interventions	Implementation
	Haidari et al., 2014 [81] [P]	Afghanistan [National]	Services and delivery methods: Basic Package of Health Services (BPHS)	Implementation
	Makan et al., 2015 [53] [P]	Ethiopia, India, Nepal, South Africa and Uganda [General + National]	Services and delivery methods: mental health services	Implementation
	Franco-Trigo et al., 2017 [19] [P]	Australia [State: New South Wales]	Services and delivery methods: Community pharmacy service aimed at preventing cardiovascular disease	Preparatory phase
	Yassoub et al., 2017 [62] [P]	Lebanon [National]	Services and delivery methods: HBP (Health Benefits Package) tailored to the NCD-related health needs of Lebanese	Development
	Henriksen et al., 2005 [41] [R]	Norway [Regional: Northern Norway Regional Health]	Services and delivery methods: a service where the specialist would order a specific consultation to be performed by the GP	Development (the project was closed down before the pilot testing)
	Park et al., 2014 [69] [R]	Korea [Local: two districts ('gu's) of Seoul city]	Services and delivery methods: an urban sub-health centre and a metabolic syndrome management program	Implementation
	Suryoputro and Isarabhakdi, 2016 [57] [R]	Indonesia [Local: Central Java city]	Services and delivery methods: Youth Friendly Reproductive Health Service	Implementation
Systems	Burton, 1999 [49] [P]	Bangladesh [Local: Chittagong and Cox's Bazar]	System: Healthy City Projects	Implementation
	Harpham et al., 2001 [34] [P]	Bangladesh [Local: Cox's Bazar] Tanzania [Local: Dar es Salam] Egypt [Local: Fayoum] Pakistan [Local: Quetta]	System: Healthy City Projects	Implementation
	Drake et al., 2010 [65] [P]	Viet Nam [National]	System: total market approach for family planning	Implementation
	Drake et al., 2011 [71] [P]	Nicaragua [National]	System: a new approach for family planning (Total Market Approach)	Needs assessment
	Shao et al., 2015 [78] [P]	China [National]	System: Essential Drug Operation System (EDOS)	Implementation

[P]: Prospective; [R]: Retrospective; SA: stakeholder analysis

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Chapter 3

Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease

Authors

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Preface

This chapter addresses the first step of a CPS collaborative planning process: the identification and initial engagement of stakeholders, which corresponds to the preparatory phase. It is a practical step that demonstrates the advantages and usefulness of stakeholder analyses when specifically applied to the organisation of a CPS planning process. This first experience, conducted in New South Wales (NSW), Australia, was a qualitative study. Key informants/stakeholders interacted face-to-face with each other and with researchers in a workshop comprising guided activities and discussions. They identified the key stakeholders that could be part of a planning group developing a CPS in NSW, the gaps and needs in cardiovascular care and the role that community pharmacists could play.

Prefacio

En este capítulo se aborda el primer paso de un proceso de planificación colaborativo de un SPFA: la identificación e involucración inicial de actores, correspondiente a la fase de preparación del proceso. Es un paso práctico que demuestra las ventajas y utilidad de los análisis de actores cuando se aplican específicamente para la organización del proceso de planificación de un SPFA. Esta primera experiencia, llevada a cabo en New South Wales (NSW), Australia, fue un estudio cualitativo. Se realizó un taller que incluyó actividades y conversaciones guiadas donde ciertos informantes clave/actores del sistema interaccionaron cara a cara entre sí y con los investigadores . Los informantes identificaron a los actores clave que podrían formar parte de un grupo de planificación para desarrollar un SPFA en NSW, las carencias y necesidades en cuidado cardiovascular y el papel que podrían jugar los farmacéuticos comunitarios.

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Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease

Abstract

Background: Participatory approaches involving stakeholders across the healthcare system can help enhance the development, implementation and evaluation of health services. These approaches may be particularly useful in planning community pharmacy services and so overcome challenges in their implementation into practice. Conducting a stakeholder analysis is a key first step since it allows relevant stakeholders to be identified, as well as providing planners a better understanding of the complexity of the healthcare system.

Objectives: The main aim of this study was to conduct a stakeholder analysis to identify those individuals and organisations that could be part of a leading planning group for the development of a community pharmacy service (CPS) to prevent cardiovascular disease (CVD) in Australia.

Methods: An experienced facilitator conducted a workshop with 8 key informants of the Australian healthcare system. Two structured activities were undertaken. The first explored current needs and gaps in cardiovascular care and the role of community pharmacists. The second was a stakeholder analysis, using both ex-ante and ad-hoc approaches. Identified stakeholders were then classified into three groups according to their relative influence on the development of the pharmacy service. The information gathered was analysed using qualitative content analysis.

Results: The key informants identified 46 stakeholders, including (1) patient/consumers and their representative organisations, (2) healthcare providers and their professional organisations and (3) institutions and organisations that do not directly interact with patients but organise and manage the healthcare system, develop and implement health policies, pay for healthcare, influence funding for health service research or promote new health initiatives. From the 46 stakeholders, a core group of 12 stakeholders was defined. These were considered crucial to the

service's development because they held positions that could drive or inhibit progress. Secondary results of the workshop included: a list of needs and gaps in cardiovascular care (n=6), a list of roles for community pharmacists in cardiovascular prevention (n=12) and a list of potential factors (n=7) that can hinder the integration of community pharmacy services into practice.

Conclusions: This stakeholder analysis provided a detailed picture of the wide range of stakeholders across the entire healthcare system that have a stake in the development of a community pharmacy service aimed at preventing CVD. Of these, a core group of key stakeholders, with complementary roles, can then be approached for further planning of the service. The results of this analysis highlight the relevance of establishing multilevel stakeholder groups for CPS planning.

Synopsis

This article describes a stakeholder analysis aimed at identifying key individuals and organisations for the development of a community pharmacy service. A total of 46 stakeholders across the whole healthcare system were identified, including patient/consumers and their representative organisations, healthcare providers and their professional organisations and other organisations that do not directly interact with patients but can affect their health. A core group of 12 key stakeholders that could strongly influence the development of the service was also defined. This stakeholder analysis highlights the relevance of establishing multilevel stakeholder groups for enhancing the development and implementation of community pharmacy services.

Introduction

Current approaches to health planning underline the importance of involving stakeholders across the healthcare system early in the planning process, in order to overcome challenges in the implementation of health services into practice.[1-3] According to Varvasovskzky and Brugha,[4] stakeholders are "actors who have an interest in the issue under consideration, who are affected by the issue, or who – because of their position – have or could have an active or passive influence on the decision-making and implementation processes". Theory[5] and experience[6, 7] suggest that multilevel stakeholder groups bring different benefits to health-service planning processes, such as in-depth knowledge of the context in which the service will be implemented, innovative ideas, and logistic and financial support. Moreover, the collaboration between stakeholders makes health-service planning more transparent, nurtures networking, increases the translation of research findings into practice, fosters co-learning, and develops stakeholders' feelings of ownership on the planned health services.[8-13] As a result of participatory planning approaches, health services and associated reforms of the healthcare system are not only more likely to address the existing or emerging population and system needs, but also to be suitably and efficiently developed, implemented and evaluated.[2, 5, 10, 14]

According to the guidelines for the design of participatory processes,[15] these processes must be informed by a stakeholder analysis (also called stakeholder mapping). A stakeholder analysis encompasses identifying and assessing the individuals and organisations that have a vested interest or can influence a particular initiative. Thus, stakeholder mapping can be used to generate knowledge about the relevant actors related to a particular issue allowing for a deeper understanding of their relative influence and interest on a problem. Importantly it can also provide useful information on the likely role that they may or can play in solving the problem. As a result, the stakeholders that are critical and crucial for the success of a particular initiative can be clearly determined, and solutions that are feasible and acceptable from multiple perspectives can be found.[10, 16] Due to their usefulness, stakeholder analysis are applied in a variety of sectors (e.g., business management,[17] public and non-for-profit management,[12] health management,[16] health policy,[16] biosecurity risk,[14, 18] natural resource management research[19]). Reed and Curzon[10] described three different theoretical approaches to stakeholder mapping (i.e., normative, instrumental and descriptive) along with the methods that can be used for identifying and categorising stakeholders, and analysing their relationships. Bryson[12] described

a range of stakeholder identification and analysis techniques classified into 4 broad categories according to their purpose: (1) organizing participation; (2) creating ideas for strategic interventions; (3) building a winning coalition around proposal development, review and adoption; and (4) implementing, monitoring and evaluating strategic interventions. Despite their wide use, stakeholder analyses are often undertaken without following a systematic process.[19] Different methods for data gathering have been described in the literature, including interviews with individuals; structured questionnaires; workshops and focus groups with multiple participants; expert opinions; snowballing sampling; etc.[16, 19] It should be noted that the theoretical approaches, methods and techniques to be used in a particular stakeholder analysis should be selected and adjusted according to the particular purpose of the analysis, the timing in which it is conducted (i.e., stage of the project) as well as the availability of resources.[16] In order to facilitate the understanding of the complexity of the results of stakeholder analyses, various graphical techniques can be used, including stakeholder maps and matrices. For example, Hernández-Jover et al[18] used a stakeholder identification map for the representation of stakeholders and several matrices in which stakeholders were located according to their influence and interest on 3 core issues.

In the context of health service planning, conducting a stakeholder analysis at the onset of the planning process not only clarifies the complexity of the context in which services will be implemented but also avoids the involvement of stakeholders who are not representative.[9, 10] In this regard, a recent analysis on current service development practices highlights the role of stakeholder maps in explicitly conducting an early exploration of the 'ill-defined problem space' before generating a particular solution.[20] Despite its importance, stakeholder mapping is poorly described in the health service literature, where, interestingly, a number of articles reporting the development of health programs that used participatory planning approaches lack this type of analysis.[6, 21-23] Without such information, it is difficult to understand the reasons behind the involvement of each stakeholder or to be certain that the key stakeholders have been engaged. An appropriate description of stakeholder analysis[24, 25] meets the recommendations for comprehensively reporting participatory processes[6] and increases the transparency of such processes, allowing for their evaluation and improvement.

Participatory planning approaches are useful in pharmacy practice, where the development, evaluation and implementation of services, and the integration of

community pharmacists into the healthcare team still remains a challenge.[26, 27] The planning process and development of CPSs is further discussed elsewhere along with some general information about how research can inform such a process.[27] A stakeholder analysis is a type of study that should be conducted at the outset of the CPS planning process to inform the group of stakeholders that may be involved in such a process. A multilevel stakeholder group may help understand and address the complexities of the healthcare system in which community pharmacy services (CPSs) need to be embedded, and so improve the implementation of those services.[27, 28] A specific area in which CPSs are seen to be particularly relevant is in the prevention of cardiovascular disease (CVD),[29] which is a major public health problem.[30, 31] According to the World Health Organization, interventions at the primary-care level are considered to be the optimal approach to reverse the progression of CVD, prevent long-term complications, and reduce the use of associated healthcare resources.[31] Community pharmacists are highly accessible healthcare professionals at the primary-care level and their positive impact on the control of cardiovascular risk factors has already been shown.[29] In order to promote the development and further implementation of a CPS aimed at preventing CVD in Australia, this study conducted a stakeholder analysis to identify those key stakeholders that could be part of a leading planning group. As a secondary objective, current gaps and needs in cardiovascular care and the role of community pharmacists were explored.

Material and methods

Study design. A workshop was carried out at the University of Technology, Sydney (UTS), with a group of 8 key informants. A 'descriptive' theoretical approach, which aims to understand the relationships between a particular issue and its stakeholders,[19] was adopted in the stakeholder analysis. The design of the study was based on the approaches proposed by Varvasovszky and Brugha[4] and Reed et al.[19] To stimulate discussions Varvasovszky and Brugha's[4] suggestions of face-to-face discussions between a broad group of informants (i.e. insiders and outsiders to the project) with different backgrounds, expertise and roles within the healthcare system were used. This provided a comprehensive view of the Australian healthcare system, neutralised individual biases and questioned individually held assumptions. All participants were potential stakeholders to the project, which allowed for enhancing the quality and credibility of both the analysis and the results as suggested by Reed et al.[19] Key informants were purposively selected because they had complementary

profiles and were potential stakeholders in the project. Key informants' profiles encompassed community pharmacy managers/owners with experience in service provision and connected to pharmacy professional organisations; an experienced cardiologist; a nurse/cardiovascular researcher related to different cardiovascular and nurse associations; a hospital pharmacist and executive at a governmental advisory organisation promoting quality use of medicines; an executive of a cardiovascular network with experience in the pharmacy industry; and academics/researchers with wide experience in pharmacy practice/service research.

Workshop organisation. The general structure of the workshop can be seen in Fig. 1 and included two main activities:
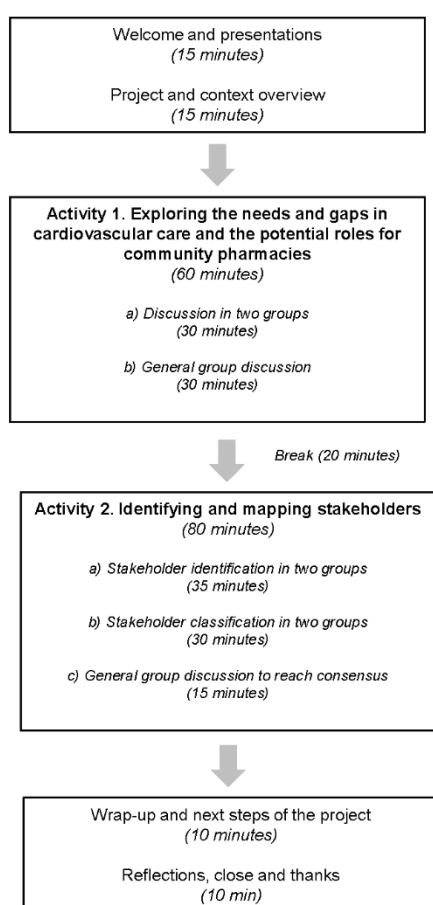
Figure 1. Structure of the workshop

Activity 1: Exploring the needs and gaps in cardiovascular care and the roles of community pharmacists. This preliminary discussion was used to prompt key informants to share ideas and feel comfortable in order to establish a common ground for the next activity regarding the identification of stakeholders. To facilitate the identification of gaps in cardiovascular care, participants were given a handout (Appendix 1) containing a list of cardiovascular risk factors and diseases (based on WHO Global Atlas on cardiovascular disease prevention and control[31]). The handout also contained a list of potential roles of community pharmacists in cardiovascular care (informed from the literature[29]), with the intention of stimulating discussion between key informants and prompting some ideas.

Activity 2: Stakeholder identification and classification. The key informants were asked to identify stakeholders with a vested interest in the development of a CPS aimed at preventing CVD. To drive the exercise, the following definition of stakeholder was provided: "any individual or organisation that can be directly or indirectly affected by, have an influence on, or have an interest in the development of a CPS aimed at

the prevention of cardiovascular diseases" (adapted from Varvasovskzky and Brugha[4]). The identification of stakeholders was made using both ex-ante and ad-hoc approaches. These approaches are complementary and the combination of both enables more information to be collected.[10] The ex-ante approach recommends identification of stakeholders in advance. Relevant stakeholders were identified by researchers from the literature prior to the workshop. These identified stakeholders, grouped in categories as adapted from Preskill and Jones,[5] were used in the workshop as examples in a handout provided to key informants (Table 1). In contrast, the ad-hoc approach does not provide probable stakeholders a priori but encourages stakeholder identification by key informants using questions. For this purpose, questions adapted from Gilmour and Beilin,[14] were projected onto a slide (Table 1). The identified stakeholders were then classified into three groups according to the relative influence that they were considered to have on the development of the CPS (adapted from Covey's circle of concern/circle of influence[32]):

1. **Control:** stakeholders who have the ability to control the development of the service, can prevent it from progressing or help make it happen.

2. **Influence:** stakeholders who have the ability to influence the development of the service – i.e. have less control but are still important to making it happen.

3. **Interest/concern:** stakeholders who may be interested in or concerned with the service but will not significantly influence whether or not the project goes ahead.

Following current recommendations for designing public participation processes,[15] discussions between key informants regarding the classification of stakeholders were held until consensus was reached to ensure that the key stakeholders that need to be involved in the first phase of the CPS planning process were identified.

In order to enhance the future feasibility of the project, some geographical boundaries were set (i.e., questions to the key informants were focused on New South Wales, Australia). This decision was made based on existing frameworks for health service/program planning.[1, 27, 33] These frameworks suggest services/programs should be developed and piloted (for optimisation) in limited geographical areas before further impact and outcome evaluation and scaling-up. An external, experienced facilitator conducted the workshop. The facilitator was experienced in systems thinking, community engagement and stakeholder mapping. While she did not have experience with healthcare in particular, she did have extensive experience

Table 1. Information provided to key informants to guide and support the stakeholder analysis

1. Ex-ante approach: Stakeholder categories (adapted from Preskill and Jones[5])	
Stakeholder category	Examples
End-beneficiaries and representative organisations	Patients, patient associations, consumer's groups, community leaders, community based-organisations, non-governmental organisations etc.
Healthcare providers (and other staff), health system/service managers and professional organisations	Pharmacists (and pharmacy staff), pharmacy managers/owners, general practitioners, specialist, nurses, system managers, executives, board of directors, advisory boards, etc.
Experts, researchers and health service planners	Experts in the health problem, community pharmacy, health system, business, strategic planning, etc. Universities, research groups, planning groups, evaluation bodies, etc.
Health policymakers, regulators and payers	Federal, state or local government agencies, advocacy organisations, insurance companies, etc.
Collaborators	Funders/donors, industry, media, educators, etc.
2. Ad-hoc approach: Questions to trigger the identification of stakeholders (adapted from Gilmour and Beilin[14])	
- Who may be affected by this? - Who might influence the change? - Who has the power to make/stop it happening? - Where might funding/financing come from? - Who are potential allies or opponents? - What coalitions might build around this issue?	

in designing and facilitating workshops with stakeholders across diverse disciplinary fields and industry sectors including the energy, mining and education sectors. The facilitator ensured that goals of the meeting were met within the designated timeframe; the group did not diverge from the set agenda; both dominant and withdrawn participants were managed to ensure all voices were heard; the

composition of groups when participants were separated for discussion was balanced; and findings were validated through group feedback processes at the end of the workshop. Two researchers took notes and the workshop was audiotaped and transcribed. Butchers paper and Post-it notes were used during the activities and collected at the end of the workshop. The UTS Human Research Ethics Committee approved the study (UTS HREC REF NO. 2015000349) and participants were provided with an information sheet and signed a consent form.

Data analysis. The information sources (i.e. transcripts, researchers' notes, Post-it notes and butchers paper) were analysed using qualitative content analysis, which allowed categories to emerge from the data and acknowledged the significance of the context in which the analysed information was generated.[34, 35] Qualitative content analysis has been found to be a useful analytical technique in health research.[36-38] This type of analysis is appropriate to describe the meaning of the answers of a wide variety of questions in a systematic way. It focusses on extracting categories from the data and is a flexible technique that can be used with both inductive and deductive approaches.[35, 39] A deductive approach using a 4-step coding process was followed. First, one reviewer read through the information sources several times and created a preliminary list of prior categories. Second, the text was coded according to these categories; when relevant information could not be coded into an existing category, a new category was created. Third, categories were reviewed to either create sub-categories or merge categories that addressed similar issues. The results derived from this process were discussed with a second researcher in order to improve the interpretation of the information and the credibility of the results. The trustworthiness of the qualitative content analysis was assured by addressing credibility, dependability and transferability of the data.[40] Credibility was reinforced by choosing participants with various perspectives and experiences, selecting how to gather data and verifying that categories covered the whole data during the analysis. Dependability was assured by bringing participants together in a workshop and collecting data at a specific point of time to avoid the risk of inconsistency in the data due to the phenomena of interest changing over time. Finally, regarding transferability of key themes, a detailed description of the characteristics of participants, methodology, and findings was presented in order to help readers elucidate the extent to what the findings can be transferred to a different context. Microsoft Excel 2010.Ink was used to manage and analyse the data.

Results and discussion

Although the activities of the workshop were planned in a specific order, the results section is organised to first address the primary objective of the study.

Identifying and mapping stakeholders

Key informants identified 46 stakeholders across the healthcare system. A detailed stakeholder map is shown in Fig. 2, where three main groups can be differentiated:

1. Individual patients/consumers and their representative organisations.

2. Healthcare professionals who interact with patients on their journey through the healthcare system (e.g. community pharmacists, general practitioners, nurses, cardiologists), and their professional organisations/associations that have the capacity to influence both the individuals within their collectives and health policy.

3. Institutions and organisations that do not directly interact with patients but can affect their health (e.g. governmental institutions, cardiovascular leading/scientific organisations, universities, pharmaceutical industry, insurers). This third group organises and manages the healthcare system, develops and implements health policies, pays for healthcare, influences funding for health service research, and promotes new health initiatives. Further details about the roles of Australian government-related stakeholders can be found in Appendix 2.

To the best of our knowledge, this is the first stakeholder analysis that uses a systematic approach with potential stakeholders to inform the development of a CPS. Recently, Vozikis et al[28] used a stakeholder analysis to research the complexity of the system in which community pharmacists are embedded focussing on health policy, while the objective of the stakeholder analysis in this study was health service development. According to results of the stakeholder identification process, it can be argued that CPS planning must involve a wide range of stakeholders with complementary roles within the healthcare system to facilitate the development and implementation of those services and so the integration of community pharmacists into the primary healthcare team. In fact, according to key informants, not considering the complexity of the healthcare system in which CPSs will be implemented and the wide array of stakeholders (and their personal interests and power) may partly explain

- Primary Healthcare Networks (Co)*
- Agency for Clinical Innovation (Co)*
- Chronic Cardiovascular Clinical Expert Reference Group (Co)*
- Office for Health and Medical Research (Co)*
- Local Health Districts & Specialty Networks (Co)*
- Pharmaceutical Benefits Advisory Committee (In)

- Heart Foundation (Co)*, including clinical committees (Co) and volunteers (I/C)
- NSW Cardiovascular Research Network (In)
- Diabetes Australia (In)
- Heart Kids NSW (In)
- Kidney Health Australia (In)
- Stroke Foundation NSW (In)

- Healthcare setting (e.g., hospital) administrators, managers or executives (Co)
- Health Insurance Companies (In)
- Pharmacy Industry (In)
- Medicines Australia (In)
- UTS (Co), including UTS experts in health service planning and cardiovascular (In) (potentially, also other universities and experts)
- Health technology providers/enablers (e.g. Fitbit, GuildLink software) (In)
- NPS Medicine Wise (In)
- Pharmacy banner groups (I/C) and Franchise pharmacy models (I/C)
- 6th Community Pharmacy Agreement funding board (I/C)

Federal and state government health-related institutions

Cardiovascular leading/scientific organisations

Other high-level stakeholders

Stakeholders that can indirectly affect patient care and health outcomes

Stakeholders for the development of a community pharmacy service aimed at preventing CVD in NSW

Pharmacy-based stakeholders

- Individual pharmacists (Co)
- Pharmacy Guild of Australia (Co)*
- Pharmaceutical Society of Australia (In)
- The Society of Hospital Pharmacists of Australia (In)
- Australian Association of Consultant Pharmacy (I/C)

Patients/Consumers and representative organisations

Healthcare providers and representative organisations

Doctors

- Individual doctors (e.g., general practitioners, specialists, etc.) (Co)
- Australian Medical Association (Co)*
- The Royal Australian College of General Practitioners (Co)*
- Cardiac Society of Australia & New Zealand (CSANZ) (In)
- Hospital Cardiology Units (Co)

- Individual patients (Co)*
- Patient groups/organisations, including disease-oriented (Co)*, vulnerable and socio-cultural groups/organisations (I/C).
- Consumer Health Forum of Australia (Co)* (potentially, also other national/state consumer groups/organisations)
- Heart Support Australia (I/C) (potentially, also other patient support groups/organisations, including home service providers)
- Patients carers, family members and friends †

Allied healthcare professionals

- Australian Primary Health Care Nurses Association (I/C)
- Cardiovascular Nurses Council –CSANZ (I/C)
- Australian Cardiovascular Health and Rehabilitation Association (I/C)
- Aboriginal Medical Services (Co)
- Aged care facilities (In)
- Psychologists / behavioural change experts (I/C)

Figure 2. Stakeholder map‡. CVD: cardiovascular disease; NSW: New South Wales (Australia); UTS: University of Technology, Sydney; Co: control (i.e., the stakeholder is considered to have the ability to control the development of the service, can prevent it from progressing or help make it happen); In: influence (i.e., the stakeholder is considered to have the ability to influence the development of the service; they have less control but are still important to making it happen); I/C: interest/concern (i.e., stakeholders who may be interested in or concerned with the service but will not significantly impact on whether or not the project goes ahead). ‡ This figure was created based on the whole information collected as part of the workshop including transcripts, butchers paper, post-it notes and researchers' notes. † These stakeholders were included by the researchers based on existing theory. * Stakeholders considered core by the key informants.

why previous experiences aiming at implementing these services have failed (quotes 1 and 2, Table 2). As argued by several authors,[41-43] the early engagement and input of a diversity of stakeholders in the planning process is crucial to successfully implement highly valuable health services. In fact, current co-design approaches involve service participants (e.g. patients, carers, health-service providers) in early planning stages to enhance existing health services,[44] develop new ones,[45] or adapt evidence-based interventions from other contexts.[46] Beyond the contribution of service participants, high-level stakeholders (e.g. policy makers, managers, payers) bring important insights to the process not only by sharing their broad knowledge about the healthcare system (e.g. organisation, regulation, resources) but also by providing logistic and financial support.[6] The relevance and usefulness of participatory approaches has begun to be reported in CPS planning in Canada and New Zealand.[6, 47]

Table 2. Selected quotes regarding the stakeholder analysis

Quote 1: *"It really does make a difference to get people in on the ground level very early and for me, brought up the, it highlighted the complexity of the system, and how many different people you have to actually bring to the table…"*

Quote 2: *"…it still makes me realise why a lot of these projects never end up being successful, because there are too many people who got too much control and influence"*

Quote 3: *"If you had the [organisation A], if you had the [organisation B], you had the [organisation C], the [organisation D] and the [organisation E]. If you had those five on the table, everybody else would just come…"*

Quote 4: *"They [organisations A, B, C, D and E] could make or break the project."*

Quote 5: *"I think the good thing about the [organisation F] is that it comes without its own baggage"*

Quote 6: *"I think that having a project that's actually evolved in conjunction with the consumer is actually going to be what makes this ultimately successful, because that's actually the end user. If you don't take their wishes into consideration, forget the project."*

Quote 7: *"I think the relative importance of them will change depending where you position the program in the [care] process..."*

When the key informants estimated the relative influence of each stakeholder on the development of a CPS, 19 were considered to have "control" over the situation, 16 to have "influence" and 11 to have an "interest/concern" (Fig. 2). Among the 19 included in the "control group", key informants agreed on a "core group of 12 stakeholders" (Fig. 2) that were considered crucial for ensuring the service's development, because

they held positions that could drive (or inhibit) the project's progress (quotes 3 to 6, Table 2). The key informants also commented that if this core group of stakeholders could work together, other stakeholders would join the process (quote 3, Table 2). Specifically, the 12 stakeholders that were considered the core group were: Primary Healthcare Networks, Agency for Clinical Innovation, Chronic Cardiovascular Clinical Expert Reference Group, Office for Health and Medical Research, Local Health Districts & Specialty Networks, Heart Foundation, Pharmacy Guild of Australia, Australian Medical Association, The Royal Australian College of General Practitioners, individual patients, patient groups/organisations (including disease-oriented), and Consumer Health Forum of Australia. The configuration of this group encompasses different key profiles, such as end-beneficiaries of the service and healthcare professionals, leading cardiovascular organisations, health-system managers, and health policy makers and regulators, who can be also payers. Interestingly, these stakeholder profiles have been shown to be the main promoters of service development projects in mental health.[20] As recommended by the guidelines for designing public participation processes,[15] by reaching this agreement, this stakeholder analysis ensured that the key stakeholders that should be involved at this stage of the process were identified. From a planning perspective, the identification of a core group of stakeholders has allowed for the prioritisation of stakeholders that will be initially approached in future workshops aimed at developing a vision (i.e. visioning exercise[48]) on how to further integrate CPS to enhance cardiovascular care.

According to the key informants, the relative importance of the identified stakeholders may change depending on the stage of a patient's journey (i.e. settings, care processes) that the service will be focused on (quote 7, Table 2). This observation is consistent with existing stakeholder theory,[10, 17, 49] which states that the influence, interest or involvement of stakeholders in a project may vary depending on several circumstances. For example, planning a CPS addressing the needs of patients being discharged from hospital might not consider the same stakeholders as a service addressing the promotion of healthy lifestyle habits in healthy people. Aside from this example, two other situations were highlighted in this mapping exercise. First, at this stage of the planning process, the health problem was still too broad (i.e. encompassing a wide spectrum of conditions, risk factors and different levels of prevention), which resulted in a similarly broad group of stakeholders being identified. In future, the definition of a specific issue and target population within the

cardiovascular spectrum will narrow the group of stakeholders. When the boundaries of the service have been clearly established, it will be advisable to explore in depth the role, the interests, and existing relationships between, the stakeholders.[10, 12, 14, 19] Second, this stakeholder analysis focused on the development of the service, mainly encompassing the theoretical design of the service and piloting for optimisation.[27] According to health planning approaches, the relative interest, influence or involvement of different stakeholders throughout the stages of the planning process (i.e. development, implementation, evaluation) may change depending on the aims of each stage.[2, 3] That is to say, the configuration of planning groups should be regularly examined to both ensure that the right stakeholders are involved at each stage of the planning process, and enable new members to join the group and so bring new ideas and enthusiasm to the discussion.[33] As a result, stakeholder analysis should be an ongoing exercise that needs to be conducted several times throughout the service-planning process.[10, 14] This will allow suitable changes in the composition of planning groups to align with the needs of the planning process.

Although a first comprehensive stakeholder analysis should be conducted at the outset of any CPS planning process, occasionally resource-, time- or funding constraints can limit the breadth and depth of this analysis.[4] If logistics do not allow for direct interaction with stakeholders to conduct a stakeholder mapping, planners still need to approach the identification of stakeholders. Different methods can be used including: analysing documents and literature relevant to the phenomenon of interest, information published in the websites of the organisations that are related to the topic, gathering expert opinions, or using questionnaires.[4, 19] The results of this study can help pharmacy-service planners identify and select relevant stakeholders. This is because the present stakeholder analysis can frame and provide insight into the individual profiles, roles, settings, system organisations etc. that can be involved in other CPS-planning processes. Finally, in order to design and conduct this study, the project team engaged cross disciplinary input, collaborating with social scientists with expertise in qualitative methods, stakeholder mapping and facilitation skills. As far as we are aware, training in stakeholder mapping techniques is not typically available for pharmacy researchers. We suggest that more attention should be given to this training when the education of researchers in service development is outlined, since the stakeholder analysis is a very first step of the planning process of a service and informs the group of stakeholders that should lead and manage such a process.

Needs or gaps in cardiovascular care and potential roles of community pharmacies

With regard to the secondary objective of this study, key informants disclosed several gaps or needs in current cardiovascular care practice and associated roles of community pharmacists in the prevention and management of CVD (Table 3). This

Table 3. Needs or Gaps in cardiovascular care and potential roles of community pharmacists*

Needs and gaps in current cardiovascular care	Associated role of community pharmacists
Enhance the knowledge and use of medicines by patients. *(Related quotes in appendix 3: 1 and 2)*	- Educating patients to optimise medication use and knowledge - Conducting medication reviews (e.g., discharge medication reviews and home medication reviews), checking drug interactions and toxicities - Monitoring and promoting medication adherence (especially when diseases are asymptomatic) - Performing dose administration aids *(Related quotes in appendix 3: 19 to 23)*
Enhance the availability of updated lists of patients' medications *(Related quotes in appendix 3: 3 and 4)*	Elaborating patients' medication profile (or checking whether it has been provided by the general practitioner) *(Related quotes in appendix 3: 24 to 26)*
Enhance patients awareness and understanding of cardiovascular disease *(Related quotes in appendix 3: 5 to11)*	- Educating patients to enhance their awareness and knowledge on their diseases - Empowering patients to better manage their diseases (i.e., enhancing self-management) *(Related quotes in appendix 3: 27 and 28)*
Prevention or delay of the onset of the disease or associated complications *(Related quotes in appendix 3: 12 to 14)*	- Promoting healthy habits - Providing immunisation for people at risk (e.g. flu vaccination) *(Related quote in appendix 3: 29)*
Improve patient use and accessibility to health services (especially in rural areas) *(Related quotes in appendix 3: 15 to 18)*	- Providing services in rural areas - Encouraging patients to visit other healthcare professionals and services when needed. *(Related quote in appendix 3: 30)*
Enhance early diagnose and treatment of cardiovascular risk factors	Screening high risk patients and refer them to the GPs for diagnosis when needed *(Related quote in appendix 3: 31)*
* This table was created based on the whole information collected as part of the workshop including transcripts, butchers paper, post-it notes and researchers' notes	

information rounds out the stakeholder identification process, providing preliminary insight about the problem to be addressed and how community pharmacists can be involved in such a problem.[19] In the future, these secondary results can be used to inform early planning steps and discussions aimed at defining a specific problem situation to be targeted by the CPS. It should be noted that the roles of community pharmacists identified by the key informants in this study have already been reported (and claimed) in previous studies conducted in Australia,[50, 51] which emphasises the existing need to develop and implement cardiovascular CPSs into primary care practice.

As part of the same discussion, key informants addressed several factors that can hinder the integration of CPSs into practice (i.e., barriers) (Table 4). Although the list of factors in Table 4 is not comprehensive, it is consistent with the findings of previous studies that assessed the barriers to the expansion of the community pharmacist's role in Australia[51] or the use of community pharmacy public health services in England.[52] Key informants put special emphasis on the poor coordination between healthcare processes and services within the healthcare system and the poor communication and collaboration between healthcare professionals (e.g. community pharmacists and general practitioners). Once again, the identified barriers highlight the importance of involving multilevel stakeholder groups in planning CPSs. This is because most of the barriers may require strategies and interventions targeting different organisations, settings, processes and individuals across the healthcare system to be suitably addressed.[53, 54]

Limitations. The information gathered in this study represents a 'snapshot' of a system that is continuously changing (i.e., the obtained information is provisional). There is a recommendation of repeating the stakeholder analysis throughout the planning process in order to update results and so ensure that the right stakeholders are involved and that new members are enabled to join the group.[10, 14] A deeper understanding of the roles and relationships of the stakeholders was not considered as this change as the planning process proceeds to more definite service definition. It should be noted that patient carers, family members and friends were not specifically named in this mapping exercise. Different authors consider this "interpersonal support network" of patients essential stakeholders in participatory research approaches[8] and the co-design of health services.[55-58] "Carers or loved ones" are also an intrinsic part of the definition of "patient" provided by the King's

Fund toolkit for experience-based co-design.[56] For these reasons, they have been added as part of the list of stakeholders in this exercise.

Table 4. Factors that can hinder the integration of cardiovascular community pharmacy services into practice*

- Poor coordination between healthcare processes and services (e.g. lack of medication review or follow-up appointments after patients being discharged from hospital to community). The poor coordination between healthcare processes and services is aggravated by the fact that care providers are not usually aware of the patients' previous journey through the system and the availability of cardiovascular services/programs (this latter problem is also shared by patients). *(Related quotes in appendix 3: 32 and 33)*

- Unavailability of information management systems containing comprehensive patients' medical records and medication lists. This results in an incomprehensive 'picture' of the patient that hinders clinical evaluation, medication review, etc. *(Related quote in appendix 3: 34)*

- Absence of a model of collaboration and communication between healthcare professionals (i.e., all of them working in silos). *(Related quotes in appendix 3: 35 to 39)*

- Lack of continuity of care (i.e., patients attending different pharmacies and medical centres and not receiving care from the same provider) *(Related quotes in appendix 3: 40 to 42)*

- Public and doctors' misperception of the role of community pharmacists *(Related quotes in appendix 3: 43 to 46)*

- Lack of a remuneration system for pharmacy services *(Related quotes in appendix 3: 47 and 48)*

- Poor patient understanding about the real cost of healthcare *(Related quotes in appendix 3: 49 to 51)*

* This table was created based on the whole information collected as part of the workshop including transcripts, butchers paper, post-it notes and researchers' notes

Conclusions

This stakeholder analysis provided a detailed picture of the wide range of individuals and organisations that have a stake in the development of a CPS aimed at preventing CVD. Stakeholders were distributed across the whole healthcare system and were considered to have different influences in the development of the service. These results underline the need for multilevel stakeholder groups to deal with the complexity of the healthcare system in which CPSs are to be embedded and so facilitate the integration of community pharmacists into the primary healthcare team.

A core group of stakeholders with complementary roles was also defined. This group can ensure the development of the service and strongly influence progress. Stakeholders in the core group will be approached to collaboratively plan the proposed community pharmacy service. Finally, useful information concerning the gaps and needs in current cardiovascular care, the role of community pharmacists in cardiovascular prevention and the factors that can affect the implementation of a community pharmacy service, was obtained.

Acknowledgements

References

1.	Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ.* 2008;337:a1655.

2.	Bartholomew LK, Parcel GS, Kok G, Gottlieb NH, Fernández ME. *Planning health promotion programs: An Intervention Mapping approach.* 3rd ed. San Francisco, CA: Jossey-Bass; 2011.

3.	Green L, Kreuter M. *Health program planning: An educational and ecological approach.* 4th ed. Boston: McGraw-Hill; 2005.

4.	Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plann.* 2000;15:338-345.

5.	Preskill H, Jones N. A practical guide for engaging stakeholders in developing evaluation questions. Robert Wood Johnson Foundation Evaluation Series: Robert Wood Johnson Foundation; 2009.

6.	Lalonde L, Goudreau J, Hudon É, et al. Development of an interprofessional program for cardiovascular prevention in primary care: A participatory research approach. *SAGE Open Med.* 2014;2:2050312114522788.

7.	Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26:124-128.

8.	Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health.* 2008;29:325-350.

9.	Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement Stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

10.	Reed M, Curzon R. Stakeholder mapping for the governance of biosecurity: a literature review. *J Integr Environ Sci.* 2015;12:15-38.

11.	Glasgow RE, Emmons KM. How can we increase translation of research into practice? Types of evidence needed. *Annu Rev Public Health.* 2007;28:413-433.

12.	Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Manag Rev.* 2004;6:21-53.

13.	Green LW. Making research relevant: if it is an evidence-based practice, where's the practice-based evidence? *Fam Pract.* 2008;25:i20-i24.

14. Gilmour J, Beilin R. *Stakeholder mapping for effective risk communication*. Vol 2015: Australian Centre for Excellence in Risk Analysis; 2007. Available at: www.acera.unimelb.edu.au/materials/core.html [Accessed 23/04/15].

15. Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing Public Participation Processes. *Public Adm Rev.* 2013;73:23-34.

16. Brugha R, Varvasovszky Z. Stakeholder analysis: a review. *Health Policy Plann.* 2000;15:239-246.

17. Freeman RE. Strategic Management: a Stakeholder Approach. Boston, Massachusetts: Pitman; 1984.

18. Hernandez-Jover M, Gilmour J, Schembri N, et al. Use of stakeholder analysis to inform risk communication and extension strategies for improved biosecurity amongst small-scale pig producers. Prev vet med. 2012;104:258-270.

19. Reed M, Graves A, Dandy N, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. J Environ Manage. 2009;90:1933-1949.

20. Jun GT, Morrison C, Clarkson PJ. Articulating current service development practices: a qualitative analysis of eleven mental health projects. *BMC Health Serv Res.* 2014;14:20.

21. Rutten GM, Harting J, Bartholomew LK, et al. Development of a theory-and evidence-based intervention to enhance implementation of physical therapy guidelines for the management of low back pain. *Arch Public Health.* 2014;72:1-12.

22. Wheeler A, Fowler J, Hattingh L. Using an intervention mapping framework to develop an online mental health continuing education program for pharmacy staff. *J Contin Educ Health Prof.* 2013;33:258-266.

23. Heinen MM, Bartholomew LK, Wensing M, van de Kerkhof P, van Achterberg T. Supporting adherence and healthy lifestyles in leg ulcer patients: systematic development of the Lively Legs program for dermatology outpatient clinics. *Patient Educ Couns.* 2006;61:279-291.

24. Hyder A, Syed S, Puvanachandra P, et al. Stakeholder analysis for health research: case studies from low-and middle-income countries. *Public Health.* 2010;124:159-166.

25. Makan A, Fekadu A, Murhar V, et al. Stakeholder analysis of the Programme for Improving Mental health carE (PRIME): baseline findings. *Int J Ment Health Syst.* 2015;9:1-12.

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26. Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health Policy.* 2015;119:628-639.

27. Sabater-Hernández D, Moullin J, Hossain L, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. *Am J Health-Syst Pharm.* 2016;73:156-164.

28. Vozikis A, Stavropoulou L, Patrinos GP. Community Pharmacists' Strategies in Greece: An Assessment of the Policy Environment and the Mapping of Key Players. Health. 2015;7:1560.

29. Sabater-Hernández D, Sabater Galindo M, Fernandez-Llimos F, et al. A systematic review of evidence-based community pharmacy services aimed at the prevention of cardiovascular diseases. *J Manag Care Spec Pharm* 2016;22(6):699-713.

30. *World Health Organisation.* Cardiovascular diseases (CVDs). Fact Sheet N317, 2015. Available at: http://www.who.int/mediacentre/factsheets/fs317/en/# [Accessed 26/02/2016]

31. Mendis S, Puska P, Norrving B. *Global atlas on cardiovascular disease prevention and control*: World Health Organization; Geneva 2011.

32. Covey S. *The 7 habits of highly effective people: Powerful lessons in personal change.* New York: Simon & Schuster; 2013.

33. McKenzie JF, Neiger BL, Thackeray R. *Planning, implementing, & evaluating health promotion programs: A primer.* 5th ed. San Francisco, CA: Pearson Higher; 2009.

34. Bryman A. *Social research methods.* 4th ed. New York: Oxford university press Inc; 2012.

35. Cho JY, Lee E-H. Reducing confusion about grounded theory and qualitative content analysis: similarities and differences. *Qual Rep.* 2014;19:1.

36. Golla H, Galushko M, Pfaff H, Voltz R. Unmet needs of severely affected multiple sclerosis patients: The health professionals' view. *Palliat Med.* 2012;26:139-151.

37. Niemi M, Thanh HT, Tuan T, Falkenberg T. Mental health priorities in Vietnam: a mixed-methods analysis. *BMC health Serv Res.* 2010;10:257.

38. Schneider N, Lueckmann SL, Kuehne F, Klindtworth K, Behmann M. Developing targets for public health initiatives to improve palliative care. *BMC public health.* 2010;10:1.

39. Bengtsson M. How to plan and perform a qualitative study using content analysis. *NursPlus Open.* 2016;2:8-14.

40. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurs Educ Today.* 2004;24:105-112.

41. Grant RW, Schmittdiel JA. Building a career as a delivery science researcher in a changing health care landscape. *J Gen Intern Med.* 2015;30:880-882.

42. Guise J-M, O'Haire C, McPheeters M, et al. A practice-based tool for engaging stakeholders in future research: a synthesis of current practices. *J Clin Epidemiol.* 2013;66:666-674.

43. Schmittdiel JA, Grumbach K, Selby JV. System-based participatory research in health care: an approach for sustainable translational research and quality improvement. *Ann Fam Med.* 2010;8:256-259.

44. Boyd H, McKernon S, Mullin B, Old A. Improving healthcare through the use of co-design. *N Z Med J.* 2012;125:76-87

45. Wherton J, Sugarhood P, Procter R, Hinder S, Greenhalgh T. Co-production in practice: how people with assisted living needs can help design and evolve technologies and services. *Implement Sci.* 2015;10:75.

46. Waugh A, Austin A, Manthorpe J, et al. Designing a complex intervention for dementia case management in primary care. *BMC Fam Pract.* 2013;14:1.

47. *Ministry of Health.* Draft Pharmacy Action Plan 2015–2020: For consultation. Wellington: Ministry of Health; 2015.

48. Boomer C, Collin I, McCormack B. 'I have a dream': A process for visioning in practice development. *Pract Dev Health Care.* 2008;7:70-78.

49. Mitchell RK, Agle BR, Wood DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Acad Manage Rev.* 1997;22:853-886.

50. George J, McNamara K, Stewart K. The roles of community pharmacists in cardiovascular disease prevention and management. Australas Med J. 2011;4:266-272.

51. McMillan SS, Wheeler AJ, Sav A, et al. Community pharmacy in Australia: a health hub destination of the future. Res Soc Admin Pharm. 2013;9:863-875.

52. Saramunee K, Krska J, Mackridge A, Richards J, Suttajit S, Phillips-Howard P. How to enhance public health service utilization in community pharmacy?: General public and health providers' perspectives. Res Soc Admin Pharm. 2014;10:272-284.

53. Moullin JC, Sabater-Hernández D, Fernandez-Llimos F, Benrimoj SI. A systematic review of implementation frameworks of innovations in healthcare and resulting generic implementation framework. Health Res Policy Syst. 2015;13:5.

54. Powell BJ, McMillen JC, Proctor EK, et al. A compilation of strategies for implementing clinical innovations in health and mental health. Med Care Res Rev. 2012;69:123-157.

55. Paton N, Callander R, Cavill M, Ning L, Weavell W. Collaborative quality improvement: consumers, carers and mental health service providers working together in service co-design. *Australas Psychiatry.* 2013;21:78-79.

56. *The King's Fund.* Experience-based co-design toolkit. 2013. Available at: http://www.kingsfund.org.uk/projects/ebcd [Accessed 09/02/2016]

57. Bate P, Robert G. Experience-based design: from redesigning the system around the patient to co-designing services with the patient. *Qual Saf Health Care.* 2006;15:307-310.

58. Tollyfield R. Facilitating an accelerated experience-based co-design project. *Br J Nurs.* 2014;23.

Appendices

Appendix 1: Support material for Activity 1.

Use the elements in the following table to think about (1) gaps, needs or opportunities in cardiovascular care or (2) potential target ('at risk') populations.

Non-modifiable risk factors	- Age - Gender - Inherited (genetic) disposition
Behavioural risk factors	- Tobacco use - Physical inactivity - Unhealthy diet - Harmful use of alcohol
Metabolic risk factors	- Overweight and obesity - Raised blood pressure (hypertension) - Raised blood glucose (diabetes) - Raised blood lipids (dyslipidaemia)
Other risk factors and target organ damage (examples)	- Poverty and low educational status - Psychological factors (e.g. stress) - Kidney disease/damage - Left ventricular hypertrophy
Cardiovascular diseases	- Ischaemic heart disease and coronary artery disease - Cerebrovascular disease - Peripheral vascular disease - Cardiomyopathies - Cardiac arrhythmias - Congenital heart disease - Rheumatic heart disease

Use the elements in the following table to think about how pharmacy services can help enhance cardiovascular care.

Role of pharmacists	Examples
Patient education and counselling	Provide patients with information about health problems, correct use of medicines, non-pharmacological treatment
Promote behavioural changes	Promote healthy lifestyles Adherence to treatment Promote self-monitoring
Medication review/assessment	Assess the appropriateness of drugs and treatment strategies; interactions; costs of treatments; adverse effects.
Assessment of health outcomes and follow-up	Disease screening Evaluating the effectiveness and safety of treatments
Participation with the healthcare team	Provision of information to other healthcare professionals Access and management of the medication history Development of care protocols
Collaborative disease management	Recommendations to physicians (adjustments in treatment) Prescription of drugs according to predefined protocols

Appendix 2: Brief description of the roles of Australian government-related stakeholders.

Governmental stakeholder	Brief description of the role (as described in official web pages)	Consulted web pages and access date
Primary Healthcare Networks (Federal Government, Department of Health)	"Primary Health Networks (PHNs) have been established with the key objectives of increasing the efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and improving coordination of care to ensure patients receive the right care in the right place at the right time"	http://www.health.gov.au/internet/main/publishing.nsf/Content/primary_Health_Networks [accessed 08/06/2016]
Agency for Clinical Innovation (State government, NSW Health)	"The Agency for Clinical Innovation (ACI) works with clinicians, consumers and managers to design and promote better healthcare for NSW"	http://www.aci.health.nsw.gov.au/about-aci/collaboration-innovation-better-healthcare [accessed 08/06/2016]
Chronic Cardiovascular Clinical Expert Reference Group (State government, NSW Health)	"The Chronic Cardiovascular Clinical Expert Reference Group (CV CERG) is a sub-committee of the Cardiac Network focused on improving the management of people with chronic cardiovascular conditions"	http://www.aci.health.nsw.gov.au/?a=145863 [accessed 08/06/2016]
Office for Health and Medical Research (State government, NSW Health)	"The Office for Health and Medical Research was established to implement to ten year strategy for NSW health and medical research." "The ten year NSW Health and Medical Research Strategic Plan identifies how NSW can position itself as an important contributor to the international health and medical research sector"	http://www.health.nsw.gov.au/ohmr/Pages/ohmr-history.aspx [accessed 08/06/2016]
	"To encourage collaboration, sharing and efficient use of resources, the Office for Health and Medical Research (OHMR) is	http://www.health.nsw.gov.au/ohmr/Pages/resources.aspx

	developing resources to encourage a state-wide approach to key infrastructure"	[accessed 08/06/2016]
Local Health Districts & Specialty Networks (State government, NSW Health)	"NSW Health has fifteen Local Health Districts and three Specialty Networks covering New South Wales…Local Health Districts and Specialty Networks are established to operate public hospitals and institutions and provide health services to communities within geographical areas or a defined patient population for Specialty Networks"	http://www.health.nsw.gov.au/lhd/boards/Pages/default.aspx [accessed 08/06/2016]
Pharmaceutical Benefits Advisory Committee (Federal Government, Department of Health)	"The PBAC is an independent expert body appointed by the Australian Government. Its primary role is to recommend new medicines for listing on the PBS*. No new medicine can be listed unless the committee makes a positive recommendation" *PBS: Pharmaceutical Benefits Scheme	http://www.pbs.gov.au/info/industry/listing/participants/pbac [accessed 08/06/2016]

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Appendix 3: Selected quotes regarding the identification of needs and gaps in cardiovascular care, community pharmacists' roles and the factors that can hinder the implementation of CPS

Needs and gaps in current cardiovascular care

1. *"Patients who get generics or brands of different generics are actually getting confused with what medication they do take. Because they all look different. It's not like I used to take the green one, now you've given me a pink one. You've given me the wrong stuff. They don't even know the criteria under which they should accept a generic"*

2. *"Then they go and get a generic version which is a completely different colour and they're completely thrown. They think, but I took a blue one, now it's a yellow one. That's all they know, colours and shapes. I think that's actually another issue for taking medications. The plethora of different generics and brand names"*

3. *"What I need to have is an accurate medicines list in their wallet"*

4. *"There can be cases where no one other than that patient really knows their full medical picture and their full pharmacological profile as well"*

5. *"And then, they stopped their medicines for various reasons and things like that. They haven't understood, they think they're cured. Once they're in the hospital, they think they're cured because they had a stent or a surgery, but especially the stent. They don't understand, and they don't see the need to get cardiac rehab or getting any further education and things like that"*

6. *"All those sort of things [blood pressure, cholesterol, diabetes, weight and smoking] go in there and when we talk about one disease, then that's at the risk of ignoring the half a dozen risk factors that are going to contribute to that disease."*

7. *"I think it's [cardiovascular disease] also perceived as self-inflicted problem and therefore you don't admit to it"*

8. *"It's [cardiovascular disease] shameful"*

9. *"It's the psychology of the perception of the disease. You can become literate about the impact of heart disease, but subconsciously do you still think, oh well, I've brought it on myself"*

10. *"I think everyone's got their eye on the big scary cancer. There's so much promotion about it on television, by sports heroes, by anyone with a high profile name. How many people do you actually see on television talk, that that's a high profile person talk about ..."* [talking about cardiovascular disease]

11. *"When a young woman has heart attack it's shock horror, and yet more women die of heart disease than they do of breast cancer. How many people know that?"*

12. *"The other thing that people come into pharmacy for is just to get their blood pressure checked."*

13. *"Maybe if we lumped other chronic diseases in the same boat, so that they could see that actually other chronic disease states are brought about by the same lifestyle factors"*

14. *"Vaccination and immunisation. I think immunization is good in patients that are at risk of … or have a cardiovascular disease condition, ensuring that we immunize them"*

15. *"We talked about the patients, the vast majority who miss out on cardiac rehab, either by the fact that if they don't have accessible to them, or they chose not to go. Therefore they miss out on those sort of education sessions that are typically run through cardiac rehab"*

16. *"The different setting [metropolitan vs rural or big cities vs small towns] is really going to determine some of these issues [pharmacists knowing the patients and their medication, pharmacists knowing patient's doctors, patients going consistently to the same pharmacy or doctor]"*

17. *"A lot of things [services] are very focused and centric on the metropolitan area"*

18. *"I suppose our role [healthcare professionals] is to try and help them navigate through the health system"*

Associated role of community pharmacists

19. *"I think again it comes down to health education between the pharmacist, between the doctors, between the hospitals, [inaudible], specialists, and GPs"*

20. *"I know there's a bit of work done with medication reviews, extending on the home medication reviews, but discharge medication reviews. A patient comes out, pharmacist then has a look at their medication, sort of draws that gap between the community care with the GPs"*

21. *"…the other thing that I think doctors are atrocious at and pharmacists are particularly good at, is drug interactions and toxicities. I think that's something, we're always suspicious that our patients are making up their side effect to whatever medication we prescribe […]I think that the pharmacists are in a much better place to look across the whole range of medications"*

22. *"Then I think there's that monitoring magnate, whether it's patient compliance, or bridging the gap in terms of doing more HMR [home medication review] reports where you actually go in somebodies home and have a look at the medication they're on. You can actually physically see what medication they're taking if they're not complying"*

23. *"The community pharmacy could really fill the gap here [not all patient's going to cardiac rehab] in their local context if they know what occurs with patients who might have any cardiovascular … it doesn't just have to be heart attack. It can be heart surgery, valve surgery or a surgery like that"*

24. *"Every patient needs to receive a comprehensive list of all of their pharmacopeia on a piece of paper from a health care provider, which will be their GP, hopefully, and that should be then shared all to them to pharmacies so that they can crosscheck that, and then the pharmacists role is to check any potential interactions"*

25. *"[list of medications]...That would be great if that was provided by the pharmacists"*

26. *"What I need to have is an accurate medicines list in their wallet. How they get that, there might be different ways to get that. It may be that the pharmacist provided that for them, or it may be that the pharmacist just needs to check it, because we don't want to disempower patients"*

27. *"It's the role, enabling role to make sure they've got what they need to have the autonomy?"*

28. *"I think so, and recognizing the people who need help or more help than those who don't need so much help, so that's not a blank or for everybody."*

29. *"…also mentioned about the potential for using the pharmacist to fill in the gaps in terms of immunisation for people that ordinarily aren't getting the flu vac immunisation that should be having it"*

30. *"We just thought that perhaps there's a potential for more involvement for community pharmacists in multidisciplinary cardiac rehab. We did say in particular like in more regional and rural areas, that might be an important role"*

31. *"I think that's actually screening patients who are not diagnosed and then sending them through to the GP, because you see them quite ... I think, so there's for the diagnosis because I don't think that, you know obviously pharmacy doesn't have a role to play in diagnosis, but you certainly could help screen"*

Factors that can hinder the integration of cardiovascular community pharmacy services into practice

32. *"You think, right, you've just spent thousands of dollars trying to get this person stabilised and then they walk out the door, because it's quitting time, and the follow through hasn't actually occurred"*

33. *"There's no way that the pharmacist is necessarily aware that the patient has perhaps been in hospital recently for an MI [myocardial infarction] or anything like that unless it's communicated directly from the patient"*

34. *"There can be cases where no one other than that patient really knows their full medical picture and their full pharmacological profile as well"*

35. *"There's no sort of loop where the pharmacist can go back to the doctor in an easy way to say, why is this prescription for this? They just have this complete information vacuum that they're operating in. It's just what's on that piece of prescription paper"*

36. *"…the prescription pad, as we call it, as a form of communication between the doctor and the pharmacist is very inadequate. It doesn't tell you anything"*

37. *"…because I don't know what you told them, so I'm not going tell them anything, because I don't want to contradict you. If I tell them something then it might be contradicting you"*

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38. *"The main reason we're not empowered [pharmacists] to deal with in these situations is lack of communication with doctors, lack of accessibility"*

39. *"We are in our own silos of medical, pharmacy, hospital and there isn't any ... Any information communication is often scrawled or written indecipherably between doctors particularly, and so I think it is a communication issue"*

40. *"They do go to at least 2 pharmacies these days, they go to the discount one for their herbals and cheaper whatever's plus their regular sort of family pharmacy"*

41. *"I think people are going to more and more different pharmacies and different GPs as well. I think people don't necessarily stick to the same GP"*

42. *"Also the issue to do with multiple doctors and multiple pharmacists. There's no consistency. There can be cases where no one other than that patient really knows their full medical picture and their full pharmacological profile as well"*

43. *"We also established there was a gap in terms of the turf war, and the understanding for the GP's and the pharmacists in each other's roles"*

44. *"I think it's more of an issue with primary health care providers, so GPs are going to be more ... Feel more under threat if pharmacists particularly go into health prescription, we're talking about writing scripts and things"*

45. *"…that could be a big issue in terms of making any recommendations or changes. I think that's why I was sort of saying there needs to be a reorientation and re-education of the role pharmacists to doctors"*

46. *"I think that's what, from the public's point of view, the education needs to be an awareness of pharmacy as a shop, versus pharmacy as health promotion"*

47. *"The other thing was that there's a lack of Medicare rebates for any kind of additional roles for the pharmacy"*

48. *"A lot of the services that you actually deliver, you're not remunerated for like if they sit down with their doctor or GP; you're only remunerated on that product that you sell"*

49. *"You get the same patients that spend hundreds of dollars on complimentary medicine. Then complaint that they've paying $10 for antibiotics"*

50. *"That's because we've become used to having all of our health costs, not all but a huge portion, because they don't understand the true cost, subsidised"*

51. *"That could be part of the opportunity for education. To educate people in the true cost of health, from every service providers point of view, whether it be the cost of pharmaceutical, the cost of the doctors time, the true cost of the doctors time, and the true cost of the primary health providers time, the GP"*

Chapter 4

Collaborative health service planning: a stakeholder analysis with social network analysis to develop a community pharmacy service

Authors

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Preface

This chapter, like the preceding one, addresses the first step of the preparatory phase of a collaborative planning process (identification and initial engagement of stakeholders). It is also a practical step that shows the advantages and usefulness of stakeholder analyses as specifically applied to a CPS planning process. On this occasion, the research was conducted in Andalucía, Spain, and used a different methodological approach to stakeholder analysis. It was a mix-methods study that combined qualitative research with social network analysis. There was no face-to-face interaction between stakeholders. Key informants were individually interviewed, and a questionnaire was sent to identified stakeholders. Stakeholders provided information that allowed to differentiate them and analyse their relationships.

Prefacio

En este capítulo, como en el anterior, se aborda el primer paso de un proceso de planificación colaborativo de un SPFA: la identificación e involucración inicial de actores. También se trata de un paso práctico que muestra las ventajas y utilidad de los análisis de actores cuando se aplican específicamente a los procesos de planificación de SPFA. En esta ocasión, la investigación se llevó a cabo en Andalucía, España, y se utilizó una aproximación metodológica distinta para el análisis de actores. Se utilizó un método mixto que combinó investigación cualitativa con análisis de redes sociales. No hubo interacción cara a cara entre los actores. Se entrevistaron individualmente a informantes clave, y se envió un cuestionario a los actores identificados. Los propios actores proporcionaron la información que permitió diferenciarlos y analizar sus relaciones.

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Collaborative health service planning: a stakeholder analysis with social network analysis to develop a community pharmacy service

Abstract

Background: Stakeholder participation optimizes health planning, fostering the acceptability and integration of new health services. Collaborative approaches may help overcome existing challenges in the development, implementation and evaluation of community pharmacy services (CPSs). Stakeholder analyses lay the foundation for building collaboration in the integrated delivery of health care.

Objectives: This stakeholder analysis was performed to organize a collaborative initiative to develop a CPS aimed at preventing cardiovascular diseases in Andalucía (Spain). It aimed to identify stakeholders, differentiate/categorize them, and analyze stakeholder relationships.

Method: Stakeholders were identified using the snowballing technique. To differentiate/categorize stakeholders and analyze the relationships (i.e., collaboration) an online web-based questionnaire was sent to 186 stakeholders. Stakeholders were asked for: (1) their influence, interest and attitude toward the initiative; (2) stakes/interests; (3) capacity to contribute to the initiative; (4) desire for involvement; (5) concerns; (6) whom they considered a key stakeholder; and (7) the level of collaboration they had with other stakeholders. Data analysis combined descriptive qualitative content analysis, descriptive quantitative analysis and social network analysis.

Results: Of the 186 stakeholders approached, 96 (51.6%) participated. The identification process yielded 217 stakeholders (individuals, organizations or collectives), classified into 10 groups. Fifty-seven stakeholders were considered critical to the intended initiative. Most participant stakeholders supported the initiative and were willing to collaborate in the development of the CPS. Public health and science were the main driving interests. A collaboration network existed between the 96 stakeholders.

Conclusion: This study revealed the magnitude of the social system surrounding the development of a CPS aimed at preventing cardiovascular disease. A large array of stakeholders was identified and analyzed, and a group of critical stakeholders selected. Stakeholder characteristics such as attitude toward the initiative, potential contribution, desire for involvement, and the existing collaboration network, provided complementary information that was helpful for planning the process and stakeholder engagement.

Introduction

Researchers or practitioners interested in developing, evaluating and implementing community pharmacy services (CPSs), or any other health service, should involve stakeholders from the beginning and throughout the entire planning process.[1-5] Stakeholders are "actors who have an interest in the issue under consideration, who are affected by the issue, or who – because of their position – have or could have an active or passive influence on the decision-making and implementation processes".[6] Involving stakeholders allows to overcome individual limitations – due to background, knowledge and profession[7]– in the understanding of the CPS context and produce results in service planning that no one specific stakeholder could obtain.[8, 9] Accessing a range of knowledge, skills and perspectives, has the potential to foster the acceptability, integration and effectiveness of new CPSs. The initial step of a CPS planning process is therefore to clearly identify the stakeholders; whose interests and needs should be taken into account; and who are the most influential or suitable stakeholders to be involved.[10] It is also important to identify areas of shared interest and build on them to create stakeholder alignment.[11] A stakeholder analysis provides access to all this information, lays the foundation to develop sound collaborative approaches[12] and may help overcome current challenges regarding CPS integration into the health system.[5]

"Stakeholder analysis is an approach, tool or set of tools for generating knowledge about actors – individuals or organizations – so as to understand their behavior, intentions, interrelations and interests; and for assessing the influence and resources they bring to bear on decision-making or implementation processes".[6] The application of stakeholder analysis methods comprises three main activities[13]: (1) identifying stakeholders, (2) differentiating or categorizing them, and (3) analyzing the relationships between them. Several authors have published a collection of techniques and recommendations to undertake stakeholder analysis.[6, 12-16] Performing the three activities together results in a clear picture of the array of stakeholders for the new service, and the complexity of their interactions. However, the third activity of the stakeholder analysis (i.e., analyzing the relationships between stakeholders) is not always performed when conducting a stakeholder analysis. The way stakeholders are connected or not connected to each other (i.e., the structure of the network between them) may foster or inhibit interactions among them, and thereby influence how they share information or other resources.[17] To systematically analyze stakeholder relationships in a stakeholder analysis, Reed et al.[13] proposed

the social network analysis (SNA) method. The fundamental perspective of SNA is its focus on the "importance of the relationships between interacting units".[18] Thus, SNA enriches the results obtained in stakeholder analyses by providing insights into the structure of relationships between stakeholders, how these relationships may affect the flow of information and resources through the network, and which stakeholders are more relevant within the network.[19] The combination of SNA results and information gathered in other steps of the stakeholder analysis helps CPS planners achieve a thorough understanding of the social system of interest, and thereby better organize the collaborative approach to developing and integrating new services into practice.

Stakeholder analyses are not commonly used in the planning process of CPSs, despite their potential utility to properly understand and address the service implementation context. Community pharmacies are health care facilities where patients interact with qualified health care professionals (i.e. community pharmacists) as part of their typical journey through the health system. Deploying the potential of community pharmacies as an intrinsic part of the health system and properly integrating CPSs would add value to the strategies used to address public health problems, such as cardiovascular disease (CVD). CVD is one of the biggest public health problems worldwide,[20] and multidisciplinary and coordinated efforts are required to achieve better treatment goals and reduce its burden.[21, 22] CPSs are shown to have a positive impact on several cardiovascular risk factors[23-25] and, as primary care interventions, are considered an asset in the comprehensive approach to tackle CVD.[21] In this context, a previous stakeholder analysis conducted in Australia[5] underlined the applicability of stakeholder analysis to assist in the development of a CPS aimed at preventing CVD. The study identified 46 stakeholders pertinent to a potential planning process, which represents a suitable starting point to investigating stakeholders for similar services in other settings.

On the opposite side of the world, Spain "is still pushing for political acceptance and remuneration, but already has a sound theoretical foundation" for CPSs.[26] Community pharmacies in Spain are "private healthcare facilities of public interest" that can only be owned and managed by pharmacists.[27] The access to pharmaceutical benefits is included in the coverage provided by the National Health System, which is publicly funded, but to date, almost restricted to prescription medicines and health products. Pharmacies' distribution in Spain is regulated by geographic and demographic criteria to ensure equal access to medicines among the population, and thus are highly

accessible healthcare facilities.[27, 28] These characteristics of Spanish community pharmacies seem to be positive for CPS to contribute to preventing CVD. Although the Australian study mentioned previously put researchers on notice of the wide range of stakeholders for the development of a CPS related to CVD, to develop a new CPS in Spain it is crucial to understand the specific Spanish context. This study adds to the literature since it identifies relevant stakeholders for a CPS related to CVD and whether an existing network between stakeholders around the CPS exists. To the best of our knowledge, there are no previous studies addressing the potential existence of stakeholder networks around CPSs and how these networks may be useful to set up a collaborative planning process. The present study is a stakeholder analysis for the development of a CPS to prevent CVD in Andalucía (a region in Southern Spain). It aims to identify stakeholders, differentiate and categorize them, and analyze stakeholder relationships to organize a collaborative initiative for the development of the service.

Methods

Study setting

A stakeholder analysis was carried out in Andalucía, a region in Southern Spain. Stakeholders were defined as "any individual or organization that can be directly or indirectly affected by, have an influence on, or have an interest in the development of a CPS aimed at the prevention of CVD in Andalucía" (adapted from Varvasovskzky and Brugha[6]; Franco-Trigo et al.[5]). Appendix A summarizes the definitions of concepts used in preparation of the manuscript.

Study design

The design of the stakeholder analysis was based on the framework proposed by Gilmour and Beilin,[12] comprising the three activities put forward by Reed et al.[13] for the application of stakeholder analysis methods: (1) stakeholder identification; (2) stakeholder categorization/differentiation; and (3) analysis of stakeholder relationships. Below is explained how each of these activities were carried out along with the manner in which the research process unfolded (explained in Figure 1).

Stakeholder identification. The stakeholder identification was performed in three phases using the snowball method[12, 16] (see Figure1, left column). Snowballing was considered appropriate as it allowed consideration of many perspectives and

triangulation of the list of stakeholders. In the first phase, the research team reviewed a previous stakeholder analysis carried out in Australia with a similar objective to this study[5] and performed searches on the Internet to identify stakeholders. An initial list of 80 potential stakeholders sorted into the five groups shown in Figure 1 – as per the stakeholder analysis consulted – was elaborated. In a second phase, nine key informants were individually interviewed for suggested additions to the initial list. As a result, a refined list of 204 stakeholders arranged into the 10 groups in Figure 1 was obtained. Finally, in a third phase, the refined list was sent in a questionnaire to a representative of each of the organizations included in such a list (see under Selection

Phase 1: Research team

The research team produced an initial list of stakeholders

(Output: list 1; n=80 stakeholders, organized in 5 stakeholder groups: (1) PC; (2) HC; (3) SO; (4) GI; and (5) other stakeholders)

The research team prepared the questions for the stakeholder analysis self-administered questionnaire

(Output: first draft of the questionnaire)

Phase 2: Key informants
(individual interviews)

Key informants reviewed and validated the list of stakeholders produced above

(Output: list 2; n=204 stakeholders, organized in 10 stakeholder groups: (1) PC; (2) HC; (3) SO; (4) GI; (5) AR; (6) PI; (7) CVI; (8) CVT; (9) SP; and (10) MD)

Key informants piloted the questions in the stakeholder analysis questionnaire (n=9) and piloted the final online web-based questionnaire (n=6)

(Output: final questionnaire)

Phase 3: Organizations/institutions included in list 2
(online web-based self-administered questionnaire)

Organizations in list 2 further identified stakeholders missing in this same list

(Output: results of the stakeholder identification)

Organizations in list 2 answered the online web-based questionnaire

(Output: raw results of the stakeholder analysis)

Figure 1. Study phases. **PC**: patients/consumers and representative organizations; **HC**: health care professionals and their regulatory bodies; **SO**: scientific organizations and NGOs; **GI**: government institutions; **AR**: academy/university research groups; **PI**: private health insurers; **CVI**: pharmaceutical industry developing drugs for cardiovascular disease; **CVT**: providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home; **SP**: providers of health care management software for pharmacies, electronic prescription and electronic medical records; **MD**: media

and recruitment of participants how organizational representatives were contacted and respondents identified). Respondents were asked to suggest any missing stakeholders. All answers were compiled by the research team and a final list of stakeholders produced (results presented in this paper).

Stakeholder categorization/differentiation. Representatives of all the organizations included in the refined list produced during the stakeholder identification process (see Figure 1, list 2) were invited to participate in the study by answering a questionnaire. Stakeholders were provided with an outline of the initiative to be developed (i.e., the collaborative approach for the development of a CPS aimed at preventing CVD) and the refined list of 204 stakeholders. Based on the stakeholder analysis framework proposed by Gilmour and Beilin,[12] stakeholders were asked for:

1) Their own attributes (definitions adapted from Caniato et al.[17]):
    a. Influence: "The current capacity of your organization to influence the initiative. This includes the access, availability and mobilization of resources; and/or the capacity to mobilize other actors/stakeholders and their resources; and/or the capacity to put into action activities or potential projects". Response options: none, low, medium, high.
    b. Attitude: "Current predisposition of your organization in relation to the aforementioned initiative". Response options: for, neutral, against.
    c. Level of interest in the collaborative initiative proposed: "Degree of interest that your organization currently has about the aforementioned initiative". Response options: none, low, medium, high.
2) Their specific interests on the initiative. Response options (multiple answers allowed): a. Politic; b. Financial/economic; c. Scientific/Technical; d. Public health/General interest/Social aspects; e. Building relationships/access to other stakeholders; f. Another.
3) Their ability to contribute to the initiative. Response options (multiple answers allowed): a. Problem definition; b. Definition of the organizational structure (establishment of committees and roles of stakeholders involved); c. Planning the initiative; d. Execution of the initiative; e. Service definition; f. Developing and reviewing materials; g. Facilitation of access to the initiative; h. Economic contributions/resources; i. Another.
4) The level of involvement they desired. Response options: a. Would not like to be involved; b. Only receiving information; c. Be a consultative body; d. Active

participation in the process without making decisions; e. Active participation in the process and in decision-making; f. No answer/Do not know.

5) Their concerns regarding the initiative. Open answer.
6) From the list of stakeholders, who they considered a key stakeholder for the initiative and the reason(s) why.

Analysis of stakeholder relationships. For feasibility reasons, only the relationships between organizations were analyzed. Stakeholders were asked for their level of collaboration with the other organizations on the list in the previous year and a half (question 7 of the questionnaire). This timeframe was considered adequate to be remembered by the stakeholders and allowed gathering useful information. The intention behind this question was to check if a collaboration network among the identified organizations already existed and, if so, see which organizations stood out in the network. The assumption was that, if a network existed, the stakeholders that stood out in an existing collaboration network would probably be helpful to build the collaborative initiative and their experience and willingness to collaborate with other stakeholders very useful to make it successful. Different levels of collaboration were defined as per Schoen et al.[29]: "not linked (do not work together), communication (share information only), cooperation (work together to achieve common goals), collaboration (work together as a formal team with specific responsibilities) and fully linked (work together as a formal team; mutually plan and share staff or resources to accomplish goals)". A roster of organizations in the stakeholder list was provided to facilitate responses and increase the number of stakeholders nominated.[30]

Selection and recruitment of participants

Key informants. Key informants were selected using purposive sampling.[11, 31] They were direct contacts of the research team and stakeholders to the project with extensive professional backgrounds. They were sought due to their diverse roles in order to gather different perspectives. Their input in the study included reviewing the initial list of stakeholders produced by the research team and piloting the questionnaire (See Figure 1-Phase 2). Their profiles included: two academics whose research focus was pharmacy practice; an internal medicine physician whose work focused on vascular risk; a senior hospital pharmacist; a community pharmacist also responsible for hypertension and vascular groups in a scientific society; a general practitioner with a background as primary care center director and health district director; a health care authority responsible for political and managerial issues related

to health policies at the regional (i.e., Andalucía) level; an informed cardiovascular patient advisor of a cardiovascular patient association with a background in hospital administration; and an academic whose focus was public health research. They were invited to participate in the study by email or telephone.

Stakeholders sent the questionnaire. Out of the 204 stakeholders included in the refined list produced after the key informants' revisions, five could not be contacted and 13 were individuals (i.e., general groups of individuals, such as individual patients, individual pharmacists, individual doctors, etc.). For feasibility reasons, individuals were represented in the study by corresponding representative organizations. Therefore, the questionnaire link was finally sent to 186 stakeholders (i.e., organizations), with a brief document describing the study attached. One representative from the upper level management of each organization was contacted and asked to respond themselves to the questionnaire or to choose the most appropriate person to respond on the organization's behalf. Contact details were obtained from key informants and the Internet. Telephone or email were used to invite participants to the study. When requested, the questions included in the questionnaire were provided to participants, which assisted in identifying the most appropriate person to respond on the organization's behalf. Stakeholders who did not respond were sent up to four reminders via email (i.e., the first one week and a half after the first email; the others two weeks and a half after the previous reminder), and a telephone call made between the second and third email reminders.

Data collection methods

To efficiently gather information from the contacted stakeholders, an online web-based questionnaire with seven questions was designed (see Appendix B, which includes the questionnaire in Spanish – the original version used for the study – and its English translation; the right column in Figure 1 outlines the process). The questionnaire was initially developed by the research team as an auto fillable document. The items were based on the stakeholder analysis framework proposed by Gilmour and Beilin and the questions in the example they provide for the application of this framework.[12] Further definitions were provided within the questionnaire to avoid diverse interpretations from stakeholders as per explained in the study design section. The questionnaire was then piloted by the key informants involved in the second phase of the stakeholder identification process, leading to a revised questionnaire and altered method of administration. The web-based

questionnaire was developed by information technology researchers and further tested by six key informants, with no additional changes. Data collection occurred October 2017-January 2018.

Data analysis

Stakeholders provided their own information and selected key stakeholders. One author managed and performed the data analysis and discussed the results with the co-authors. This enhanced the quality and trustfulness of the analysis and results, since combining the perspectives of insiders to the research (i.e., researchers) and outsiders (i.e., stakeholders) enhances the comprehensiveness of the stakeholder analysis and reduces the likeliness to introduce individual or researchers' bias.[6, 13]

Data for Question 1 of the questionnaire (i.e., stakeholder level of influence, interest and attitude) were analyzed by representing level of influence vs level of interest in a square matrix and assigning stakeholders to each cell depending on their responses. In doing so, stakeholders were grouped based on Eden and Ackerman's[32] classification as: (a) *players*, those having medium-high influence and interest; (b) *context-setters*, those having medium-high levels of influence but none-low levels of interest; (c) *subjects*, those having none-low levels of influence but medium-high levels of interest; and (d) *crowd*, those having none-low levels of influence and interest. Stakeholder attitude was identified in the matrix by using a color code (i.e., green-for, black-neutral, red-against). A descriptive analysis was performed for Questions 2, 3 and 4. Descriptive qualitative content analysis was used for Question 5. Data gathered in a qualitative manner from Questions 6 and 7, were coded to carry out a quantitative analysis. For Question 6 (who are key stakeholders), the number of votes provided for each stakeholder was added (self-voting was not considered), then stakeholders were sorted in descending order, based on their total votes. For question 7, stakeholder relationships (i.e., level of collaboration) were analyzed using SNA. For feasibility reasons, only the relationships between organizations were analyzed. A whole network analysis was carried out. The initial boundaries for the network analysis used for data collection included all organizations identified; however, for ethical reasons, the boundaries for the analysis were redefined and only collaboration among those stakeholders who provided consent to participate in the study was finally analyzed. Data were coded in a square matrix, with the program UCINET[33] used for the analysis and NetDraw[34] used for network visualization. Since the relationships analyzed were reciprocal, their values were symmetrized (i.e., for

stakeholders A and B, the relationship that A had with B was the same as B had with A).[35] The value for a relationship was defined as the higher score for each pair of stakeholders (i.e., dyad).[29] When a participant in a dyad had consented to participate in the study but did not respond to this question/item, the value provided by the other was used to define the relationship. Data were then dichotomized so that the relationship could only have two values: existed or did not exist.[35] It was considered that a relationship (i.e., tie) existed when "cooperation", "collaboration" or "fully linked" were selected.[29] Different measures were calculated to understand the properties of the network as a whole:

- To analyze how well-connected the network was:
    - Number of ties (total amount of ties in the network[35])
    - Density (number of existing ties out of all the possible ties in the network[35])
    - Average degree ("average number of ties" that stakeholders had[35])
- To analyze the shape of the network:
    - Centralization (the extent to which the network is organized around one stakeholder or group of stakeholders[19])
    - Core-periphery structure (correlation with a network structure that has two groups of stakeholders: *core*, those who are "connected to each other and to others"; and *periphery*, those connected to the stakeholders in the core but not to those in the periphery[35])

Other measures were calculated to understand the properties of the network at the stakeholder or node level:

- Degree centrality (i.e., actual number of ties a stakeholder has), calculated to identify the important/powerful stakeholders in the network[35]; and
- Betweenness centrality (i.e., the frequency of a stakeholder being in the shortest path between two other stakeholders in the network[36]), to identify the strategic stakeholders that could potentially control flow through the network.[35]

For the purpose of this study, the *critical stakeholders* were determined by triangulating different data. Triangulation enhanced the completeness of the analysis, therefore increasing the quality of the analysis and the confidence in the results obtained.[31] The following criteria were used to select the *critical stakeholders*: (a) stakeholders that declared having high levels of influence and interest; (b) the first decile of stakeholders with most votes considered key by the other stakeholders, because a decile (of the list of 204 stakeholders) resulted in a manageable number of stakeholders; (c) the first quartile of stakeholders (of the 96 participants) with higher

degree centrality in the collaboration network; and (d) the first quartile of stakeholders (of the 96 participants) with higher betweenness centrality in the collaboration network. Note that decile and quartiles were calculated out of different figures and were chosen because they represented similar and manageable numbers of stakeholders. This ensured that all four methods contributed to a similar extent to the selection of critical stakeholders.

Ethics

This research was the result of collaboration by two universities, ethical clearance was obtained by one institutional Human Research Ethics Committee (Reference number: 310/CEIH/2017) and ratified by the other (Reference number: ETH17-1458). Key informants were provided an information sheet and signed a consent form. For the questionnaire, stakeholders were randomly assigned four and six-digit identification numbers and passwords respectively. Following the link for the questionnaire and after introducing their identification and password numbers, stakeholders were presented with a brief description of the study, the information sheet and the consent form. The questionnaire could only be accessed if they selected a check box declaring they had read the documentation and consented to participate. Participants were sent a summary of the results. For publication and dissemination of results, participant names were modified, and only stakeholder groups are identified.

Results

Of the 186 organizations, 96 (51.6%) agreed to participate and responded to at least the first question of the questionnaire. The entire questionnaire was filled in by 72 participants (38.7%). Table 1 summarizes participants' description and response rates.

Table 1. Participant description and response rates

Stakeholders invited to participate: 186								
Stakeholders that agreed to participate: 96								
Respondents: mean age 55 (SD11.3); 73% men								
Stakeholder group	Number of stakeholders invited	Number of stakeholders that answered each of the questions						
		Q1 Influence Interest Attitude	Q2 Stakes	Q3 Contribution	Q4 Involvement	Q5 Concerns	Q6 Voted key stakeholders	Q7 Relationships
PC	51	26	22	21	21	11	20	19
HC	34	20	19	18	20	13	15	13
SO	21	12	12	12	12	8	12	11
GI	25	16	15	15	15	8	13	11
AR	8	7	7	7	7	6	5	5
PI	8	1	1	1	1	0	1	1
CVI	16	6	5	5	5	3	5	5
CVT	8	2	2	2	2	1	2	2
SP	6	3	3	3	3	2	2	2
MD	9	3	3	3	3	1	3	3
TOTAL	186	96	89	87	89	53	76	72
Response rate		51.61%	47.85%	46.77%	47.85%	28.49%	40.86%	38.71%

PC: patients/consumers and representative organizations; HC: health care professionals and their regulatory bodies; SO: scientific organizations and NGOs; GI: government institutions; AR: academy/university research groups; PI: private health insurers; CVI: pharmaceutical industry developing drugs for cardiovascular disease; CVT: providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home; SP: providers of health care management software for pharmacies, electronic prescription and electronic medical records; MD: media

Stakeholder identification

Only 13 additional stakeholders were identified as part of the third phase of the stakeholder identification process. The final list of stakeholders included 217 stakeholders at the national, regional, provincial and local level, belonging to 10 groups shown in the stakeholder map presented in Figure 2: (1) patients/consumers and representative organizations; (2) health care professionals and their regulatory bodies, including professionals/regulatory bodies for pharmacy, medicine, nursing, psychology, physiology, nutrition and dietetics, and podiatry; (3) scientific organizations and non-governmental organizations (NGOs); (4) government institutions; (5) academy/university research groups; (6) private health insurers; (7) pharmaceutical industry developing drugs for CVD; (8) providers of medical devices related to CVD for use at community pharmacies or patients' homes; (9) providers of health care management software for pharmacies, electronic prescription and electronic medical records; and (10) media.
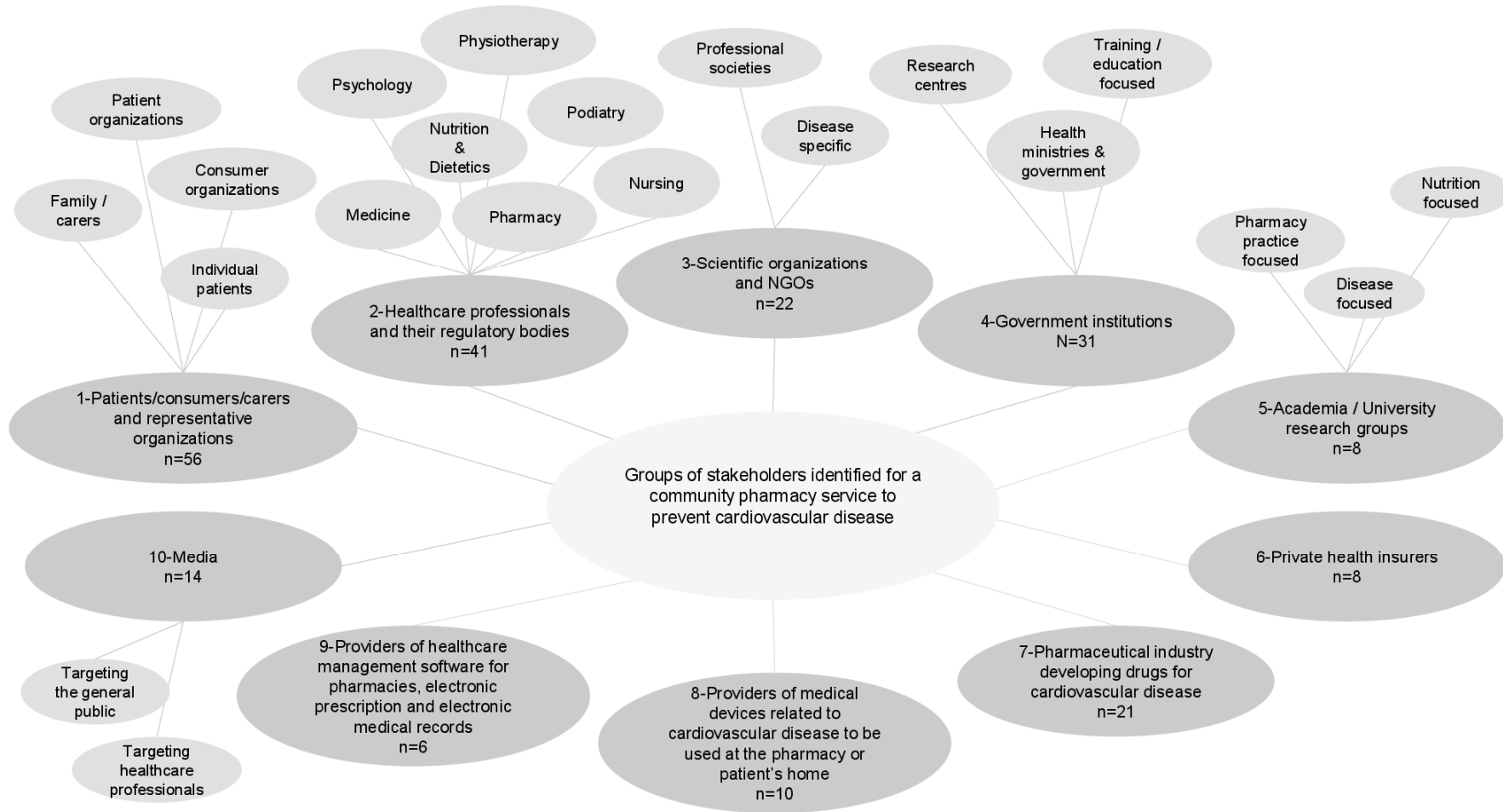
Figure 2. Stakeholder map. *Consider all these groups at the national, regional/state and provincial/local level

Stakeholder categorization/differentiation

The stakeholders' self-perceived level of influence and interest, together with their position regarding the initiative are summarized in the influence/interest matrix in Figure 3. Most participants were classified as players (n=71), with 25 of them
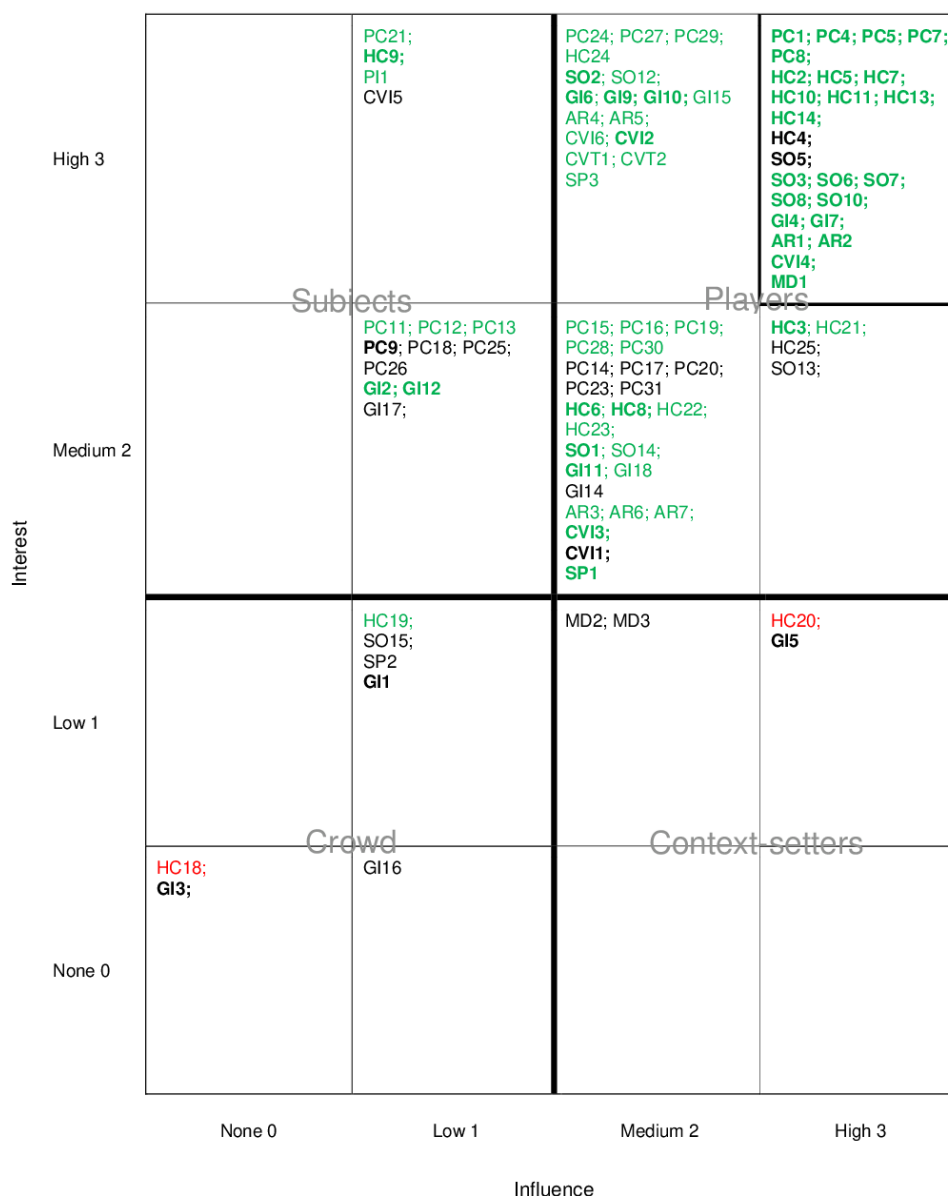

Figure 3. Influence, interest and attitude matrix. This figure shows the influence, interest and attitude self-reported by stakeholders towards the collaborative initiative. The colours in the figure (online version of the article) stand for the stakeholder attitude towards the initiative: green (for); black (neutral); red (against). Names in bold correspond to critical stakeholders: those in the upper right quadrant are the stakeholders that declared having high levels of influence and interest; those elsewhere in the figure were selected by the other methods used for triangulation. **PC**: patients/consumers and representative organizations; **HC**: health care professionals and their regulatory bodies; **SO**: scientific organizations and NGOs; **GI**: government institutions; **AR**: academy/university research groups; **PI**: private health insurers; **CVI**: pharmaceutical industry developing drugs for cardiovascular disease; **CVT**: providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home; **SP**: providers of health care management software for pharmacies, electronic prescription and electronic medical records; **MD**: media. Bold: critical stakeholders.

classified as critical stakeholders. Only four participants were classified as context-setters, 14 as subjects and seven as crowd. Sixty-nine participants (71.9%) supported the initiative, some had a neutral position (n=25), and only two declared being against the initiative. All the critical stakeholders selected by this method, except two (who declared a neutral position), supported the initiative. Table 2 summarizes the critical stakeholders identified by the different methods; Column A presents the 25 critical stakeholders identified through the influence/interest matrix.

Table 2. Critical stakeholders

Stakeholder groups	A High influence & interest [self-perception]	B 1st decile voted as key stakeholders (number of votes)	C 1st quartile higher degree centrality [more power] (normalized degree centrality value)	D 1st quartile betweenness centrality [strategic] (normalized betweenness centrality value)	E Total (number of critical stakeholders)
PC	PC1 PC4 PC5 PC7 PC8	PC2 (36) PC6 (52) PC10 (42)	PC1 (21.1)	PC5 (2.1) PC8 (1.7) PC9 (3.3)	n=9
HC	HC2 HC4 **HC5** HC7 HC10 HC11 **HC13** HC14	HC1 (42) HC4 (40) **HC5 (45)** HC12 (36) **HC13 (49)** HC15 (41) HC16 (34) HC17 (39)	HC2 (32.6) HC3 (26.3) **HC5 (34.7)** HC6 (30.5) HC10 (27.4) **HC13 (26.3)**	HC2 (2.9) HC3 (1.9) **HC5 (2.8)** HC6 (2.0) HC8 (2.5) HC9 (2.2) HC10 (2.8) **HC13 (1.7)**	n=17
SO	SO3 SO5 SO6 SO7 SO8 **SO10**	SO2 (34) SO4 (41) SO5 (33) SO6 (36) **SO10 (34)** SO11 (38)	SO1 (27.4) SO6 (25.3) SO7 (51.6) **SO10 (32.6)**	SO1 (2.5) SO7 (11.7) **SO10 (2.0)**	n=10
GI	GI4 GI7	GI6 (42) GI8 (50) GI13 (34)	GI1 (25.3) GI2 (26.3) GI3 (26.3) GI5 (23.2) GI6 (33.7) GI9 (53.7) GI10 (22.1) GI11 (26.3) GI12 (27.4)	GI1 (3.9) GI2 (3.0) GI3 (1.8) GI5 (1.9) GI6 (5.7) GI9 (17.1) GI12 (3.3)	n=13
AR	AR1 AR2		AR1 (22.1)		n=2
CVI	CVI4		CVI2 (21.1) CVI3 (28.4) CVI4 (21.1)	CVI1 (1.6) CVI3 (2.9)	n=4
SP			SP1 (33.7)	SP1 (4.6)	n=1
MD	MD1				n=1
				Total number of critical stakeholders	n=57

Stakeholders in bold are those showed as critical by all four methods. **PC**: patients/consumers and representative organizations; **HC**: health care professionals and their regulatory bodies; **SO**: scientific organizations and NGOs; **GI**: government institutions; **AR**: academy/university research groups; **PI**: private health insurers; **CVI**: pharmaceutical industry developing drugs for cardiovascular disease; **CVT**: providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home; **SP**: providers of health care management software for pharmacies, electronic prescription and electronic medical records; **MD**: media

Public health was the stake/interest aligning most participants (76 stakeholders belonging to the 10 groups), followed by scientific stakes/interests (51 stakeholders pertaining to eight groups), and establishing relationships with other stakeholders (23 stakeholders of seven groups). Additionally, 14 stakeholders of seven groups declared an economic stake/interest in the initiative, and four stakeholders from two groups declared a political stake/interest in the collaborative initiative. Professional stakes/interests were raised by three stakeholders.

The stakeholders' capacity to contribute to the initiative and their desired involvement can be found in Table 3. This table shows the number of stakeholders in each group that could potentially contribute to each of the stage of the initiative and their desire

Table 3. Stakeholders' potential for contribution and level of involvement

Stakeholder groups →		Total number of stakeholders (%)	PC	HC	SO	GI	AR	PI	CVL	CVT	SP	MD
Stakeholder contribution* (n=87 respondents)												
Problem definition		41 (47.1)	6	8	9	8	4	0	3	1	0	2
Collaborative process	Organize structure	33 (37.9)	2	10	9	6	3	0	1	1	1	0
	Initiative planning	36 (41.4)	4	11	7	6	5	0	2	1	0	0
	Initiative execution	33 (37.9)	4	9	8	3	3	0	3	2	1	0
	Resources	7 (8.0)	0	4	1	0	0	0	1	0	1	0
Service development	Service definition	35 (40.2)	4	10	9	2	5	0	3	1	1	0
	Material preparation	42 (48.3)	6	13	11	3	5	0	3	1	0	0
	Facilitate access to the service	33 (37.9)	3	9	4	4	3	1	4	2	2	1
Other (evaluation)		2 (2.3)	2	0	0	0	0	0	0	0	0	0
Stakeholders' desire for involvement (n=89 respondents)												
Not involved		5 (5.6)	0	2	0	0	0	1	0	0	0	2
Receive information		16 (18.4)	9	3	1	1	0	0	0	0	1	1
Being consulted		19 (21.3)	5	3	2	5	2	0	0	1	1	0
Active participation without making decisions		12 (13.5)	3	1	1	4	0	0	2	0	1	0
Active participation making decisions		32 (36.0)	3	11	8	3	5	0	2	0	0	0
Don't know		5 (5.6)	1	0	0	2	0	0	1	1	0	0

PC: patients/consumers and representative organizations; **HC**: health care professionals and their regulatory bodies; **SO**: scientific organizations and NGOs; **GI**: government institutions; **AR**: academy/university research groups; **PI**: private health insurers; **CVI**: pharmaceutical industry developing drugs for cardiovascular disease; **CVT**: providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home; **SP**: providers of health care management software for pharmacies, electronic prescription and electronic medical records; **MD**: media. *More than one option could be chosen by each stakeholder.

for involvement in the process. In addition, stakeholders expressed concerns over the collaborative initiative and the final service (see Table 4).

Counting votes for "key stakeholders" resulted in a group of 20 stakeholders classified in the first decile (see Table 2, Column B). This group contained stakeholders from four groups: patients/consumers (n=3), health care professionals (n=8), scientific organizations (n=6) and government organizations (n=3). Further information on the reasons provided by respondents on why stakeholders were considered key were

Table 4. Stakeholder concerns

Concerns on the collaborative initiative	Concerns on the final service
(1) Participants were concerned about the feasibility of the initiative: how to design, coordinate, get resources and carry out the collaborative initiative to ensure the objectives are feasible and stakeholders are informed and participate.	(1) The service must respond to real needs of both the population and the involved stakeholders.
(2) Another concern was the participating stakeholders, how to coordinate them, and agreeing on the roles they may play.	(2) The service must be developed in agreement with current regulations and be feasible in practice, avoiding complexity that could hinder its future sustainability.
(3) The quality of the initiative must be ensured, and planning must include: a suitable methodological approach, a pilot study, appropriate evaluations and scale-up.	(3) Pharmacists involved in providing the service must receive appropriate training.
(4) The initiative must be transparent.	(4) Undermining doctors' competencies must be avoided.
(5) The rights of patients/consumers must be safeguarded.	(5) Patients' privacy must be safeguarded.
(6) The initiative must be developed with the support of official institutions and physicians.	(6) The service must achieve objectives such as:
(7) The initiative must be prevented from being distorted and used to achieve other than health-related ends.	a) patients accessing information about their medication, diseases, and available innovations;
(8) Advantage of the benefits the initiative may entail must be taken, such as: improving patient healthcare; building alliances to improve the healthcare system; creating new opportunities for participating stakeholders by establishing multilevel and multidisciplinary research; and integrating community pharmacies/pharmacists in the healthcare system.	b) patients knowing and demanding the services that are available to them; and c) fostering health promotion and disease prevention activities, including life style habits.
	(7) Successful scale-up of the service must be ensured along with the promotion of equity in terms of access to the service for both pharmacies and patients, independent of their location.

synthesized by groups to protect individual stakeholders' identity and are presented in Appendix C.

Stakeholder relationships

SNA results revealed an existing collaboration network among the 96 participants in the study, with 1348 ties. All the stakeholders were linked, meaning all could reach any other in the network following the collaboration ties. The density of the network indicated the 1348 existing ties represented only 14.8% of all possible ties in the network (i.e., if all stakeholders were collaborating with all others there would be 9120 ties). The average degree was 14, indicating that each stakeholder in the network collaborated with an average of 14 other stakeholders in the network. The network centralization was 39.7%, and its structure was moderately correlated with a core/periphery structure (correlation=0.53). That is, there was a group of stakeholders with high links among them (core), and another group of stakeholders linked to the stakeholders in the core group but poor or no links between them (periphery). Figure 4 shows the core/periphery structure of the network displaying the stakeholder groups and critical stakeholders.

As shown in Table 2, Column C, identifying the first quartile of stakeholders with the highest degree centrality (i.e., those more linked to other stakeholders) led to the selection of 25 stakeholders pertaining to the following groups: patients/consumers and representative organizations (n=1); health care professionals and their regulatory bodies (n=6); scientific organizations and NGOs (n=4); government institutions (n=9); academy/university research groups (n=1); pharmaceutical industry developing drugs for CVD (n=3); and providers of health care management software for pharmacies, electronic prescription and electronic medical records (n=1). Conversely, the first quartile of stakeholders with the highest betweenness centrality (i.e., those in the path that links two other stakeholders) was constituted by 24 critical stakeholders (see Table 2, Column D), belonging to: patients/consumers and representative organizations (n=3); health care professionals and their regulatory bodies (n=8); scientific organizations and NGOs (n=3); government institutions (n=7); pharmaceutical industry developing drugs for CVD (n=2); and providers of health care management software for pharmacies, electronic prescription and electronic medical records (n=1). Considering the degree centrality and betweenness centrality together, 18 stakeholders were both well connected to others and strategically situated in the network.
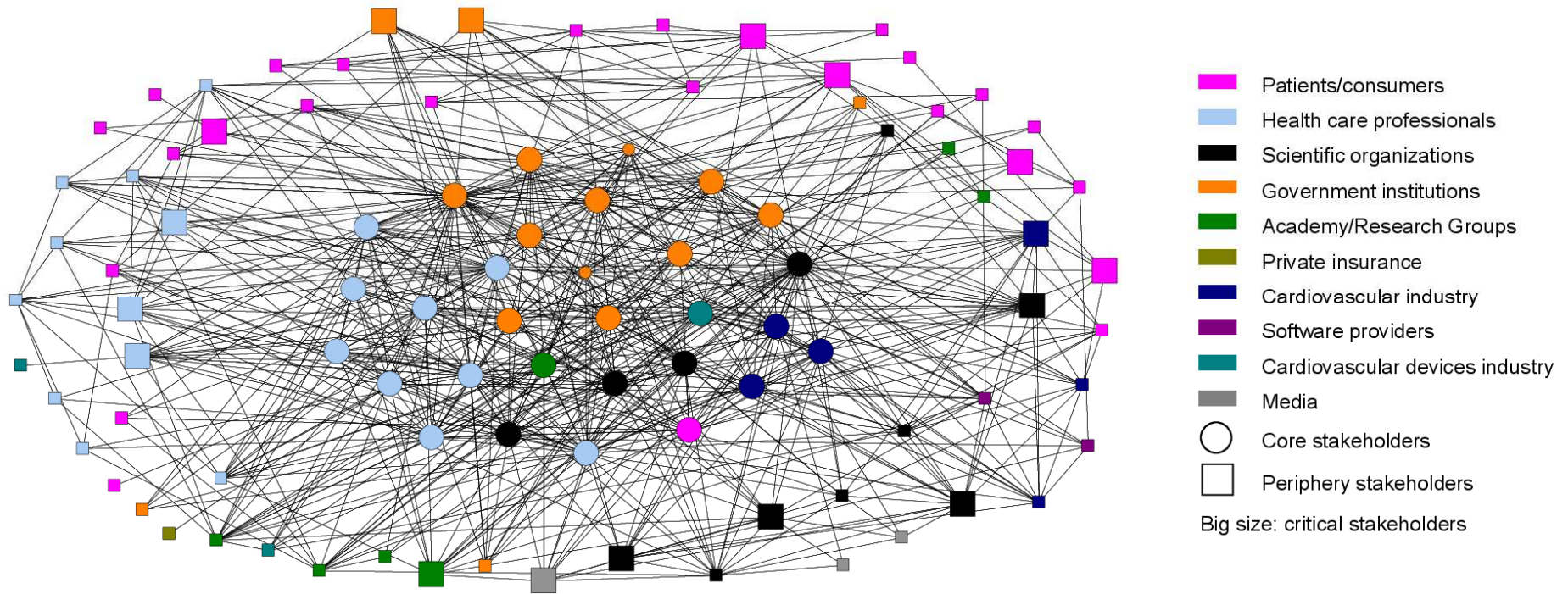
Figure 4. Collaboration network among stakeholders. This figure shows the collaboration network that exists among the stakeholders that participated in the study. The circles and squares in the figure represent stakeholders and the lines represent the collaboration relationship among them. The different colours (online version of the article) represent the different stakeholder groups. The circles and squares in big size represent those participants that were selected as critical stakeholders by any of the four methods used for this purpose in the study. The stakeholders in the centre of the figure (core) are those highly linked among them and with others; those in the periphery are mainly linked with stakeholders in the core. In this figure, the core periphery structure has been manually modified for visualization purposes.

Critical stakeholders: combination of results

For the reasons stated in the methods section (i.e., data analysis), this analysis combined four different methods that assisted in assessing critical stakeholders. The first two methods were applied as part of the stakeholder differentiation/categorization: (1) stakeholders with high self-perceived influence and interest (see Table 2, Column A); and (2) those considered key by other stakeholders (see Table 2, Column B). The third and fourth methods were part of the SNA's analysis of stakeholder relationships: (3) degree centrality in the collaboration network (see Table 2, Column C); and (4) betweenness centrality in the collaboration network (see Table 2, Column D). The combination of the four methods yielded a final number of 57 critical stakeholders. All four methods returned stakeholders belonging to patient/consumer groups, health care professionals, scientific organizations, and government institutions. The "stakeholders considered key by the other stakeholders" only pertained to the abovementioned stakeholder groups, whereas the other three methods yielded stakeholders in additional groups. "Stakeholders' high self-perceived influence and interest" revealed stakeholders in the academy/university research groups, pharmaceutical industry and media. The degree centrality measures also considered stakeholders from the academy, cardiovascular industry and software providers; and the betweenness centrality considered stakeholders from the cardiovascular industry and software providers. Only three stakeholders were identified as critical by all four methods (two health care regulatory bodies and one scientific organization). Five more were identified as critical by three methods (two health care regulatory bodies, two scientific organizations and one government institution). The results show no critical stakeholders within two of the 10 stakeholder groups identified: the private health insurers and the providers of medical devices related to cardiovascular disease to be used at community pharmacies or patients' home. It should be noted that any of the two participant stakeholders that declared being against the initiative were shown as critical stakeholders by any of the four methods.

Discussion

This stakeholder analysis provides valuable insight into critical stakeholders that can strongly influence the development, implementation and evaluation of a cardiovascular CPS in Andalucía (Spain). Involving stakeholders throughout the

study allowed a wide variety of perspectives to be considered,[7] and thus produced quality, credible results.[5, 13] The results revealed stakeholders' willingness to work collaboratively and their support of the initiative, as well as some common interests and different concerns around the project. Considering all this information at the outset of a planning process is crucial for CPS developers. It enables them to establish a suitable steering group and carefully manage a collaborative process in which different stakeholders with varied perspectives, interests and needs participate.

Stakeholder identification

The three-phase process followed in this study to identify stakeholders allowed for an exhaustive list of individuals, groups or organizations that may influence, have an interest or are affected by a CPS aimed at preventing CVD. Such a list included stakeholders at the national, regional, provincial and local levels, which resulted in a suitable mix providing different points of view, resources and experiences to the project. The diversity of stakeholders identified underlined the need to involve stakeholders that are usually ignored in efforts to integrate CPSs (e.g., patient and consumer groups, and the spectrum of health care professionals). Many of these stakeholders were highly influential and should be taken into account by CPSs planners, along with their stakes and concerns, as early as possible in the planning process; ignoring them could hamper the success and final integration of the new service. High-level stakeholders may bring to the process the representation and resources needed to set it up, and as local or ground level stakeholders know the problem and implementation context, their input is crucial to designing a feasible and implementable CPS.[37, 38] The broad definition of the initiative at this early stage of the planning process contributes to the high number of stakeholders identified.

Stakeholder categorization/differentiation and relationships

As per the interest/influence matrix, most of the stakeholders that participated in the study were classified as players (i.e., had medium-high levels of influence and interest), and the initiative was well received. Given the topic under analysis, it makes sense that the common stakes that brought together more stakeholders were scientific interest and public health. Interestingly, the results also indicated stakeholder willingness for collaboration and thus the necessity of promoting collaborative approaches for CPS research and planning. Participatory approaches are not usual in this area and they deserve serious consideration. CPS planners must

be aware and properly handle the needs, objectives, conflicts of interest, and shared interests of stakeholders to create a final CPS that is meaningful to all.

Methodologically, this study used an SNA as part of the stakeholder analysis, which yielded detailed information that contributed to understand the critical stakeholders and the context of interest. Previous studies in health service planning have already used a stakeholder analysis with SNA.[39, 40] The advantages of combining SNA with stakeholder analyses were also highlighted in studies in health policy development processes,[41] in the investigation of health care systems,[11] evaluation of infectious waste management[17] or in water infrastructure planning processes.[42] In the present study, SNA facilitated the demonstration of an existing collaboration network between stakeholders. Existing relationships may foster the formation of new collaboration links, but they could also be used to exert a negative influence when a stakeholder against the initiative is well connected. The two participant stakeholders that declared being against the initiative were part of the collaboration network, but the fact that none of them were selected as critical stakeholders by any of the four methods points to their limited influence. This existing network could be strengthened in the future by building new links between the stakeholders to foster communication and implementation strategies and coordinate activities to achieve better cardiovascular health. Several pharmacy organizations were part of that network and should be considered in the design of public health strategies. Likewise, pharmacy organizations/researchers should not develop CPSs in silos but coordinated with other health care facilities and professionals. CPS planners and researchers must be aware of this and collaboratively design CPSs not to waste time, effort and resources.[43]

To decide which stakeholders to initially involve in the planning process, it is useful to consider the information yielded by the four methods used in the current study to select the critical stakeholders, along with the other characteristics analyzed (i.e., attitude toward the initiative, capacity to contribute and desire for involvement). Most of the 57 critical stakeholders supported the initiative and had medium-high influence and interest, which is important because it may foster the viability of the service and feasibility of the collaborative approach. The influence/interest matrix allowed selection of an interesting group who perceived themselves as powerful stakeholders and were highly interested in the initiative and in being involved. The skills and resources this group could contribute included the definition of the problem, the organization of the collaborative approach, and the development of the CPS.

Involving stakeholders that were considered key by other stakeholders may help in establishing the legitimacy of the collaborative process. The centrality measures in the collaboration network facilitated understanding of the stakeholders participating in the study that were most connected in the network and which of them played a strategic role. Knowing these critical stakeholder groups allows for prioritizing stakeholders for engagement purposes. Additionally, the network visualization may assist in the design of communication strategies to raise awareness of this particular initiative and on CPSs in general, as well as in the design of future implementation strategies.

Future actions

According to existing literature,[5, 44-47] the next step to advance the planning process would be to develop a stakeholder shared vision, i.e., a model for cardiovascular care in which the stakeholders identified and CPSs are integrated. The legitimacy of the participatory process must be established, and bringing stakeholders together to set the direction and purpose of planning efforts may assist in achieving this end.[38, 48] The group of *critical stakeholders* that arose from this stakeholder analysis represented varied perspectives, so this should be the group initially invited to participate in developing the vision. With adequate facilitation, visions have been developed involving similar numbers of participants.[49, 50] It is important to embrace diversity and organize an inclusive participatory process that is as meaningful to the stakeholders as possible.[38] Care should be put into the organization of such activities; working with stakeholders is challenging and their different characteristics, power relationships and influence must be balanced to ensure all voices are heard and conflict is properly managed.[51] Once the vision is developed, it would be ideal to consult with the remaining stakeholders that declared an interest in being involved in the initiative, for further contextual validation of the vision in the implementation setting. Depending on how these processes are managed, it would be possible to keep adequate support for the initiative, to leverage the support of those stakeholders that declared a neutral position, and try to neutralize the actions of those opposed to the initiative.[45] With a vision that sets a clear direction, a further step would be defining stakeholders' roles and committees, and the rules and principles to guide the process, along with ensuring access to the resources needed throughout the process.[38, 46] Not all stakeholders have to be involved in the same way and at the same time in the process,[38] as this will depend on how the initiative evolves, stakeholders' capacity to contribute and their willingness to be involved. As an example, those stakeholders

wanting to be actively involved could be part of the steering committee, whereas those only wanting to be consulted could be part of an advisory committee.

Applicability of the parameters used in this study in future stakeholder analyses

This study identified parameters that are useful to select stakeholders to involve in a collaborative CPS planning process and that could be applicable to other stakeholder analyses. Although there are no hard and fast rules on how to select the ideal collaborative team this experience showed that, for the selection of critical stakeholders for a CPS, it is useful to take into account the following: stakeholders with high influence and interest in the process; stakeholders considered most key by other stakeholders; and those stakeholders with higher degree centrality and betweenness centrality in a collaboration network. There are no pre-established or one-size-fits-all cut-off points for the parameters used. Planners/researchers will have to decide where to set them depending on the number of stakeholders analyzed, the characteristics of the network and the time and resources available for the process. What is of most importance is that this decision is disclosed with transparency, so it may be evaluated. As an example, in this study decile and quartiles were found useful to select the group of critical stakeholders. It is important to check that those to involve have a positive attitude toward the initiative (or at least neutral), want to be involved, and have capacity to contribute at some point of the CPS planning process. Cross-checking all this information enables the organization of stakeholders during the planning process.

It has to be noted that although the stakeholder analysis in this study was performed in the early phases of the planning process, this type of analysis and methodologies are applicable to, and useful in, subsequent phases of the process. Those working in the growing field of implementation science may clearly benefit from conducting stakeholder analyses to understand the stakeholders that may influence final implementation of CPS or other health innovations with which they work.

Strengths and limitations

This study made a methodological contribution to perform stakeholder analyses in CPS planning processes. The use of a mix-method-approach and introduction of the social network analysis method to analyze stakeholder relationships was proposed as an alternative to the qualitative methodology used in a previous study,[5] increasing the rigor of the analysis. The current study employed a questionnaire, which made it

possible to reach a higher number of stakeholders in distant geographical areas than in the previous study (i.e., 96 versus 8). The involvement of key informants in reviewing the produced stakeholder list and piloting the questionnaire, the consideration of such an amount of perspectives, and the triangulation of four methods to select the critical stakeholder made the design of this study especially robust. Hence the results showed high quality and credible information about stakeholders. This information was richer and more complete than the information obtained in the previous study and led to a more comprehensive understanding of the context of interest.

The previous stakeholder analysis' results allowed to identify which stakeholders to involve in the next step of the planning process, whereas the results of this one also provided information on how to involve stakeholders beyond that step. The previous stakeholder analysis demonstrated that many stakeholders should be considered in CPS planning. The current work supported such a finding in a different setting, but also demonstrated that stakeholders may be connected, and that uncovering an existing network among them could lead to new insights for the design of future strategies. Both studies provided complementary methodologies that may be used by researchers and practitioners in different situations, depending on the resources they have and the depth of the information desired.

The results of these studies are context-specific and therefore cannot be directly applied to other contexts. However, considering the stakeholder groups identified and those selected as critical stakeholders may be useful to fast track the identification of specific stakeholders in a different setting. Health service researchers (other than those researching CPS), and policy makers may use the results to reflect on the fact that such a quantity and variety of stakeholders may also influence health services other than CPSs. The detailed report presented in this manuscript will help readers to assess the similarities and differences in their context of interest. Finally, an important strength of this paper is that the study design and the results section follow an organized structure, allowing to link the stakeholder analysis steps with the research methods used in each of them and the results they produce. This allows for the future conduct of systematic reviews to uncover which methods produce the better results in specific circumstances, a need identified by Bryson et al.[15]

Some limitations must be acknowledged in the interpretation of these results. First, due to time and resources limitations, only one representative from each organization was invited to participate in the study, and different people within the same

organization might have answered differently to the questions in the questionnaire. To reduce the impact of this limitation, an upper level management was contacted and asked to respond or to choose the most appropriate person to respond on the organization's behalf, since it is likely that a person in such position would have a good understanding of the organization. Second, there was a low response rate that might have been influenced by several factors, such as (1) the use of an online web-based survey[31]; and (2) working with high-level, busy stakeholders. Also, as participation was on a voluntary basis, perhaps some stakeholders who may be against the initiative did not have an interest or were not willing to participate in the study. To uncover those non-respondent stakeholders who could be against the initiative and potentially hinder CPS development and implementation, it would have been useful to analyze news in specialized media and the content of non-respondent web pages. Limitations in time and resources prevented such an analysis to be made. Despite not having the response of all stakeholders, there were participants of all stakeholder groups, representing varied perspectives, and therefore supporting the credibility of the results presented. Third, some respondents' broad answers did not allow identification of specific stakeholders, which was most likely due to the broad definition of the initiative at this early stage of the planning process. However, at this stage it is unlikely this aspect compromises the credibility of the results, since critical stakeholders were clearly defined and different methods used for triangulation purposes. In the future, as the initiative evolves and becomes more concrete, those individuals and organizations working in the implementation setting will be identified in subsequent stakeholder analyses. Finally, an inherent limitation to any stakeholder analysis is that the results are context-specific and temporary[52] due to changes in economic, health or social contexts; in the planning process itself (e.g., moving to further phases); or in the information, knowledge or experience that stakeholders have, which are factors that may influence their attributes, interest or ideas.[5, 52]

Conclusions

This stakeholder analysis contributed to understand the social system that surrounds the collaborative planning of a CPS aimed at preventing CVD, which is crucial in understanding the context to carry out such an initiative and achieve success. A large number of stakeholders were identified and, among them, a group of critical stakeholders selected for consideration throughout the planning process. In addition, stakeholder characteristics such as their attitude toward the initiative, potential

contribution and desire for involvement, complement the above information to assist in deciding which stakeholders to involve, and how to involve them in different phases of planning. The varied profiles of the stakeholders identified, namely of those considered critical, along with the declared stakeholder support and willingness to collaborate in a future planning process, and the existence of a collaboration network, empowers the argument that CPSs should not be developed in silos. All this information supports participatory approaches as an asset to align interests and build synergies to make CPSs meaningful to stakeholders and foster their future integration in the system. The methodology applied in this stakeholder analysis was useful and may be applicable to perform future stakeholder analyses for the development of other CPSs/health services in the same or a different setting. Although the results are context-specific and cannot be directly applied to other settings, they may be used as a starting point to fast-track the initial identification of stakeholders for CPSs in other settings, provided that the list created is further validated by stakeholders or key informants related to the new context.

Acknowledgements

References

1. Agency for Healthcare Research and Quality. Effective Health Care Program. Stakeholder Guide. AHRQ Publication No 14; https://archive.ahrq.gov/research/findings/evidence-based-reports/stakeholderguide/stakeholdr.pdf; 2014 Accessed 15.08.2018

2. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj.* 2008;337:a1655.

3. Green L, Kreuter M. *Health Program Planning: An Educational and Ecological Approach.* 4th ed. Boston: McGraw-Hill; 2005.

4. Sabater-Hernández D, Moullin J, Hossain L, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. *Am J Health-Syst Pharm.* 2016;73:156-164.

5. Franco-Trigo L, Hossain LN, Durks D, et al. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. *Res Soc Admin Pharm.* 2017;13:539-552.

6. Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plan.* 2000;15:338-345.

7. van Limburg M, Wentzel J, Sanderman R, van Gemert-Pijnen L. Business modeling to implement an eHealth portal for infection control: A reflection on co-creation with stakeholders. *JMIR res protocols.* 2015;4:e104.

8. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. *Annu Rev Public Health.* 2008;29:325-350.

9. O'Brien N, Heaven B, Teal G, et al. Integrating evidence from systematic reviews, qualitative research, and expert knowledge using co-design techniques to develop a web-based intervention for people in the retirement transition. *Journal of medical Internet Res.* 2016;18:e210.

10. Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

11. Yang WH, Hu JS, Chou YY. Analysis of network type exchange in the health care system: a stakeholder approach. *J Med Syst.* 2012;36:1569-1581.

12. Gilmour J, Beilin R. Stakeholder mapping for effective risk communication: Australian Centre for Excellence in Risk Analysis; https://cebra.unimelb.edu.au/__data/assets/pdf_file/0006/2220990/gilmour0609.pdf; 2007 Accessed 14.09.2018

13. Reed M, Graves A, Dandy N, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. *J Environ Manag.* 2009;90:1933-1949.

14. Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Manag Rev.* 2004;6:21-53.

15. Bryson JM, Patton MQ, Bowman RA. Working with evaluation stakeholders: A rationale, step-wise approach and toolkit. *Eval Program Plann.* 2011;34:1-12.

16. Reed M, Curzon R. Stakeholder mapping for the governance of biosecurity: a literature review. *J Integr Environ Sci.* 2015;12:15-38.

17. Caniato M, Vaccari M, Visvanathan C, Zurbrugg C. Using social network and stakeholder analysis to help evaluate infectious waste management: a step towards a holistic assessment. *Waste management* 2014;34:938-951.

18. Wasserman S, Faust K. *Análisis de Redes Sociales. Métodos y Aplicaciones*: CIS-Centro de Investigaciones Sociológicas; 2013.

19. Scott J. *Social Network Analysis.* 4th, ed. London, Thousand Oaks, New Delhi, Singapore: Sage; 2017.

20. World Health Organization. Cardiovascular diseases (CVDs). http://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds); 2017 Accessed 14.09.2018.

21. Mendis S, Puska P, Norrving B. *Global Atlas on Cardiovascular Disease Prevention and Control*: World Health Organization. http://www.who.int/cardiovascular_diseases/publications/atlas_cvd/en/; 2011 Accessed 14.09.2018.

22. Sabater-Hernández D, de la Sierra A, Bellver-Monzó O, et al. Guía de actuación para el farmacéutico comunitario en pacientes con hipertensión arterial y riesgo cardiovascular. Documento de consenso (versión resumida). *Hipertens Riesgo Vasc. 2011*;28:169-181.

23. Al Hamarneh YN, Hemmelgarn BR, Hassan I, Jones CA, Tsuyuki RT. The effectiveness of pharmacist interventions on cardiovascular risk in adult patients with type 2 diabetes: the multicentre randomized controlled RxEACH trial. *Canadian J Diabetes.* 2017;41:580-586.

24. Cheema E, Sutcliffe P, Singer DR. The impact of interventions by pharmacists in community pharmacies on control of hypertension: a systematic review and meta-analysis of randomized controlled trials. *Br J Clin Pharmacol.* 2014;78:1238-1247.

25. Sabater-Hernandez D, Sabater-Galindo M, Fernandez-Llimos F, et al. A systematic review of evidence-based community pharmacy services aimed at the prevention of cardiovascular disease. *J Manag Care Spec Pharm.* 2016;22:699-713.

26. Moullin J. *Implementation Science in Community Pharmacy. Development of frameworks, models and tools for introducing and integrating professional services.* Sydney, Australia: Graduate School of Health, Discipline of Pharmacy, University of Technology Sydney; 2016.

27. Ministerio de Sanidad Servicios Sociales e Igualdad. Real Decreto Legislativo 1/2015, de 24 de julio, por el que se aprueba el texto refundido de la Ley de garantías y uso racional de los medicamentos y productos sanitarios. *núm. 177, de 25 de julio de 2015*: «BOE»; 2015.

28. Consejo General de Colegios Oficiales de Farmacéuticos. Farmacia Comunitaria en España. https://www.portalfarma.com/Profesionales/organizacionfcolegial/profesionfarma/Paginas/colegiaciondatestadisticos.aspx; 2017 Accessed 19.11.2018

29. Schoen MW, Moreland-Russell S, Prewitt K, Carothers BJ. Social network analysis of public health programs to measure partnership. *Soc Sci Med.* 2014;123:90-95.

30. Costenbader E, Valente TW. The stability of centrality measures when networks are sampled. *Soc Netw.* 2003;25:283-307.

31. Bryman A. *Social Research Methods.* 4th ed. New York: Oxford university press; 2012.

32. Eden C, Ackermann F. *Making Strategy: The Journey of Strategic Management*: London, Thousand Oaks, New Delhi: Sage Publications; 1998.

33. Borgatti SP, Everett MG, Freeman LC. Ucinet for Windows: Software for social network analysis. 2002.

34. Borgatti SP. NetDraw: Graph visualization software. *Harvard: Analytic Technologies.* 2002.

35. Borgatti SP, Everett MG, Johnson JC. *Analyzing Social Networks.* London, Thousand Oaks, New Delhi, Singapore: Sage; 2013.

36. Freeman LC. Centrality in social networks conceptual clarification. *Soc Netw.* 1978;1:215-239.

37. Morone P, Camacho Cuena E, Kocur I, Banatvala N. Securing support for eye health policy in low- and middle-income countries: identifying stakeholders through a multi-level analysis. *J Public Health Policy.* 2014;35:185-203.

38. Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing public participation processes. *Public Adm Rev.* 2013;73:23-34.

39. Alive & Thrive. Nutrition Stakeholder Analysis: Bihar, India. In: Thrive A, ed. Washington, D.C., USA. https://www.aliveandthrive.org/wp-content/uploads/2018/07/Nutrition-stakeholder-analysis_Bihar_11.11.pdf; 2014 Accessed 14.09.2018.

40. Transform Nutrition. Transform Nutrition: Kenya Stakeholder Mapping Report. http://www.transformnutrition.org/wp-content/uploads/sites/3/2011/11/Stakeholder-Mapping-Report-Kenya.pdf; 2011 Accessed 14.09.2018.

41. Hoeijmakers M, De Leeuw E, Kenis P, De Vries NK. Local health policy development processes in the Netherlands: an expanded toolbox for health promotion. *Health Promot Int.* 2007;22:112-121.

42. Lienert J, Schnetzer F, Ingold K. Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. *J Environ Manag.* 2013;125:134-148.

43. Sabater-Hernandez D, Tudball J, Ferguson C, Franco-Trigo L, Hossain LN, Benrimoj SI. A stakeholder co-design approach for developing a community pharmacy service to enhance screening and management of atrial fibrillation. *BMC Health Serv Res.* 2018;18:145.

44. Greenhalgh T, Jackson C, Shaw S, Janamian T. Achieving research impact through co-creation in community-based health services: literature review and case study. *Milbank Q.* 2016;94:392-429.

45. Thomas S, Gilson L. Actor management in the development of health financing reform: health insurance in South Africa, 1994-1999. *Health Policy Plan.* 2004;19:279-291.

46. McKenzie JF, Neiger BL, Thackeray R. *Planning, Implementing & Evaluating Health Promotion Programs: A primer.* 7th Ed: Pearson; 2016.

47. National Association of County & City Health Officials. Mobilizing for action through planning and partnerships: a community approach to health improvement. *Fact sheet.* Washington, DC. http://archived.naccho.org/topics/infrastructure/mapp/upload/MAPPfactsheet-systempartners.pdf; 2008 Accessed 14.09.2018.

48. National Association of County & City Health Officials. Visioning. *Mobilizing for Action through Planning and Partnerships (MAPP).*

http://archived.naccho.org/topics/infrastructure/mapp/upload/visioning_full.pdf; 2016 Accessed 14.09.2018

49. O'Brien F, Meadows M. Corporate visioning: a survey of UK practice. *J Operational Research Society.* 2000;51:36-44.

50. Ziegler W. Envisioning the future. *Futures.* 1991;23:516-527.

51. Franco-Trigo L, Tudball J, Fam D, Benrimoj SI, Sabater-Hernandez D. A stakeholder visioning exercise to enhance chronic care and the integration of community pharmacy services. *Res Soc Adm Pharm.* 2019;15:31-44.

52. Brugha R, Varvasovszky Z. Stakeholder analysis: a review. *Health Policy Plan.* 2000;15:239-246.

Appendices

Summary of the definitions used in this paper

Introduction	
Stakeholders (general definition)	"actors who have an interest in the issue under consideration, who are affected by the issue, or who -because of their position- have or could have an active or passive influence on the decision-making and implementation processes".[1]
Stakeholder analysis	"Stakeholder analysis is an approach, tool or set of tools for generating knowledge about actors - individuals or organizations - so as to understand their behavior, intentions, interrelations and interests; and for assessing the influence and resources they bring to bear on decision-making or implementation processes".[1]
Methods - Study setting	
Stakeholder (definition specifically applied to this study, adapted from Varvasovskzky and Brugha[1]; Franco-Trigo et al.[2])	"any individual or organization that can be directly or indirectly affected by, have an influence on, or have an interest in the development of a CPS aimed at the prevention of CVD in Andalucía"
Methods – Study design	
Influence (adapted from Caniato et al.[3])	"The current capacity of your organization to influence the initiative. This includes the access, availability and mobilization of resources; and/or the capacity to mobilize other actors/stakeholders and their resources; and/or the capacity to put into action activities or potential projects."
Attitude (adapted from Caniato et al.[3])	"Current predisposition of your organization in relation to the aforementioned initiative."
Level of interest (adapted from Caniato et al.[3])	"Degree of interest that your organization currently has about the aforementioned initiative."
Levels of collaboration	• "not linked (do not work together), • communication (share information only), • cooperation (work together to achieve common goals),

(adapted from Schoen et al.[4])	• collaboration (work together as a formal team with specific responsibilities) • fully linked (work together as a formal team; mutually plan and share staff or resources to accomplish goals)"
Methods – Data analysis	
Players (based on Eden and Ackerman's[5] classification)	"those having medium–high influence and interest"
Context-setters (based on Eden and Ackerman's[5] classification)	"those having medium–high levels of influence but none–low levels of interest"
Subjects (based on Eden and Ackerman's[5] classification)	"those having none–low levels of influence but medium–high levels of interest"
Crowd (based on Eden and Ackerman's[5] classification)	"those having none–low levels of influence and interest"
Number of ties (based on Borgatti et al.[6])	"total amount of ties in the network"
Density (based on Borgatti et al.[6])	"number of existing ties out of all the possible ties in the network"
Average degree (based on Borgatti et al.[6])	"average number of ties" that stakeholders had"
Centralization (based on Scott[7])	"the extent to which the network is organized around one stakeholder or group of stakeholders"
Core-periphery structure (based on Borgatti et al.[6])	"correlation with a network structure that has two groups of stakeholders: core, those who are "connected to each other and to others"; and periphery, those connected to the stakeholders in the core but not to those in the periphery"
Degree centrality (based on Borgatti et al.[6])	"actual number of ties a stakeholder has"

Betweenness centrality (based on Freeman[8])	"the frequency of a stakeholder being in the shortest path between two other stakeholders in the network"

1 Varvasovszky Z, Brugha R. A stakeholder analysis. Health Policy Plan. 2000;15:338-345.

2 Franco-Trigo L, Hossain LN, Durks D, et al. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. Research in social & administrative pharmacy 2017;13:539-552.

3 Caniato M, Vaccari M, Visvanathan C, Zurbrugg C. Using social network and stakeholder analysis to help evaluate infectious waste management: a step towards a holistic assessment. Waste Manag 2014;34:938-951.

4 Schoen MW, Moreland-Russell S, Prewitt K, Carothers BJ. Social network analysis of public health programs to measure partnership. Soc Sci Med. 2014;123:90-95.

5 Eden C, Ackermann F. Making strategy: The journey of strategic management: London, Thousand Oaks, New Delhi: Sage Publications; 1998.

6 Borgatti SP, Everett MG, Johnson JC. Analyzing social networks. London, Thousand Oaks, New Delhi, Singapore: Sage; 2013.

7 Scott J. Social network analysis. 4th, ed. London, Thousand Oaks, New Delhi, Singapore: Sage; 2017.

8 Freeman LC. Centrality in social networks conceptual clarification. Soc Netw. 1978;1:215-239.

Questions used for data collection *(authors' translation into English)*

Once the information and consent sheets have been read and the stakeholder agreed to participate in the study, the following questions appeared:

Thank you for participating in the study. Please answer the following questions:

Data to characterize responses:

Age:	Sex:	Role that you play in the organization you are representing (e.g., director, assessor, vocal…):
Haga clic o pulse aquí para escribir texto.	☐ Male ☐ Female	Haga clic o pulse aquí para escribir texto. * this information will help us identify the most appropriate profile to answer this type of questions and understand the data in case of discrepancies in the results

1. Please, select the option that best describes **how the organization you are representing would be positioned** with respect to a project as the one described above, in terms of:

	None	Low	Medium	High	
Influence	☐	☐	☐	☐	*Influence: the current capacity of your organization to influence the initiative. It includes the access, availability and mobilization of resources; and/or the ability to mobilize other stakeholders and their resources; and/or the power to carry out potential activities or projects*

	For	Neutral	Against	
Attitude	☐	☐	☐	*Attitude: the current readiness of your organization towards the aforementioned initiative*

	None	Low	Medium	High	
Interest	☐	☐	☐	☐	*Interest: level of interest that your organization currently has over the aforementioned initiative*

Do you have any comment? Haga clic o pulse aquí para escribir texto.

2. How would you **classify the interests the organization you are representing would have** regarding this initiative? *(multiple answers allowed)*

   a) ☐ Politic

   b) ☐ Financial/economic

   c) ☐ Scientific/Technical

d) ☐ Public health/General interest/Social aspects

e) ☐ Building relationships/access to other stakeholders

f) ☐ Another: Haga clic o pulse aquí para escribir texto.

3. How could the organization you are representing **contribute to the aforementioned initiative**? *(multiple answers allowed)*

a) ☐ Problem definition

b) ☐ Definition of the organizational structure (establishment of committees and roles of stakeholders involved)

c) ☐ Planning the initiative

d) ☐ Execution of the initiative

e) ☐ Service definition

f) ☐ Developing and reviewing materials

g) ☐ Facilitation of access to the initiative

h) ☐ Economic contribution/resources

i) ☐ Another: Haga clic o pulse aquí para escribir texto.

4. **To what extent** do you think **your organization would like to be involved** in the initiative?

a) ☐ Would not like to be involved

b) ☐ Only receiving information

c) ☐ Be a consultative body

d) ☐ Active participation in the process without making decisions

e) ☐ Active participation in the process and in decision-making

f) ☐ No answer/Do not know

5. What do you think would be **the biggest concern of your organization** in relation to an initiative of this kind?
Haga clic o pulse aquí para escribir texto.

(Question 6 in next page)

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6. Please, from the following list indicate **which stakeholders do you consider key stakeholders (i.e., absolutely essential)** to carry out the initiative.

Response options: I do not know this stakeholder *, Key stakeholder, No key, I prefer not to answer

* For this study we consider that you know a stakeholder if you have enough Information on him to issue an opinion

Stakeholder	I do not know this stakeholder	Key stakeholder *(please, specify the reasons)*	No key	I prefer not to answer
1. Stakeholder A	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
2. Stakeholder B	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
3. Stakeholder C	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
4. …	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐

In this question, at the end of each group of stakeholders, respondents were asked to cite other stakeholders that should be included in the group:

Considering the following stakeholder definition:

"any individual or organization that can be directly or indirectly affected by, have an influence on, or have an interest in the development of a community pharmacy service aimed at the prevention of cardiovascular diseases in Andalucía"

Please cite other stakeholders that should be included in the "XXX" group

(Question 7 in next page)

7. On the following list indicate **with which stakeholders your organization collaborated in 2016 and 2017 (until June, included)** and how.
Response options (see definitions in the grey column): Not linked, Communication, Cooperation, Collaboration, Fully linked, No answer/Do not know

Stakeholder	Not linked	Communication	Cooperation	Collaboration	Fully linked	No answer /Do not know	*Definitions*
1. Stakeholder A	☐	☐	☐	☐	☐	☐	
2. Stakeholder B	☐	☐	☐	☐	☐	☐	***Not linked:*** *do not work together*
3. Stakeholder C	☐	☐	☐	☐	☐	☐	***Communication:*** *share information only*
4. Stakeholder D	☐	☐	☐	☐	☐	☐	***Cooperation:*** *work together to achieve common goals*
5. Stakeholder E	☐	☐	☐	☐	☐	☐	***Collaboration:*** *work together as a formal team with specific responsibilities*
6. Stakeholder F	☐	☐	☐	☐	☐	☐	***Fully linked:*** *work together as a formal team; mutually plan and share staff or resources to accomplish goals*
7. …	☐	☐	☐	☐	☐	☐	
8. …	☐	☐	☐	☐	☐	☐	

8. Please write any comments you may consider appropriate
Haga clic o pulse aquí para escribir texto.

Thank you for participating in the study

Appendix B

Preguntas utilizadas para la recogida de datos (español, original).

Una vez leídas las hojas de información y consentimiento y aceptado participar en el estudio aparecen las siguientes preguntas:

Muchas gracias por participar. Por favor, responda a las siguientes preguntas:

Datos para la caracterización de respuestas:

Edad (años cumplidos): Haga clic o pulse aquí para escribir texto.	Sexo: ☐ Hombre ☐ Mujer	Cargo/rol que desarrolla en la organización a la que representa (ej.: director/a, asesor/a, vocal…): Haga clic o pulse aquí para escribir texto. *esta información nos ayudará a identificar cuál es el perfil más adecuado para contestar a este tipo de encuesta y a entender los datos en caso de encontrarse discrepancias en los resultados

1. Señale **cómo cree que la organización a la que representa se vería posicionada** con respecto a una iniciativa de las características mencionadas, en relación a su:

	Ninguna	Baja	Media	Alta	
Influencia	☐	☐	☐	☐	*Influencia: capacidad actual de su organización para influir sobre la iniciativa. Incluye el acceso, disponibilidad y movilización de recursos; y/o la capacidad de movilizar a otros actores/stakeholders y sus recursos; y/ o el poder de llevar a la práctica actividades o proyectos en potencia

	En contra	Neutro	A favor	
Actitud	☐	☐	☐	*Actitud: predisposición actual de su organización en relación a la iniciativa mencionada

	Ninguno	Bajo	Medio	Alto	
Interés	☐	☐	☐	☐	*Interés: el grado de interés que su organización tiene actualmente sobre la iniciativa mencionada

¿Tiene algún comentario? Haga clic o pulse aquí para escribir texto.

2. ¿Cómo clasificaría los **intereses que su organización podría tener** con respecto a esta iniciativa? *(varias respuestas posibles)*

a) ☐ Político

b) ☐ Económico

c) ☐ Científico/Técnico

d) ☐ Salud pública/Bien público/Aspectos sociales

e) ☐ Establecer relaciones o acceder a otros actores/stakeholders

f) ☐ Otro: Haga clic o pulse aquí para escribir texto.

3. ¿Cuál sería la **capacidad de contribución de su organización** a la iniciativa mencionada? *(varias respuestas posibles)*

a) ☐ Definición del problema

b) ☐ Definición de la estructura organizativa (comités a formar y roles de los actores implicados)

c) ☐ Planificación de la iniciativa

d) ☐ Ejecución de la iniciativa

e) ☐ Definición del servicio

f) ☐ Desarrollo y revisión de materiales

g) ☐ Facilitación del acceso al servicio

h) ☐ Contribución económica/recursos

i) ☐Otro:Haga clic o pulse aquí para escribir texto.

4. ¿En qué grado considera que le gustaría a su organización **participar en la iniciativa**?

a) ☐ No le interesaría estar involucrada

b) ☐ Sólo recibir información

c) ☐ Ser un órgano de consulta

d) ☐ Participación activa en el proceso sin tomar decisiones

e) ☐ Participación activa en el proceso y en la toma de decisiones

f) ☐ No sabe/no contesta

5. ¿Cuál considera que sería la **mayor inquietud/preocupación de su organización** en relación a una iniciativa de estas características?

Haga clic o pulse aquí para escribir texto.

(Pregunta 6 en la siguiente página)

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6. De la siguiente lista, indique **qué actores/stakeholders considera clave (absolutamente imprescindibles)** para el desarrollo de la iniciativa.

Opciones de respuesta: No lo conozco*, Es clave, No es clave, Prefiero no contestar (Pref no cont)

* Para este estudio se considera que usted conoce un actor/stakeholder cuando con la información que dispone sobre el mismo puede emitir una opinión sobre él

Actor/Stakeholder	No lo conozco	Es clave (por favor, especifique por qué)	No es clave	Prefiero no contestar
5. Actor A	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
6. Actor B	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
7. Actor C	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐
8. …	☐	☐ Haga clic o pulse aquí para escribir texto.	☐	☐

En esta pregunta, al final de cada grupo de actores/stakeholders se pedirá que citen otros actores/stakeholders que deberían figurar en el grupo:

Teniendo en cuenta la definición de Actor/Stakeholder:

"cualquier individuo u organización que, directa o indirectamente, pueda verse afectado, tener influencia o interés en el desarrollo y pilotaje de un servicio farmacéutico dirigido a la prevención de enfermedades cardiovasculares en Andalucía"

Por favor, cite otros actores que deberían figurar en el grupo de "XXX"

(Pregunta 7 en la siguiente página)

7. Indique **con qué actores/stakeholders colaboró su organización en el año 2016 y en 2017 (hasta junio, incluido),** y de qué manera.
Opciones de respuesta (ver definiciones en el recuadro gris): No conectados, Comunicación, Cooperación, Colaboración, Completamente conectados, No sabe/No contesta (NS/NC)

Actor/Stakeholder	No conectados	Comunicación	Cooperación	Colaboración	Completamente conectados	NS/NC	Definiciones
9. Actor A	☐	☐	☐	☐	☐	☐	***No conectados:*** *no trabajamos juntos*
10. Actor B	☐	☐	☐	☐	☐	☐	***Comunicación:*** *sólo compartimos información*
11. Actor C	☐	☐	☐	☐	☐	☐	***Cooperación:*** *trabajamos juntos para conseguir objetivos comunes*
12. Actor D	☐	☐	☐	☐	☐	☐	***Colaboración:*** *trabajamos juntos como un equipo formal con responsabilidades específicas*
13. Actor E	☐	☐	☐	☐	☐	☐	
14. Actor F	☐	☐	☐	☐	☐	☐	***Completamente conectados:*** *trabajamos juntos como un equipo formal, planificando conjuntamente y compartimos personal o recursos para alcanzar objetivos*
15. …	☐	☐	☐	☐	☐	☐	
16. …	☐	☐	☐	☐	☐	☐	

8. Escriba los comentarios que considere oportunos
Haga clic o pulse aquí para escribir texto.

Muchas gracias por su participación

Appendix C

Reasons why participants considered stakeholders "key stakeholders"

The reasons stated by participants as why a particular stakeholder was considered a key stakeholder could be mainly organized in two groups:

1. Reasons related to stakeholder characteristics or actions stakeholders usually perform:

    a. *Legitimacy*, in terms of being responsible for patients' health and medication, representing patients or being directly involved in the new service. This reason mainly applied to patients and patient/consumer organizations, physicians, pharmacists and nurses.

    b. *The actual knowledge of the stakeholder*; that is, knowledge on the disease (clinical or experiential), disease indicators, risk factors, treatments, knowledge on the roles different health care professionals may undertake and pharmacists in particular, and knowledge on CPSs. The stakeholders considered key because of this reason were patients, health care professionals, scientific organizations, research groups and the pharmaceutical industry.

    c. *Ability to provide/create specific data*, such as data on the medication taken by patients in the case of providers of electronic medical records and electronic prescriptions, or data generated in studies involving patients, as was the case for the pharmaceutical industry or medical devices providers.

    d. *Performing research and training activities*, as was the case for academia/research groups, scientific organizations, some government institutions, pharmaceutical industry, and providers of medical devices.

    e. *Being innovative*, which applied to pharmaceutical industry.

    f. *Having political influence or providing institutional and political support*. These reasons were applicable to patient/consumer organizations, health care professionals' regulatory bodies and government institutions.

    g. *Being in charge of coordinating health care* was mentioned as a reason to consider some government institutions as key stakeholders.

    h. *Disseminating health-related information and health advice* was the main reason to consider media stakeholders as key.

2. Reasons referring to the stakeholder's potential to carry out actions that may foster the collaborative initiative or the new service:

a. *Assessing patients' needs and expectations or analyzing barriers*, which may be done by patients and carers.

b. *Assessing the initiative*, by consumer organizations.

c. *Promoting or channeling the initiative* were expected to be carried out by pharmacists' regulatory bodies.

d. *Providing advice or scientific support* were abilities attributed to scientific organizations and academia/research groups.

e. *Designing the initiative* could be undertaken by academia/research groups.

f. *Contributing to research and training activities*, by academia/research groups along with scientific organizations, pharmaceutical industry and providers of health care technology.

g. *Developing implementation strategies* may be undertaken by patient associations, health care professionals, pharmacists' regulatory bodies, scientific organizations or private insurance companies.

h. *Coordinating the new service with existing health care actions and different levels of care* to foster integration was expected from government institutions.

i. *Designing and unifying protocols*, by scientific organizations and patient associations.

j. *Assist in data processing and fostering communication between doctors and pharmacists* may be done by providers of health care management software for pharmacies.

k. *Raising awareness and disseminating information* (on the initiative, on pharmacists' roles, or on CPSs) and diffusing the new service. These actions may be performed by patient associations, health care professionals' regulatory bodies, scientific organizations, providers of health care management software for pharmacies, and media.

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Chapter 5

A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services

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Preface

This chapter addresses the second step of the preparatory phase of a collaborative planning process: The development of a stakeholder-shared vision. It is a practical study that continues on from the CPS planning process that was initiated with the Australian stakeholder analysis conducted in Chapter 3. This qualitative study shows the advantages and usefulness of developing a stakeholder-shared vision in establishing common ground when specifically applied to a CPS planning process. Key stakeholders identified in the previous stakeholder analysis were brought together in a workshop. They participated in guided activities and discussions to develop a stakeholder-shared vision of a care model that integrated community pharmacists and to identify the initiatives needed to achieve the vision.

Prefacio

Este capítulo aborda el segundo paso en la fase de preparación de un proceso de planificación colaborativo: el desarrollo de una visión conjunta de los actores. Es un estudio práctico que continúa el proceso de planificación de SPFA iniciado con el análisis de actores en Australia del capítulo 3. Este estudio cualitativo muestra las ventajas y utilidad de desarrollar una visión conjunta de los actores para establecer una base común cuando se aplica específicamente a los procesos de planificación de SPFA. Se realizó un taller con los actores clave identificados en el análisis de actores previo. Se diseñaron actividades guiadas y conversaciones que permitieron desarrollar una visón conjunta de un modelo de cuidado que integrase a los farmacéuticos comunitarios, así como identificar las iniciativas necesarias para alcanzar dicha visión.

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A Stakeholder Visioning Exercise to Enhance Chronic Care and the Integration of Community Pharmacy Services

Structured Abstract

Background: Collaboration between relevant stakeholders in health service planning enables service contextualization and facilitates its success and integration into practice. Although community pharmacy services (CPSs) aim to improve patients' health and quality of life, their integration in primary care is far from ideal. Key stakeholders for the development of a CPS intended at preventing cardiovascular disease were identified in a previous stakeholder analysis. Engaging these stakeholders to create a shared vision is the subsequent step to focus planning directions and lay sound foundations for future work.

Objectives: This study aims to develop a stakeholder-shared vision of a cardiovascular care model which integrates community pharmacists and to identify initiatives to achieve this vision.

Methods: A participatory visioning exercise involving 13 stakeholders across the healthcare system was performed. A facilitated workshop, structured in three parts (i.e., introduction; developing the vision; defining the initiatives towards the vision), was designed. The Chronic Care Model inspired the questions that guided the development of the vision. Workshop transcripts, researchers' notes and materials produced by participants were analyzed using qualitative content analysis.

Results: Stakeholders broadened the objective of the vision to focus on the management of chronic diseases. Their vision yielded 7 principles for advanced chronic care: patient-centered care; multidisciplinary team approach; shared goals; long-term care relationships; evidence-based practice; ease of access to healthcare settings and services by patients; and good communication and coordination. Stakeholders also delineated 6 environmental factors that can influence their implementation. Twenty-four initiatives to achieve the developed vision were defined.

Conclusions: The principles and factors identified as part of the stakeholder shared-vision were combined in a preliminary model for chronic care. This model and initiatives can guide policy makers as well as healthcare planners and researchers to develop and integrate chronic disease services, namely CPSs, in real-world settings.

Introduction

A suitable development, implementation and evaluation of health services requires the adoption of participatory approaches, which involve collaboration between relevant stakeholders across the healthcare system.[1-3] Stakeholder involvement in health service planning allows different roles and interests to interact, fosters co-learning, nurtures innovative ideas, enables contextualization of service implementation and facilitates access to both funding and organizational support.[4-6] A participatory planning approach thus enables an optimal design of the health service adequately addressing population needs and integrating with the healthcare system and routine practice.[1-3, 7, 8] It is essential to identify and engage with key stakeholders early in the health service planning process, even preceding the actual service development or design.[7, 9, 10] According to McKenzie et al.,[7] a health service planning process might begin with: (1) the identification and initial engagement of the stakeholders; (2) the development of a stakeholder-shared vision; (3) defining the organizational structure for the planning process (stakeholders' roles and committees); and (4) ensuring access to the required resources. Overall, these steps focus on early organization and coordination, which both act to establish a sound foundation for the entire planning process.[7]

In a planning process initiated as stated above, once stakeholders have been identified, the next strategic step is to engage them to work together to develop a stakeholder shared vision.[7, 9, 11] Visioning exercises are a good approach to enable idea sharing and formulating health service planning process outcomes. They also enable taking into consideration the opinions and perspectives of a range of stakeholders on the problem, focus planning directions and lay foundations for future work.[12, 13] When stakeholders work together to develop a particular vision, individual ideas and bias can be reconsidered, alongside broadening participants' understanding of the situation.[13, 14] Through this process, interested stakeholders become enthused with the vision and develop a sense of ownership, thus becoming more readily committed to achieve and communicate the vision.[15-18]

Participatory planning can be applied to patient-centered services in community pharmacy whose overall objective is to improve patients' health and quality of life.[19-22] As an example, a theoretical description of a planning process and related research can be found elsewhere.[10] Community pharmacies are easily accessible healthcare facilities, in which skilled healthcare professionals (i.e.,

community pharmacists) are available to assist, usually without the need of an appointment, in addressing patients' health needs. In Australia, some community pharmacy services (CPSs) are government subsidized, however, there is a lack of integration of these services with primary care. Importantly, new community pharmacists' roles need to respond to existing or emerging needs of the population.[23] For example, cardiovascular disease (CVD), one of the major health priorities worldwide and in Australia, is an area in which community pharmacists have already shown to positively impact patients' health.[22] As there is an evidence base, the development, implementation and evaluation of CPSs aimed at preventing CVD are actively being encouraged in Australia. In response to this situation, a participatory planning process was initiated in New South Wales (NSW) with a previous study conducting a stakeholder analysis to identify key stakeholders that could be involved in the development of a CPS for the prevention of CVD.[24]. The present study is the second step in the participatory CPS planning process initiated in NSW, and its objective is developing a stakeholder-shared vision of a NSW world-leading cardiovascular care which integrates community pharmacists into primary care. A key outcome from the visioning process and a secondary objective of this study is also to identify the initiatives necessary to achieve this vision.

Methods

Study design

Workshops are a suitable and commonly used method to develop stakeholder-shared visions[25, 26] that enable efficient collection of dependable data (i.e., information does not change over the period of data collection).[27] Workshops also enable face-to-face discussions between stakeholders with varied backgrounds, which, in turn, allow for consideration of different perspectives, neutralizing bias and providing the opportunity to question individual assumptions, so contributing to high quality and credible outcomes.[14, 28] For this study, we conducted a structured, facilitated workshop designed through cross-disciplinary collaboration with social scientists experienced in designing and facilitating visioning exercises.

Participant selection and recruitment

In the previous stakeholder analysis,[24] 46 stakeholders related to the development of a cardiovascular CPS in NSW were identified, of which a sub-group of 12 were

considered key in the process (Table 1, List A). Further description of the process followed to identify and analyze the stakeholders along with information on how the sub-group of 12 stakeholders were considered key can be found elsewhere.[24] For the

Table 1. Stakeholders involved in this research

A. *Core group of stakeholders considered crucial for the development of a cardiovascular CPS in New South Wales, Australia (n=12)[16]*
- Primary Healthcare Networks (PHNs)
- Agency for Clinical Innovation (ACI)
- Chronic Cardiovascular Clinical Expert Reference Group
- Office for Health and Medical Research
- Local Health Districts & Specialty Networks
- National Heart Foundation of Australia
- Pharmacy Guild of Australia
- Australian Medical Association
- The Royal Australian College of General Practitioners
- Individual patients
- Patient groups/organizations (including disease-oriented)
- Consumer Health Forum of Australia.

B. *Stakeholders invited by the research team to participate in the study in addition to the core group (n=9)*
- Heart Support Australia
- Pharmaceutical Society of Australia
- The Society of Hospital Pharmacists of Australia
- The Cardiac Society of Australia & New Zealand (CSANZ)
- The Cardiovascular Nurses Council-CSANZ
- The Australian Primary Health Care Nurses Association
- The Australian Cardiovascular Health and Rehabilitation Association
- A community pharmacist
- UTS: Graduate School of Health

C. *Stakeholders that finally participated in the workshop (n=13)*
- **A representative of The Pharmacy Guild of Australia**
- **A representative of the National Heart Foundation of Australia**
- **A representative of the ACI**
- **A representative of Health Consumers NSW (nominated by Consumer Health Forum of Australia)**
- **A representative of a specific PHN**
- **A departmental representative for PHNs**
- A general practitioner who is related to the Australian medical associations
- An individual community pharmacist with experience in providing community pharmacy services
- A representative of the Pharmaceutical Society of Australia
- A clinical pharmacist member of the Society of Hospital Pharmacists of Australia
- A cardiology nurse consultant
- A representative of Heart Support Australia
- A representative of the UTS: Graduate School of Health (i.e., research team member).

present study, we first invited those key stakeholders to participate in the workshop. Patient and consumer organizations were invited to represent individual patients in the visioning exercise, as cooperation with well-organized/institutionalized partners is a known successful approach.[29] This allowed for accessing the needs and perspectives of a wider patient population and avoiding individual patients feeling intimidated by a high-level meeting with industry stakeholders.[5] Additionally, 9 of the

remaining stakeholders identified were also invited to specifically utilize their enhanced understanding of the healthcare system and patient journey (Table 1, List B) and thus provide clarity and credibility to the final output of the visioning process.[14, 30] The particular stakeholder selection was made with an aim to achieve a broad range of perspectives, whilst keeping the workshop participant numbers manageable.[6, 31] For further details on how the final list of participants was obtained, please refer to Appendix 1. All stakeholders were initially contacted by email and/or by phone from August 2015 and a brief description of the project was provided (Appendix 2). Save the date emails were sent out in October-November 2015. Individual stakeholders who could not, or did not feel they were the most appropriate candidate to attend, were encouraged to nominate an alternative representative from their own or another organization.

Ethics approval

This study was approved by the corresponding Human Research Ethics Committee (HREC REF NO. ETH15-0041). All participants were provided with an information sheet and signed a consent form. Individual roles and profiles of the participants are not revealed in final publication of the research to avoid identification.

Workshop structure

The workshop lasted 4.5 hours and was facilitated by an external consultant with broad experience in facilitating stakeholder visioning workshops. The structure of the workshop was as follows:

1. *Introduction.* A brief presentation was provided to the participants, including: (1) the context in which CPS are delivered in Australia and 6th Community Pharmacy Agreement[23] (a 5-year term agreement signed between de Department of Health and The Pharmacy Guild of Australia, the National Pharmacy Owners Organization, allocating funds to CPSs); (2) existing needs and gaps in cardiovascular care and (3) the potential role of community pharmacists/CPSs in cardiovascular care.[22, 24] Additionally, a general practitioner and 2 representatives of patient and consumer organizations were invited to present their views. A short discussion followed these presentations.
2. *Developing the vision.* Visions can be developed using a varied number and combination of steps, which differ among authors.[25] An aspect to note

is that timeframes for visioning processes need to be set in a balanced manner: long enough to avoid building on current problems and allow imagination play, and short enough to maintain a sense of reality.[18] The experts collaborating in this study considered a 20-year timeframe and a 3-step approach (similar to one used by Boomer et al.[15]) to develop a suitable vision. Participants were seated at 2 tables and asked to develop, as a group, their vision of a world-leading system for cardiovascular care integrating CPSs for NSW by the year 2035. In the first step, participants individually draw their own vision and thereafter briefly explained it to their table. This encouraged participants to engage with creativity and access and deeply explore subconscious ideas.[15, 32] Given the challenge of developing visions on complex issues,[18] participants were also provided with support material to stimulate and prompt their thought process (Appendix 3). This material included a pictorial representation of potential patients' needs, the current gaps in cardiovascular care and a set of questions based on the components of the Chronic Care Model (CCM).[33] The CCM was chosen to inspire the questions because it is a sound theoretical framework[34] that has been broadly used for the design of primary patient care for chronic and cardiovascular disease.[35-38] In the second step, each table was asked to generate a shared vision, specifying which ideas were (a) agreed by everyone; (b) agreed by more than half of the table; or (c) proposed by only one or two participants. The shared visions of each table were then presented to the entire study group and discussed further in a third step.

3. *Defining initiatives to achieve the vision.* Each participant was asked to select up to 4 initiatives that they believed were necessary to achieve the intended vision. Initiatives were then classified as: short-term (to be conducted in less than 1 year), medium term (between 1 and 5 years) and long term (more than 5 years). Initiatives were further discussed, reorganized and collated by the whole group to generate an agreed list. These initiatives were then prioritized through a process of voting, giving to each participant 3 points that they could freely assign to one, two or three initiatives. The initiatives with the most votes were selected for further group discussion.

Data collection and analysis

The workshop took place at a University's meeting room on the 2nd December 2015. It was audiotaped and transcribed by a professional transcribing company. Furthermore, two independent researchers took notes during the workshop and all materials produced by the participants were retained by the study. All data sources were analyzed using qualitative content analysis, a useful analytical technique widely used in health research, in particular for data gathered through stakeholder group discussions.[39-41] Qualitative content analysis was considered suitable for this study because it can be used to analyze many types of qualitative materials (e.g. interview transcripts, observations, drawings) and questions (such as what, why and how), and allows to provide a systematic description of the meaning of these materials.[42] Moreover, this technique permits both inductive and deductive approaches, and facilitates the interpretation of the context in which the data were generated, extracting both content and latent meaning.[42-44] In this study, a conventional inductive approach to qualitative content analysis was undertaken: the knowledge produced by the analysis came out of the data (i.e. was based on participants' perspectives), and theories or other research findings were used at a later stage to discuss results.[45] Qualitative content analysis was employed by first conducting descriptive analysis (i.e., categories were extracted from the data and further reorganized by condensing them or creating sub-categories), followed by analysis of evident relationships. The analysis was performed by the lead author using QSR International's NVivo 11 software.[46] The results were reported to two other members of the research team who reviewed the identified categories against the original dataset (i.e., selected quotes) to ensure result consistency and credibility.[27] The three researchers engaged in discussions to resolve any disagreements. A 2-step process was employed to generate a stakeholder-shared vision arising from the data analysis. Firstly, data from each table's presentations and the final group discussion were analyzed to generate initial categories which clearly describe the final vision components. These categories were then used as a framework to analyze the remainder of the dataset.

Results

Out of the total number of stakeholders invited, thirteen participated in the workshop, including 6 key stakeholders (Table 1, List C). For the sake of clarity, quotes (Q) in this study are compiled in Appendix 4.

Redefining the scope of the vision

As stated in the methodology, the stakeholders were initially asked to develop a '2035 vision of a NSW world-leading system for cardiovascular care integrating CPSs'. However, they proposed to reframe this objective as the '2035 vision of a NSW world-leading healthcare system to better manage chronic diseases'. (Q1, speaker 1); (Q2, speaker 12) The stakeholders agreed that it would be useful to think in a broad sense and thus establish foundations of a healthcare system that holistically addresses chronic diseases and avoid adding additional interventions that could increase the fragmentation of an existing, unsustainable system.

Developing the vision

Two main categories were identified from the dataset addressing the actual visioning exercise (part 2 of the workshop): (1) general principles of care, which encompass a set of propositions that would serve as the foundation of advanced chronic care in NSW and (2) supportive environmental factors that can influence the implementation of these principles. Participants expressed their concerns about the scalability of any new model or service being implemented. Therefore, scalability issues should be considered upfront and any innovation should be piloted in a limited scale and adjusted to the specific characteristics of the context before scaling it up for full implementation.

General principles of care. Seven principles were identified:

1. **Patient-centered care**: Healthcare will be driven by and tailored to the individual needs of patients. (Q3, speaker 10) Patients will be comprehensively assessed to identify any needs that may directly or indirectly affect their health, including current and previous diseases and medications, adherence, lifestyle, psychosocial aspects, literacy, cultural factors, etc. The aim would be to achieve a comprehensive understanding of patients' needs, how they relate to each other, and so prioritize and address them in the best way possible. (Q4, speaker 1) One participant noted that a patient-centered healthcare system should move beyond tailoring healthcare to the needs of patients and further involve patients in decision making processes, from setting their healthcare goals to designing healthcare, to the development of health policies.

2. **Multidisciplinary team approach**: Patients' needs will be comprehensively addressed by a multidisciplinary healthcare team, which includes patients/consumers, carers, family members, healthcare professionals and other specialists. (Q5, speaker 13) By specialists, stakeholders meant not only healthcare providers (e.g., cardiologists) but also other professionals who could help both patients and healthcare professionals achieve desired behavioral changes. (Q6, speaker 1) Stakeholders highlighted that general practitioners should be responsible for coordinating care and some would need to specialize in specific conditions. Pharmacists could be based in community pharmacies, in general practice, or visiting patients at home, and stakeholders envisaged a major role for them that could involve a range of activities, such as patient education, medication reviews, assistance with adherence, understanding what patients require to take their medication, or developing new roles as needed. (Q7, speaker 12) Practice nurses could be located in general practices to reinforce patient education and monitoring, or conduct patients home visits.

3. **Shared goals**: Patients will actively participate in setting the goals and objectives regarding their own health and care. (Q8, speaker 5) Those goals and objectives will be shared by the multidisciplinary healthcare team, who will work collaboratively to achieve this end.

4. **Long-term care relationships**: Patients will establish long-term relationships with healthcare providers. (Q9, speaker 1) This will facilitate patients' increased confidence in healthcare providers and increase providers' understanding of patients' needs and detect changes in their health status.

5. **Evidence-based practice**: Healthcare decisions will be made based on the best scientific evidence, patient values and needs and the clinical expertise of healthcare professionals. This principle must be applicable to all levels of care and settings and by all healthcare professionals. (Q10, speaker 1); (Q11, speaker 10)

6. **Ease of access to healthcare settings and services by patients**: Healthcare will be provided in different settings, including patients' home. (Q12, speaker 1) Patients will easily access and smoothly move between services aimed at any primary, secondary or tertiary levels of prevention. (Q13, speaker 4) All this will enable an appropriate transition and continuity of care.

7. **Good communication and coordination**: There will be good communication between the members of the healthcare team and appropriate coordination between healthcare settings and services. This communication between members of the healthcare team would facilitate a timely transfer of information. Clinical information needs to be accessible to all members of the healthcare team (e.g., patients' allergies, updated medical history and medication list and discharge summaries). (Q 14, speaker 1) Moreover, appropriate coordination is important to provide patients with the best care possible, taking advantage of the varied and complementary skills of different health professionals. (Q15, speaker 1) The appropriate coordination of the healthcare team will enable meetings irrespective of care location (e.g. meeting in a virtual setting). (Q16, speaker 10) Most participants agreed that general practitioners could act as healthcare team coordinators, though nurses, working as case managers, were also cited. Regarding CPSs, it was highlighted that good coordination encompasses effective coordination with other health services and settings and with existing CPSs. (Q17, speaker 8)

As a consequence of compiling these principles, an appropriate transition and continuity of care will be possible and overall will lead to a real integration of services, which was a significant concern for participants. (Q18, speaker 12)

Supportive environmental factors. Participants identified 6 key contextual factors that could influence implementation of the aforementioned principles:

1. **Payment systems**: It was noted that in the current healthcare system, payment systems can influence and limit patient care. For example, participants considered that some organizational problems in general practices, such as full waiting rooms, are derived from current business models (designed on the basis of the existing payment systems). (Q19, speaker 10) Similarly, payment systems were mentioned to have an impact on the role that pharmacists can play in healthcare, in that they influence what these healthcare professionals are paid for. (Q20, speaker 5) Therefore, to be able to apply the principles described above, payer or funder policies will need to be developed to encourage such changes to the healthcare system.

2. **Health funding**: Health funding will come from the government (federal and state), insurers and consumers. (Q21, speaker 1) It is important to determine who will fund any emerging service before it is implemented as this strongly

influences its sustainability. Attention will be paid to prevent any service provision ceasing due to lack of funding.

3. **Financial incentives**: Financial incentives will be implemented to promote the achievement of the goals and objectives proposed to meet patients' needs. (Q22, speaker 10) Healthcare professionals will be incentivized for performing integration and coordination activities and for achieving the goals and objectives set around patients' needs.

4. **Electronic systems**: A new and innovative electronic system will be accessible to facilitate transfer of information between all members of the healthcare team across any setting, both in public and private care. Patients will also have access to the system through a user-friendly interface. (Q23, speaker 10); (Q24, speaker 1)

5. **Evaluation systems**: Evaluation systems will be put in place to ensure quality care and patient safety, such as commissioning processes (i.e. "the process of planning, agreeing and monitoring services"[47]). (Q25, speaker 5) These systems will be the responsibility of the PHNs, who will ensure that the outcomes are achieved.

6. **Health system organizational changes**: Changes will be required to be made to the health system and settings to accommodate these new principles of care. Particularly, PHNs will have the authority to stimulate the changes needed and coordinate the funding to implement them, since they are responsible for ensuring the efficiency and effectiveness of medical services and the coordination of care.[48] (Q26, speaker 1)

Defining initiatives to achieve the vision

Participants delineated an overall approach to move towards this shared vision. Firstly, it would be important to identify major needs of the population and the healthcare system (as the main drivers for change) and thereafter consider an appropriate team who could meet such needs. Suitable interventions would need to be identified to assist in achieving these desired changes. It was also deemed crucial to identify aspects of the current healthcare system which work well and build on these effective features to progress. The 24 specific initiatives proposed to achieve the vision that arose from the data analysis are reported in Table 2. Among them, two were the most voted: (1) enhancement of teamwork, including the co-design of

Table 2. Initiatives proposed by the stakeholders

[Votes] Short term initiatives (to be operationalized in less than one year)
[8] Enhance the teamwork, the co-design of protocols and the seamless and timely communication between patients/consumers and healthcare providers *(This initiative is a cluster of initiatives that participants proposed and were voted as a group)*
[7] Conduct a needs assessment to prioritize and focus health planning efforts. *(This initiative is a cluster of initiatives that participants proposed and were voted as a group. Apart from the votes given to the cluster, participants voted specific activities inside it such as: gather examples of models that are working now (1vote); identify what is happening at the moment in telemedicine (1vote); and perform a pharmacists training needs analysis (1vote)).*
[2] Promote the implementation of evidence-based practice
[0] Improve the links between existing health programs and services
[0] The Pharmacy Guild of Australia to undertake advocacy actions to improve the general understanding about the role of community pharmacists/community pharmacy services
[0] The Pharmaceutical Society of Australia and universities to work to upskill and specialize community pharmacists in service delivery
[0] Adapt the workflow in the community pharmacies to accommodate the new model of care and the teamwork
[0] Work on an electronic platform that will enable shared care planning
[Votes] Medium term initiatives (1-5 years)
[3] Exploit existing data sources for assessing and enhancing healthcare practices (e.g. Medicare, Pharmaceutical Benefits Scheme), particularly to consider medication use and adherence
[2] Enhance the functionality and use of the Electronic Health Record; locate the electronic health records in a common platform shared by the healthcare team and include consumers and pharmacists as users to allow for shared care planning
[2] Define sustainable payment models
[1] Foster the use of new technologies to implement telemedicine and monitoring and to establish appropriate communication procedures among healthcare professionals at a national level
[1] Professional organizations and the government to identify and develop chronic disease coordinated care models supported by funding
[1] Trial the new model of care via a large-scale pilot
[1] Establish quality improvement and feedback processes and reward practitioners ($)
[0] Seek political support for the new model of care at state and federal levels
[0] Define a package of services that can be delivered in the community pharmacy in agreement with rural Primary Health Networks
[0] Reward healthcare professionals for performing integration and coordination activities
[0] Pharmacists managing medication reconciliation and providing feedback to general practitioners
[Votes] Long term initiatives (more than 5 years)
[1] Separate the role of community pharmacists as clinicians from their role as medication dispensers
[1] Review the business models in community pharmacy to assure that community pharmacists provide independent clinical advice (not linked to remuneration), and take into account the ethical code of conduct to guide the review
[1] Address funding models for Electronic Medical Records
[0] Establish co-designed centralized protocols that can facilitate integrated patient care by a multidisciplinary team. These protocols should be dynamic and frequently reviewed.
[0] Include specialized psychological services as part of the management team for cardiovascular diseases

protocols and effective communication between members of the healthcare team (8 votes), and (2) conducting a needs assessment to prioritize and focus health planning efforts (7 votes). Further discussions were held around these two initiatives and a third issue that participants considered an important aspect that could directly

influence the achievement of the vision, in particular, "information technology and the ability to connect data gathered by different stakeholders". A summary of the results of the stakeholder discussion around these three specific topics is provided in Appendix 5.

Discussion

This article specifies the basic principles that should be considered in NSW to improve chronic care, as well as the key factors that should be initially taken into account to implement those principles. Stakeholders' participation for the development of the vision, and the mix of profiles they represented, allowed for connecting patients' needs, care, and the policy environment, making the results of this study relevant and useful for all stakeholders.[49] This visioning exercise also created an opportunity for knowledge exchange, as decision-makers and researchers worked together and listened to one another, allowing for enhancing the understanding of each other's perspectives (and those of the remaining stakeholders), and thus improving research rigor and relevance.[50-52] The participation of stakeholders was so important in this study that incorporating their own perspectives and needs into the vision meant reframing the vision objective and developing an overall vision distinct to that originally anticipated – which is something to be prepared for when using participatory approaches.[11, 13] Herein lies the importance of reporting these processes, usually not comprehensively reported although exceptions exist.[5, 38, 53] This reporting contributes to advancing the field of health service development and research.

The principles and factors defined as part of this vision are directly linked to different components of the CCM, which is logical considering that this model was employed to develop the questions used throughout the discussion as a reference to establish the vision foundations. The three components of the CCM that have accommodated greater improvements in healthcare in previous studies,[34] were also the most common in our study, for example: factors such as payment systems, health funding or financial incentives are related to "healthcare organization"; principles such as multidisciplinary team approach, shared goals or good coordination and communication are related to "delivery system design"; and the factor electronic systems is related to "clinical information systems". The principles and factors of this vision, for example the patient-centered care, good communication and coordination,

the use of electronic systems or evidence-based practice, can also be found in other existing models for chronic care, such as the Advanced Medical Home[54] or the Patient Centered Medical Home (PCMH).[55] These models, are reference models for general practice care development, thus the similarities shared with them bring to light this newly developed vision coherence. Furthermore, it is important to note that the identified environmental factors were reported in related studies also focused on the implementation of improvements in healthcare.[56, 57] Considering the principles of care and the environmental factors identified in this research along with the importance of stakeholder participation, there are valid reasons to combine the findings of this study with those of the previous stakeholder analysis.[24] In that analysis, the 46 stakeholders identified were displayed in a stakeholder map and organized in 7 general groups that should be taken into account for the design of health services. Thus, the combination of these stakeholder groups with the principles and factors found in the present study results in a unique model for chronic care in NSW, i.e., the NSW-MCC (Figure 1). The NSW-MCC provides a comprehensive view of what to consider when trying to improve chronic care, being a patient-centered model that aims to assure the continuity of care that chronic diseases require, enabling smooth and safe transitions of care.

The usefulness of the NSW-MCC lies in that it may serve as a basis for developing health services (including CPSs) that can be implemented and integrated in a real setting. The NSW-MCC can help healthcare planners and researchers identify the aspects that should be considered upfront to organize healthcare planning processes and research. Looking at the model, planners/researchers are provided a general idea of the different groups of stakeholders that should be involved in the planning process. The supportive environmental factors comprised in the model can help them anticipate potential issues that should be addressed by future implementation strategies. For example, the model prompts different challenges that must be considered in advance throughout the service planning process and that have been identified internationally in previous studies in the cardiovascular area[24, 38] and chronic disease management.[35] Also, the principles of care help define the tasks to focus on and the respective stakeholders that should be involved. Overall, the whole model has the potential to prompt planners/researchers to think about the resources and the different working groups required, how to prioritize the different interests and focus the different tasks that must be carried out. Applying it specifically to the development of CPSs, this model helps planners realize beforehand the
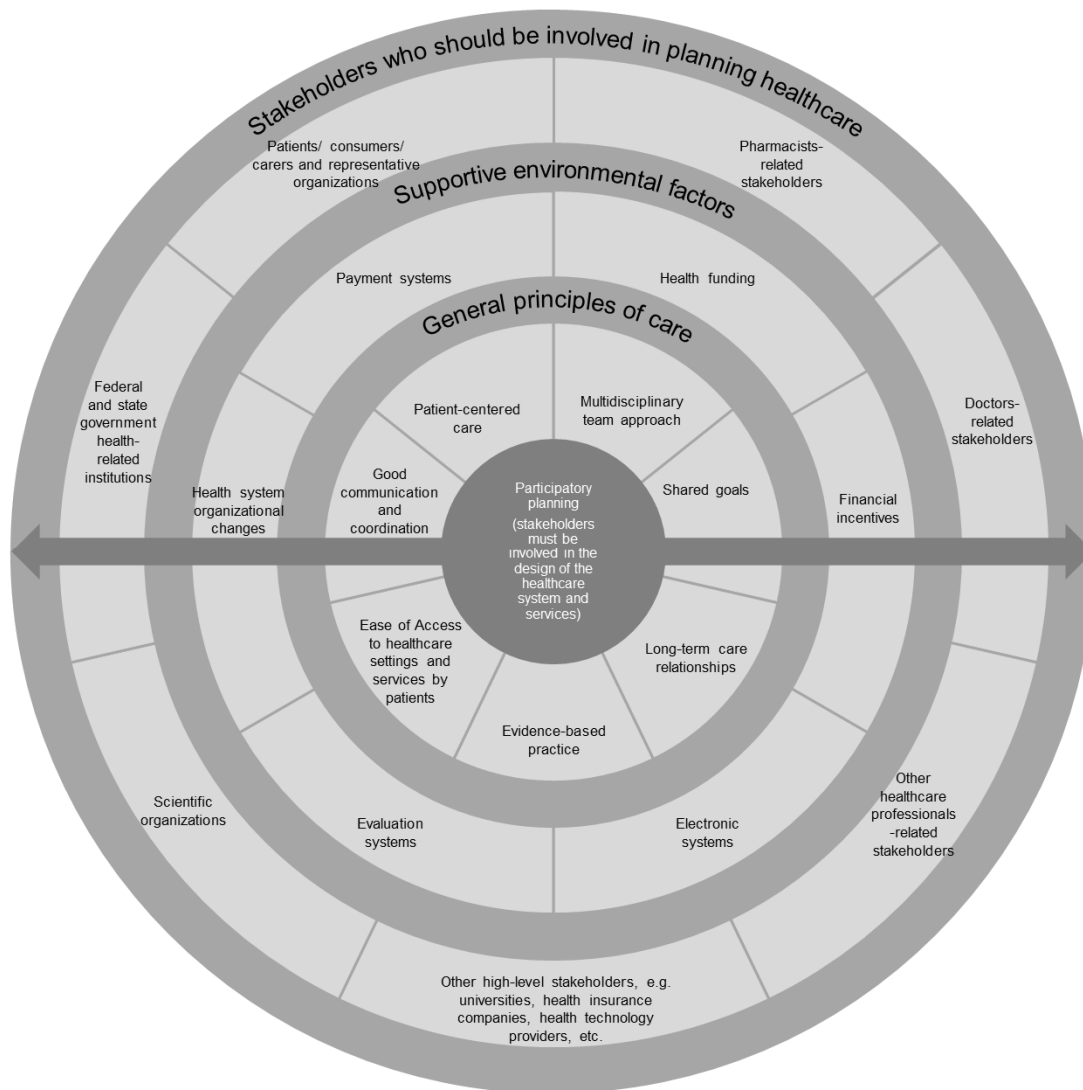
Figure 1. The New South Wales Model for Chronic Care (NSW-MCC)

complexity that must be addressed (i.e., it is much more than defining the components of the service and making sure it is effective), allowing them to better plan for successful integration. Besides, the initiatives identified in this study, consistent with the recommendations of existing health service planning frameworks,[1, 7] may help prompt the design of a number of projects/activities that can contribute to improve chronic care, outline the planning process and expand the role that community pharmacists play. Finally, regarding the policy arena, since the NSW-MCC was developed by a wide variety of stakeholders, it may be used to help define how to represent the chronic care problem which, in turn, may influence how new policies addressing chronic care may be developed. The model may also be used for assisting in policy analysis in terms of considering if existing policies address the complexity of chronic care represented in the model. The degree to which a policy meets

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stakeholders' needs may also influence the degree to which the policy will be adopted and implemented, and the results of its evaluation. Thus, policy makers may consider working with stakeholders to create a meaningful change, and further work on the model with them at the local level to create the mechanisms that are necessary in practice to allow change to happen.

Limitations

The model developed in this visioning exercise is limited by resource constraints (i.e., time, funding, and human resources) and so it is considered a preliminary model. Future studies should explore further the principles of care and the supportive environmental factors of the model. The checklist for identifying determinants of practice developed by Flottorp et al.[56] and the compilation of implementation strategies carried out by Powell et al.[57] can help guide this future work as they provide insights on the multiple factors and strategies that may influence the implementation of improvements in healthcare, and that can complement the model. The perspectives, and when possible the participation, of those on the ground level (e.g., individual patients, pharmacists and other healthcare professionals), who implement the changes in practice, will bring new questions and ideas, enrich the information obtained so far and help contextualize it to the specific implementation setting.[8, 52, 58-60] Also, because of the scope of the study being broadened from cardiovascular to chronic care, it would be useful to obtain the perspectives and validation of the model from specific representatives of chronic conditions other than cardiovascular diseases. Additionally, exploring the initiatives identified by the stakeholders in greater depth using a support framework for health program planning may help define and organize the various activities required for successful model operationalization and implementation.

The development of a vision is a flexible process that may be tailored based on the specific circumstances, objectives and resources available[18] and participatory research is resource intensive.[5] In this study, the resources influenced both the number of steps used for the development of the vision and the number of participants invited to the study, who also came altruistically. Efforts were made to have at least one stakeholder representing each structure, so the results were not compromised.

Finally, although the NSW-MCC was developed in the context of NSW, Australia, where it was intended to be applied, chronic care challenges are not

exclusive from this setting, and therefore the model may be relevant to guide research and planning in other contexts. The extent of the transferability of findings is dependent on the contextual environment surrounding the design and implementation, including the specific health care system. The description provided of the workshop, its context and methodology, along with the presentation of findings, quotations and other support material, may assist in adjusting to the environment.[27]

Conclusions

The vision developed in this study incorporates the perspectives and needs of stakeholders across the healthcare system and defines general principles that should guide chronic care in NSW as well as some factors influencing its implementation. Stakeholder participation was crucial to develop a final vision consistent with their needs and those of the healthcare system. A new model for chronic care (the NSW-MCC) is presented combining the principles and factors that are part of this vision with the main stakeholders that should be considered for healthcare planning found in a previous study. Therefore, this model has the added value of being aligned with stakeholders needs and can be used as a starting point for healthcare planning and research and to develop health services, namely CPSs, that can be successfully integrated in real-world settings. Finally, the initiatives proposed by the stakeholders to achieve their vision may help guide and organize the process to achieve its implementation.

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References

1. Bartholomew LK, Parcel GS, Kok G, Gottlieb NH, Fernández ME. *Planning health promotion programs: An Intervention Mapping approach.* Third ed. San Francisco, CA: Jossey-Bass; 2011.

2. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *Bmj.* 2008;337:a1655.

3. Green L, Kreuter M. *Health program planning: An educational and ecological approach.* 4th ed. Boston: McGraw-Hill; 2005.

4. Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26(2):124-128.

5. Lalonde L, Goudreau J, Hudon É, et al. Development of an interprofessional program for cardiovascular prevention in primary care: A participatory research approach. *SAGE Open Med.* 2014;2:2050312114522788.

6. Preskill H, Jones N. A practical guide for engaging stakeholders in developing evaluation questions. *Robert Wood Johnson Foundation Evaluation Series*: Robert Wood Johnson Foundation; 2009. http://www.pointk.org/resources/files/rwj.stakeholders.final.1.pdf. Accessed 30.08.2017.

7. McKenzie JF, Neiger BL, Thackeray R. *Planning, implementing & evaluating health promotion programs: A primer*: Pearson; 2016.

8. Moore SL, Fischer I, Havranek EP. Translating Health Services Research into Practice in the Safety Net. *Health Serv Res.* 2016;51(1):16-31.

9. National Association of County & City Health Officials. Mobilizing for action through planning and partnerships: a community approach to health improvement. *Fact sheet*. Washington, DC2008. http://archived.naccho.org/topics/infrastructure/mapp/upload/MAPPfactsheet -systempartners.pdf. Accessed 30.08.2017

10. Sabater-Hernández D, Moullin J, Hossain L, et al. Intervention mapping for developing pharmacy-based services and health programs: A theoretical approach. *Am J Health-Syst Pharm.* 2016;73:156-164.

11. Greenhalgh T, Jackson C, Shaw S, Janamian T. Achieving Research Impact Through Co-creation in Community-Based Health Services: Literature Review and Case Study. *The Milbank Q.* 2016;94(2):392-429.

254

12. Pitt M, Monks T, Crowe S, Vasilakis C. Systems modelling and simulation in health service design, delivery and decision making. *BMJ Qual Saf.* 2016;25(1):38-45.

13. Ziegler W. Envisioning the future. *Futures.* 1991;23(5):516-527.

14. Reed M, Graves A, Dandy N, et al. Who's in and why? A typology of stakeholder analysis methods for natural resource management. *J Environ Manage.* 2009;90(5):1933-1949.

15. Boomer C, Collin I, McCormack B. 'I have a dream': A process for visioning in practice development. *Practice Development in Health Care.* 2008;7(2):70-78.

16. Nanus B. Leading the vision team. *The Futurist.* 1996;30(3):20.

17. National Association of County & City Health Officials. Visioning. *Mobilizing for Action through Planning and Partnerships (MAPP)*2016. http://archived.naccho.org/topics/infrastructure/mapp/upload/visioning_full.pdf. Accessed 30.08.2017.

18. Stewart JM. Future state visioning—A powerful leadership process. *Long range planning.* 1993;26(6):89-98.

19. Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health policy.* 2015;119:628-639.

20. Cheema E, Sutcliffe P, Singer DR. The impact of interventions by pharmacists in community pharmacies on control of hypertension: a systematic review and meta-analysis of randomized controlled trials. *Br J Clin Pharmacol.* 2014;78(6):1238-1247.

21. Chisholm-Burns MA, Kim Lee J, Spivey CA, et al. US pharmacists' effect as team members on patient care: systematic review and meta-analyses. *Med Care.* 2010;48(10):923-933.

22. Sabater-Hernandez D, Sabater-Galindo M, Fernandez-Llimos F, et al. A Systematic Review of Evidence-Based Community Pharmacy Services Aimed at the Prevention of Cardiovascular Disease. *J Manag Care Spec Pharm.* 2016;22(6):699-713.

23. Australian Government Department of Health. Sixth Community Pharmacy Agreement 2015. http://6cpa.com.au/about-6cpa/. Accessed 30.08.2017.

24. Franco-Trigo L, Hossain LN, Durks D, et al. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. *Res Social Adm Pharm.* 2017;13(3):539-552.

25. Meadows M, O'Brien F. Under pressure: visioning in a regulated environment. *Systemic Practice and Action Research.* 2006;19(6):537-551.

26. O'Brien F, Meadows M. Corporate visioning: a survey of UK practice. *Journal of the operational research society.* 2000;51(1):36-44.

27. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today.* 2004;24(2):105-112.

28. Varvasovszky Z, Brugha R. A stakeholder analysis. *Health Policy Plann.* 2000;15(3):338-345.

29. Tempfer CB, Nowak P. Consumer participation and organizational development in health care: a systematic review. *Wien Klin Wochenschr.* 2011;123(13):408-414.

30. Robinson TE, Rankin N, Janssen A, McGregor D, Grieve S, Shaw T. Collaborative research networks in health: a pragmatic scoping study for the development of an imaging network. *Health Res Policy Syst.* 2015;13:76.

31. Bryson JM. What to do when stakeholders matter: stakeholder identification and analysis techniques. *Public Manag Rev.* 2004;6(1):21-53.

32. McCormack B, Illman A, Culling J, Ryan A, O'Neill S. 'Removing the chaos from the narrative': preparing clinical leaders for practice development. *Educational Action Research.* 2002;10(3):335-352.

33. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness. *Jama.* 2002;288:1775-1779.

34. Hroscikoski MC, Solberg LI, Sperl-Hillen JM, Harper PG, McGrail MP, Crabtree BF. Challenges of change: a qualitative study of chronic care model implementation. *Ann Fam Med.* 2006;4(4):317-326.

35. Grover A, Joshi A. An overview of chronic disease models: a systematic literature review. *Glob J Health Sci.* 2015;7(2):210-227.

36. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, Part 2. *Jama.* 2002;288(15):1909-1914.

37. Coleman K, Austin BT, Brach C, Wagner EH. Evidence on the chronic care model in the new millennium. *Health Aff.* 2009;28(1):75-85.

38. Lalonde L, Goudreau J, Hudon E, et al. Priorities for action to improve cardiovascular preventive care of patients with multimorbid conditions in primary care-a participatory action research project. *Fam Pract.* 2012;29(6):733-741.

39. Javanparast S, Coveney J, Saikia U. Exploring health stakeholders' perceptions on moving towards comprehensive primary health care to address childhood malnutrition in Iran: a qualitative study. *BMC Health Serv Res.* 2009;9:36-42.

40. Mahdi S, Viljoen M, Massuti R, et al. An international qualitative study of ability and disability in ADHD using the WHO-ICF framework. *Eur Child Adolesc Psychiatry.* 2017;26(10):1219-1231.

41. Usiak DJ, Stone VI, House RB, Montgomery ME. Stakeholder perceptions of an effective CIL. *J Vocat Rehabil.* 2004;20:35-43.

42. Cho JY, Lee E-H. Reducing confusion about grounded theory and qualitative content analysis: Similarities and differences. *The Qualitative Report.* 2014;19(32):1-20.

43. Bengtsson M. How to plan and perform a qualitative study using content analysis. *NursingPlus Open.* 2016;2:8-14.

44. Bryman A. *Social research methods.* 4th ed: Oxford university press; 2012.

45. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res.* 2005;15:1277-1288.

46. QSR International. *NVivo qualitative data analysis Software (Version 11)*; QSR International Pty Ltd. 2015.

47. National Health Service England. *NHS Commissioning.* 2017. https://www.england.nhs.uk/commissioning/. Accessed 30.08.2017.

48. Australian Government Department of Health. *Primary Health Networks (PHNs).* 2015. http://www.health.gov.au/internet/main/publishing.nsf/Content/primary_Health_Networks. Accessed 30.08.2017.

49. Wagner EH. Chronic disease care: Insights from managed care in the United States will help the NHS. *BMJ.* 2004;328(7433):177-179.

50. Cvitanovic C, McDonald J, Hobday AJ. From science to action: Principles for undertaking environmental research that enables knowledge exchange and evidence-based decision-making. *Journal Environ Manage.* 2016;183:864-874.

51. Dudley R, Struhl B. *Evaluating Complex Health Services Interventions: Challenges, Goals, and Proposals for Progress*. Report from an AcademyHealth Meeting. Washington DC. 2015. AcademyHealth, ed2016. http://www.academyhealth.org/files/AH_Report_Evaluating_Complex_HSI_June2016_FINAL.pdf. Accessed 30.08.2017.

52. Gold MR. Critical Challenges in Making Health Services Research Relevant to Decision Makers. *Health Serv Res.* 2016;51(1):9-15.

53. Sorensen EW, Haugbolle LS. Using an action research process in pharmacy practice research--a cooperative project between university and internship pharmacies. *Res Social Adm Pharm.* 2008;4(4):384-401.

54. Barr M, Ginsburg J. The advanced medical home: A patient-centered, physician-guided model of health care. *Philadelphia, PA: American College of Physicians; 2005: Position Paper.* (Available from American College of Physicians, 190 N. Independence Mall West, Philadelphia, PA 19106.) https://www.acponline.org/acp_policy/policies/adv_medicalhome_patient_ce ntered_model_healthcare_2006.pdf. Accessed 30.08.2017.

55. Patient-Centered Primary Care Collaborative. Joint principles of the patient centered medical home: Washington DC. 2007. http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initi atives/PCMHJoint.pdf. Accessed 30.08.2017.

56. Flottorp SA, Oxman AD, Krause J, et al. A checklist for identifying determinants of practice: a systematic review and synthesis of frameworks and taxonomies of factors that prevent or enable improvements in healthcare professional practice. *Implement Sci.* 2013;8:35.

57. Powell BJ, McMillen JC, Proctor EK, et al. A compilation of strategies for implementing clinical innovations in health and mental health. *Med Care Res Rev.* 2012;69(2):123-157.

58. Caron-Flinterman JF, Broerse JEW, Bunders JFG. The experiential knowledge of patients: a new resource for biomedical research? *Soc Sci Med.* 2005;60(11):2575-2584.

59. Lowe MM, Blaser DA, Cone L, et al. Increasing Patient Involvement in Drug Development. *Value Health.* 2016;19(6):869-878.

60. Ward PR, Thompson J, Barber R, et al. Critical perspectives on 'consumer involvement' in health research:Epistemological dissonance and the know-do gap. *Journal of Sociology.* 2010;46:63-82.

Appendices

Appendix 1. Details of how the list C participants (final participants) were selected

Stakeholders invited to the workshop		C. Stakeholders that finally participated in the workshop (n=13)
A. Core group of stakeholders considered crucial for the development of a cardiovascular CPS in New South Wales, Australia (n=12)[1]	Primary Healthcare Networks (PHNs)	A representative of a specific PHN A departmental representative for PHNs
	Agency for Clinical Innovation (ACI)	A representative of the ACI
	Chronic Cardiovascular Clinical Expert Reference Group	They are part of the ACI; represented by the representative of the ACI
	Office for Health and Medical Research	They referred us to the ACI
	Local Health Districts & Specialty Networks	One specific Local Health District was contacted, and they referred us to a cardiology nurse consultant that assisted to the workshop
	National Heart Foundation of Australia	A representative of the National Heart Foundation of Australia
	Pharmacy Guild of Australia	A representative of The Pharmacy Guild of Australia
	Australian Medical Association	It was not possible to have somebody representing these associations. A general practitioner who is related to the Australian medical associations was invited (and assisted) to compensate for these perspectives
	The Royal Australian College of General Practitioners	
	Individual patients	Their perspectives were represented by Heart Support Australia and Health Consumers NSW. Bringing these organizations allowed us to access the needs and perspectives of a wider patient population than we would have accessed bringing individual patients to this specific exercise

	Patient groups/organizations (including disease-oriented)	A representative of Heart Support Australia
	Consumer Health Forum of Australia.	A representative of Health Consumers NSW (nominated by Consumer Health Forum of Australia)
B. Stakeholders invited by the research team to participate in the study in addition to the core group (n=9)	Heart Support Australia	A representative of Heart Support Australia
	Pharmaceutical Society of Australia	A representative of the Pharmaceutical Society of Australia
	The Society of Hospital Pharmacists of Australia	A clinical pharmacist member of the Society of Hospital Pharmacists of Australia
	The Cardiac Society of Australia & New Zealand (CSANZ)	It was not possible to have somebody representing this association* (both cardiac doctors and nurses), but a cardiology nurse consultant assisted to the workshop and compensated for nurses' perspectives
	The Cardiovascular Nurses Council-CSANZ	
	The Australian Primary Health Care Nurses Association	It was not possible to have somebody representing this association*
	The Australian Cardiovascular Health and Rehabilitation Association	It was not possible to have somebody representing this association*
	A community pharmacist	An individual community pharmacist with experience in providing community pharmacy services
	UTS: Graduate School of Health	A representative of the UTS: Graduate School of Health (i.e., research team member)

*Possibly having sent the invitations earlier would have facilitated bringing some of the representatives that it has not been possible to bring

[1] Franco-Trigo L, Hossain LN, Durks D, et al. Stakeholder analysis for the development of a community pharmacy service aimed at preventing cardiovascular disease. Res Soc Adm Pharm. 2017;13(3):539-552.

Appendix 2. Stakeholder briefing

Stakeholder briefing: cardiovascular disease and community pharmacy

A problem, a solution, a plan

The problem: Burden of Cardiovascular Disease in Australia

Cardiovascular diseases (CVDs) affect a high proportion of the adult population (22% of Australian adults were estimated to have at least one CVD in 2011-2012)[1] and are the leading cause of death in Australia; accounting for 45,622 deaths in 2011 (31% of all deaths).[2] In 2012-2013, CVDs were the principal diagnosis for 524,900 hospitalizations[3]. Overall, CVD, diabetes and chronic kidney disease were presented as comorbidity in 1 out of 10 hospitalisations, leading to a longer length of stay in hospital. The economic burden associated with CVD accounted for $AUD 7.6 billion in 2008-2009, which represents 12% of all allocated health care expenditure[4]. From this expenses, $AUD 4.4 billion were spent in hospital admitted patient services and $AUD 1.6 billion in prescription pharmaceuticals.

Reducing the burden of CVDs is a major challenge for the Australian government and healthcare system, which recognise the significant impact of CVDs on individuals and public hospital services, and demand strategies to reduce the burden of CVDs. Individual interventions at the primary health care level are seen as the best approach to reverse the progression of CVDs, prevent long-term complications, and reduce the use of healthcare resources and healthcare expenditure.

A promising solution: Community Pharmacy Services

Community pharmacies in Australia provide a highly accessible network of 5000-plus health facilities to help address the challenge of improving cardiovascular care at the primary care level. Community pharmacists are highly-qualified professionals that already have been shown to have a positive impact on the control of cardiovascular risk factors when providing patient-centred services. Community pharmacy is seen as an asset to enhance patient's cardiovascular health, optimize the use of existing resources and facilities in the health system and reduce the economic burden of CVDs in Australia.

The Australian Government recognises the key role played by community pharmacy in primary health care and a 6th Community Pharmacy Agreement (CPA) has been signed from 1st July 2015 to 30th June 2020. As part of the 6th CPA, $AUD 1.26 billion (around 7% of the budget) has been allocated for professional services in order to fund a combination of continuing community pharmacy programs, a pharmacy trial

program and potentially a range of new and expanded programs and services. Identifying new formulas to involve the wide network of pharmacies as part of a multidisciplinary cardiovascular health strategy and efficiently use such a budget is a challenge that requires extensive planning and cooperation between key stakeholders in the health system.

The plan: A Collaborative Planning Approach

Planning a cardiovascular community pharmacy service requires the involvement of all the individuals, groups and organizations that can be affected by, have an influence on, or have an interest in such a problem or service. Examples of stakeholders that must be involved in a successful planning process are patients/consumers, pharmacists, care providers in the health system (e.g., general practitioners, nurses, specialists), health system managers, policy makers, academics, funders, etc.

The early input and involvement of a stakeholder group of health, policy and community leaders is crucial to visualize and understand how changes in the health system will look like and develop a mutually relevant pharmacy service. Having stakeholders work together facilitates co-learning and networking, and enhances the overall suitability of the decisions concerning the design, implementation, sustainability, evaluation and regulation of community pharmacy services.

This collaborative project delineates a full planning process in which a stakeholder leading group will be involved from the development, to the implementation, to the continuous evaluation and enhancement of the service. As a result, it is expected to enable community pharmacists to play an agreed and meaningful role as part of the healthcare team and thus improve patient's health and quality of life and reduce the economic burden of CVD in the health system.

Preliminary work has been conducted to map key stakeholders and outline a stakeholder's engagement process. A workshop will be held in December 2015 to visioning suitable changes in pharmacy practice to reduce the burden of CVD and gain the input from stakeholders to define potential ways of working together and developing a collaborative initiative. Ideally, the development of the service would be conducted during 2016 with possible implementation planned for 2017.

References

1.   Cardiovascular disease, diabetes and chronic kidney disease –Australian facts: Prevalence and incidence. Canberra: AIHW, 2014.

2. Cardiovascular disease, diabetes and chronic kidney disease –Australian facts: Mortality. Canberra: AIHW, 2014.

3. Cardiovascular disease, diabetes and chronic kidney disease –Australian facts: Morbidity–Hospital care. Canberra: AIHW, 2014.

4. Health-care expenditure on cardiovascular diseases 2008–09. Canberra: AIHW, 2014.

5. Evans CD, et al. Diabetes and cardiovascular disease interventions by community pharmacists: a systematic review. Ann Pharmacother 2011; 45(5): 615-28.

6. Cheema E, et al. The impact of interventions by pharmacists in community pharmacies on control of hypertension: a systematic review and meta-analysis of randomised controlled trials. Br J Clin Pharmacol 2014; 78(6): 1238-47.

7. Australian Government, Department of Health. Sixth Community Pharmacy Agreement. 2015. Available from: http://www.guild.org.au/docs/default-source/public-documents/tab---the-guild/Community-Pharmacy-Agreements/6cpa---final-24-may-201558b59133c06d6d6b9691ff000026bd16.pdf?sfvrsn=2

Appendix 3. Handout activity 1

Handout activity 1

Consider a 2035 vision for NSW cardiovascular care that is world-leading further integrating community pharmacies. What does it look like?

Consider the following:

CATEGORIES	GUIDING QUESTIONS
Patient experience	• What do patients experience in this system that enhances their cardiovascular care and outcomes?
Health care (service) delivery	• Who is involved in providing care services and at what stage of the patient experience? What practices, services are they providing? • What are the interactions between these professionals? • What are the roles of community pharmacists and what services are they providing?
Technologies	• What technologies are being used (e.g. information systems, data records, remote consultations, medical devices) - why and by whom?
Policies and Regulation	• What government support enables this system to work efficiently and effectively? • What governmental policies, programs and regulations are in place?
Finance and Funding	• What are the funding and financing sources for projects and services? Government, industry, private, philanthropy, crowd-sourced? • How are key stakeholders remunerated for their part in service delivery?
Resources and Support	• What supporting resources are available in the community and linked to the health care system? e.g. exercise programs, self-help groups
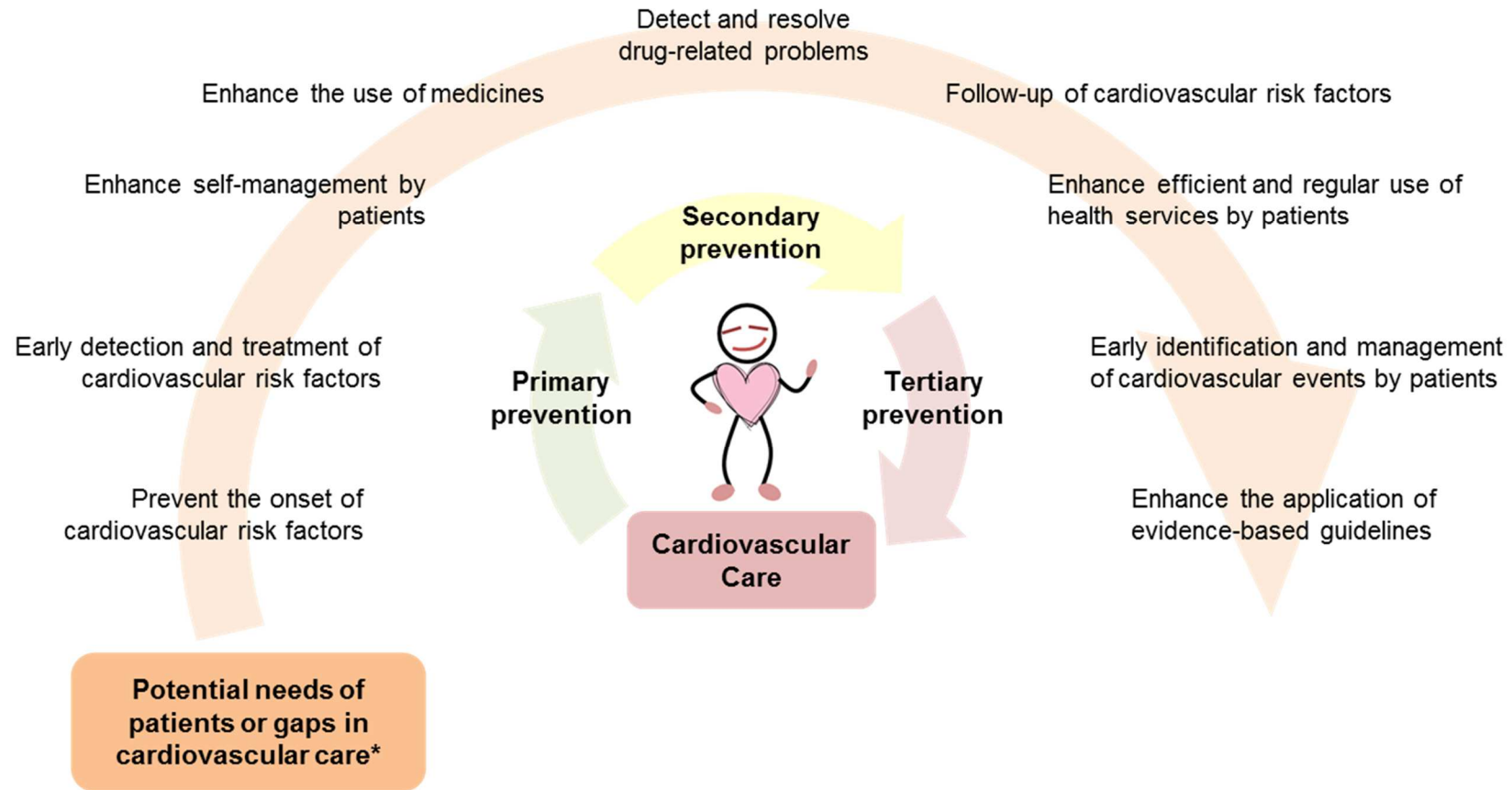
* This needs and gaps have been informed by the scientific literature and the previous workshop

Appendix 4. Quotes

Quote number	Quote	Speaker number
Q1	*"Chronic disease is very important, that's where we need systems to support the management of chronic disease and that goes across lots of fields"*	Speaker 1
Q2	*…"most people are living with comorbidities so we don't want to make it specific to just one disease state. We want to create something that actually has benefit across the spectrum of diseases and is actually embedded and ongoing, it's not non-sustainable."*	Speaker 12
Q3	*"So one of the things I talked about was the fact that the actual intervention should come down the list, we should try to identify what are the patient's needs, what are the relationships around that patient's needs and then get to the interventions further down the track as opposed to trying to design an intervention right up front that's trying to deal with something as evidence based as it might be… I mean there are thousands of evidence-based interventions that sit in the system everywhere but how does this actually respond to that person's needs"*	Speaker 10
Q4	*…"Patient adherence we discussed which is very important. Looking at medications and also looking at the patient as a whole, the diet and all the other important things, their social circumstance [unintelligible 01:34:59] living conditions - all that affect their health."*	Speaker 1
Q5	*"I think it's very important to add the consumers but also the carers because they are critical people. Because often if somebody is getting very sick they can't remember what they've been told."*	Speaker 13
Q6	*"And behavioral change is very important, so we've got to look at the whole system as a whole and change everyone's behavior to accommodate the team-based approach and it's important to coordinate to include lifestyle in that as well."*	Speaker 1
Q7	*"we needed to map exactly what that contribution could be so that there's a big part to play for pharmacies in medicine adherence, unpacking what it needs to take medication, why you need to take it but there's a whole range of other things that pharmacists can do specifically to contribute to that multidisciplinary care."*	Speaker 12
Q8	*"And in addition to the kind of enablers that you discussed having very clear goals and and objectives and outcomes that are shared throughout the team that are kind of set by that patient and with the care provider, or in this case the care coordinator, and shared with the teams who are working towards the same outcome."*	Speaker 5

Q9 *"Long term relationships are important and it's very important for patients to have one pharmacist, one doctor that they know well, they trust and people get to know and also they can detect changes in the patient's condition easier if they know the patients well."* — Speaker 1

Q10 *"Evidence based is important and it's important to link into other fields of the system, primary care is one of them we discussed."* — Speaker 1

Q11 *"I mean there are thousands of evidence-based interventions that sit in the system everywhere but how does this actually respond to that person's needs."* — Speaker 10

Q12 *"it's actually having the patients as the center of their health care and that can be delivered in other places not just in the practice. A lot of it can be done in the home, so taking stress of hospitals and acute emergency services. Actually have more things, for example if they need a drip for antibiotics it can be done in the house."* — Speaker 1

Q13 *"But for those patients that need to get specialist care fast – our nurses will just pick up the phone and the cardiologist will answer and they'll just work out a plan."* — Speaker 4

Q14 *"So we can start off with the basic level and the basic level would probably be allergies, past medical history and a current medication list which is a bugbear of everyone in our fields so that's the important thing. And discharge summaries are very important as well to get those in a timely fashion and information that's actually important and useful."* — Speaker 1

Q15 *"So the other thing was the team base care we discussed and the coordinators for the care and actually have a partnership. And I think obviously, it would be GP centered and that will be all the allied health around working as a team. And then that would be in coordination with the medical home where the patient would be there, the carer, the family, the patient and then there would be cross integration between those two visiting in the home and that will be one role for the pharmacist is going to go and to do work in the patient's home if required as part of that team."* — Speaker 1

Q16 *"And I'm agreeing with both of you and in that sense saying, look, it doesn't have to be at the general practice, it's just part of a team. It can be a virtual team, it can be services, just how that's coordinated really. And I think at the end of the day it's a question – general practice is very diverse, some are small, and some are large. You've got to be able to have something that isn't just because it's all there, it's right, it doesn't have to be all there it just has to be coordinated."* — Speaker 10

Q17 *"I mean there's so many programs that are already in place in pharmacies, if we even connected to programs that were in pharmacies such as weight loss, blood pressure […] they're all* — Speaker 8

actually already in place in community pharmacies. We haven't really connected them within our own system, they're only an extension of primary healthcare system as well. So I think it's not a matter of reinventing the wheel. I think it's a matter of connecting them together for a broader scope of patients and making sure that we are even speaking the same language in the primary healthcare network. And where interventions are being made at a community pharmacy level is being communicated back but we're also supporting whatever interventions has been made in the primary healthcare network but with the patients as well."

Q18   *"So we really want to see better integration of healthcare servicing across the spectrum 20 years from now and that pharmacy is embedded in that system, in that integrated system."*   Speaker 12

Q19   *"The point is the GP [General Practitioner] side of it is determined by the funding system, it's not determined by the best patient care. So I think what the GPs waiting room is a reflection of, how they run their business – which is a business model and an ability to deal with all the stresses and strains around a business model and patient care – if we had a different business model and a different way of doing that, suddenly you'd have a different level of service at the GP level."*   Speaker 10

Q20   *"I think the thing is it doesn't need to be [bricks-and-mortar] pharmacies. I think what we see overseas is a little more than pharmacists who are actually independent, who might have a…their career might be more involved in visiting patients' homes, GP clinics with the patient, have an outpatient role in a hospital. There's far more dynamic pharmacist workforce overseas than we do here. I think it's because of the funding. You go where the funding is. Here it is limited to community pharmacy and hospital."*   Speaker 5

Q21   *"Chronic disease is very important, that's where we need systems to support the management of chronic disease and that goes across lots of fields: reimbursement is one and that's very important between state and federal funding and cost shifting between the states and the federal government. It's important to have that funding there and that would be a role for primary healthcare networks to coordinate that."*   Speaker 1

Q22   *"And I think one of the enablers - we talked about technology - one of the enablers is the payment structure showing that we have a payment structure, incentive structure that is actually around achieving that person's needs as opposed to just churning through more volume and more services that may or may not be effective."*   Speaker 10

Q23   *"But the challenge is that the EMR [Electronic Medical Record] issue isn't primary care based, the issue is that the EMR sits in a public health system which is fine as long as you're in that system, it doesn't sit in the private care. So my view about an*

EMR should be patient centered firstly and secondly primary care based so that we don't have that. And in models like that the issue becomes scalability."

Q24   *"One was the transfer of information amongst all the stakeholders and that's where the electronic medical record will come in across all sectors. So that's probably – and obviously, the patient is at the center of it – then there's the medical team, the public, community and also the general practice team setting. Now, how the patient interfaces with that would depend obviously on literacy of the individual consumer. Some of them may want more than others, some of them are more savvy in electronic gadget communication than others are."*   Speaker 1

Q25   *"While they use the commission, I mean, the PHNs [Primary Health Networks] are enabled to commission, and you could imagine that it'll be in the government' interest to pull a lot of the money that's being reviewed under primary healthcare, and the MBS [Medicare Benefits Schedule] items and kind of enable and build the PHN's role in commissioning with some of this money. And that's a potential that could happen. So, theoretically… so that can happen as early as 1 July. You know, we could be seeing the PHN saying, here's the outcomes we want for our community, who can deliver that? And that will then enable us to a team base care potentially. So I don't know if it's that – but I think, you know, they're individual items, I'm probably way off, but I think the commissioning process and more dynamic model will enable this. It probably isn't that far off."*   Speaker 5

Q26   *"It's important to have that funding there and that would be a role for primary healthcare networks to coordinate that."*   Speaker 1

Q27 (Appendix5)   *"I think you should put funding in there because funding's important. Now whether PHN want to fund it now that's a different thing but there's no reason why the practice can't fund it."*   Speaker 1

Q28 (Appendix5)   *"One of the things that they use or started using in the UK is a concept of collective responsibility and you will do something like an alliance contract where everybody is responsible for the outcome."*   Speaker 6

Q29 (Appendix5)   *"We thought it's important to develop pathways and pathways of care, but also protocols around working together. We saw this was something that PHNs [Primary Health Networks]are possibly in a position to enable working together, particularly in the private health space. Some of the barriers, obviously, it's just different funding models and that people aren't being necessarily paid, or being rewarded for working in a team."*   Speaker 11

Q30 (Appendix5)   *…"there's still that hierarchical culture around like there's doctors and there's sort of other health professionals and there's nurses and I still, I think that's still inculcated into our training."*   Speaker 11

Q31 (Appendix5)	*"Well we looked at what was happening, so we thought the first place to begin would be to do a literature review, then do some process mapping, so look to see what sort of models we've got that are working here now, are working well and what's going on overseas, and look at things like the training and management of pharmacists. And that includes how are the education programs that they deliver to patients."*	Speaker 13
Q32 (Appendix5)	*"It would be looking at things like that, some of those large community based interventions, what's worked what's not? Do we have any data about how effective they were? What are the key findings? Which would be just one aspect of it, just looking at large scale programs."*	Speaker 12
Q33 (Appendix5)	*"Then you'd have to look at the scope, the legislation, funding incentives, the framework for implementation, the use of tele-medicine. Realizing that one model won't fit all, particularly when you're looking rural versus metro. Recognizing that there are different levels of skill and experience within pharmacy and there may be some up-skilling required."*	Speaker 13
Q34 (Appendix5)	*"I mean this is how you'd get around trialing the protocol in the absence of electronic health record, is actually trial it in a rural area where you don't need often as ... It's a generalization but there's a lot more trust, local trust between practitioners, there's the records better known generally."*	Speaker 5
Q35 (Appendix5)	*"We were just talking vaguely about IT and the fact that no one understands what's already available to them."*	Speaker 9
Q36 (Appendix5)	*"I was just trying to clarify to say that if a pharmacy is using a different software they're not in actual fact communicating with each other it's just the one pharmacy that does the clinical programs that gets all this accurate data of the dispensing."*	Speaker 3
Q37 (Appendix5)	*…"there's no rigor in the data that the GP has or the pharmacist has or Medicare has […] what we need to get clear is how a GP or a primary care nurse or a pharmacist and the patient, consumer, use what's available without reinventing the wheel so it doesn't become a cost barrier so we can achieve the outcomes we're trying to achieve through the primary health networks or the GP. Look, we're all after the same outcome which is better health."*	Speaker 9

Appendix 5. Results for the stakeholder discussions on specific initiatives

A. **Enhance the teamwork, the co-design of protocols and the seamless and timely communication between patients/consumers and healthcare providers**. PHNs were identified responsible for ensuring teamwork and the co-design of protocols. They were also identified as potential funders, along with general practices. (Q27, speaker 1) Payment systems were identified as levers to integrate the different healthcare professionals in the team, and the provision of incentives as a way of enabling this integration. In terms of defining and building the team, participants identified the need to develop protocols to work together and suggested paying attention to the collective responsibility (Q28, speaker 6) and to designing pathways of care. (Q29, speaker 11) Different funding models and the lack of rewards for teamwork were considered barriers, as well as the definition of roles, and the relationships and communication within the team. A change of existing perceptions of each other's professions, instilled from the training period, was considered deemed necessary. (Q30, speaker 11)

B. **Conduct a needs assessment to prioritize and focus health planning efforts**. A literature review and environmental scanning were considered essential to understand what is currently happening in healthcare in Australia and overseas: (1) in community engagement in health; (2) in individual pharmacies; (3) in PHNs and at the national level; and (4) in the training space of healthcare professionals. (Q31, speaker 13) Identifying large-scale community-based interventions, programs or models successfully implemented was also highlighted. (Q32, speaker 12) Regarding how to do it, the development of a framework to analyze enablers and barriers and the identification and interview of stakeholders should be done first. Then, a model should be identified/created, and the protocols developed, along with a framework for implementation. The distinctive characteristics of various settings and professionals should be considered for this. (Q33, speaker13) Finally, piloting the model was considered crucial, and rural areas were the setting suggested owing to the greater level of trust and interaction between doctors and pharmacists. Testing the model in the absence of the electronic health record, to ensure it is not dependent on this technology was proposed. (Q34, speaker 5)

C.   **Information technology and the ability to connect data gathered by different stakeholders**. Participants reflected on the need to raise awareness about what is currently available in terms of information technology. (Q35, speaker 9) Existing software was suggested as the basic infrastructure to build upon, but further work would be needed to overcome impediments to its generalizability, such as the lack of interoperability between softwares used in pharmacies and with other healthcare professionals' systems. (Q36, speaker 3) Connecting data gathered by different stakeholders (e.g., general practitioners, pharmacists, Medicare) was considered to potentially improve health outcomes. (Q37, speaker 9) The need for strong policies and procedures related to information technology and a possible accreditation system was also suggested, but not further discussed.

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Chapter 6

Discussion: Lessons learned and future research

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Discussion: Lessons learned and future research

This thesis facilitates an improved understanding of, and for, the participatory development of CPSs. It contributes to improve the knowledge of CPS planning processes, mainly addressing the preparatory phase, and demonstrates the value of stakeholder analysis and visioning exercises to focus planning efforts. As a result of this thesis, detailed reports for the first two steps of the preparatory phase of a CPS planning process are now available. Since these processes are not frequently reported, this work may inspire other researchers carrying out similar tasks.

In particular, this dissertation presented information gathered about the use of, steps and methods for stakeholder analysis in any health innovation planning process, as well as information on the stakeholder attributes analysed (Chapter 2). It also presented a guideline to enable accurate reporting of stakeholder analysis (i.e., the RISA tool) which, in turn, may allow for the evaluation and improvement of such analyses.

Additionally, two different methodologies were applied, and reported, to conduct stakeholder analysis as the first step for CPS planning processes. These studies, performed in Australia (Chapter 3) and Spain (Chapter 4), highlighted the advantages and usefulness of stakeholder analyses in the preparatory phase of such a process. Their results showed the number and variety of stakeholders that may influence CPSs and therefore should be considered when planning such services. The stakeholder analysis carried out in Spain also showed that CPS stakeholders were not isolated but interconnected and embedded in a network. Moreover, the stakeholder analysis in Australia revealed needs and gaps in cardiovascular care and the role that community pharmacists may play in addressing this public health problem.

To put into practice the second step of the CPS planning process, a stakeholder-shared vision was developed for the process initiated in Australia, and the initiatives to achieve such a vision were identified (Chapter 5). Developing a stakeholder-shared vision proved to be useful in establishing common ground during the preparatory phase of CPS planning. This resulted in a model for chronic care (i.e., the NSW-MCC) which is useful in understanding the complexities faced during planning processes and allows them to be anticipated. This model, although developed in the context of New South Wales, might be of value in other contexts.

From the methodological point of view, this thesis included both qualitative and mixed-methods research. The qualitative approach was useful to explore and describe the reality around the CPS planning steps studied, obtaining rich and in-depth information. The mixed-methods approach combined qualitative and quantitative perspectives, adding the rigor and objectivity provided by the quantitative approach to the advantages of qualitative research. Data collection was carried out by using a variety of methods. A scoping review was carried out to gather information on the use and methods for stakeholder analysis, a topic hardly explored in this knowledge area (Chapter 2). Two workshops, which included different activities and guided discussions, were used to bring together stakeholders that collaborated in a joint effort to perform one of the stakeholder analyses (Chapter 3) or develop the stakeholder-shared vision (Chapter 5). Key informant interviews were conducted to validate the stakeholder list initially produced by the research team and to pilot the questions used for the stakeholder analysis carried out in Spain (Chapter 4). The use of an online web-based questionnaire in such an analysis allowed to reach a high number of stakeholders that were geographically dispersed. Different methods were also used for data analysis. Qualitative content analysis was used to analyse data gathered for the review (Chapter 2), for the stakeholder analyses (Chapters 3 and 4), and for the visioning exercise (Chapter 5). Descriptive quantitative analysis, social network analysis and an influence, interest and attitude matrix were also used to analyse data in the stakeholder analysis carried out in Spain (Chapter 4). All this shows the methodological richness of this thesis.

Since the results and other aspects of each of the studies that comprise this thesis have been already discussed in Chapters 2-5, this Discussion section aims to reflect on the lessons learned through this research journey and to propose future research directions.

Lesson 1. Although this investigation focused on the initial steps of the planning process, many aspects came to light at this early stage that forced a reflection upon the complete planning process and improve an overall understanding of such a process. To achieve final integration, the development of a CPS should not be made independently but along with the strategies needed for its integration in practice. Before starting to execute any specific step of the planning process, a planner must keep in mind four fundamental aspects: (1) the involvement of stakeholders (i.e., collaborative approach planning); (2) the definition of service components (i.e., service planning); (3) the development of strategies to address the contextual factors

that may influence the final implementation of the service (i.e., implementation strategy planning); and (4) the assessment of the health program's quality and effectiveness over the planning process (i.e., evaluation planning). All four processes are interconnected, influence each other, and should be organised simultaneously and in a coordinated manner.

Lesson 2. CPS planning processes are challenging, and it is worth investing time and resources in a preparatory phase to lay an adequate foundation for the process. The contexts in which CPSs are developed and implemented are complex and the early planning steps enhance understanding and help visualise such complexity. The research carried out in this thesis supports the idea that carrying out a stakeholder analysis and bringing stakeholders together to develop a shared vision may be useful ways to initiate the preparatory phase of CPS planning processes. McKenzie et al.[1] argue that the preparatory phase is a set of "actions that occur before planning technically begins" and so consider such a phase a 'quasi-phase' in the planning process. Taking into account the complexity of the activities that compose the preparatory phase and what their results bring to the planning process overall, it could be argued that the preparatory phase has enough entity to be considered an actual phase of the planning process. In addition to help organise the process, these early steps set the tone for the upcoming phase: the needs-assessment. Therefore, due to the usefulness of the preparatory phase, it would be recommended to promote these early steps.

Lesson 3. Stakeholder analyses are key to understanding the context both at the beginning and at subsequent phases of health innovation planning processes. These analyses allow to identify who are the stakeholders for a specific health innovation, understand their relative importance and positions, their stakes and even the resources they could mobilise to foster or hinder the planning process. Thus, stakeholder analyses facilitate that CPS planners/researchers can involve the appropriate stakeholders and prepare strategies to increase the chances of the health innovation being successfully developed, implemented and evaluated. The evidence gathered by the systematic scoping review (Chapter 2) showed that stakeholder analyses are applicable to all phases of the planning process, which supports their importance and iterative nature. The fieldwork described in Chapters 3 and 4 demonstrated the usefulness of conducting stakeholder analyses at the outset of a CPS planning process. Among the great variety of methods shown in the review, two different methods were used to conduct the stakeholder analyses in this thesis, which

revealed a difference in the depth of information obtained. The stakeholder analysis carried out in Australia (Chapter 3) provided basic information about stakeholders that allowed to understand who to involve in the following step of the planning process (i.e., the development of a stakeholder-shared vision). The stakeholder analysis performed in Spain (Chapter 4) provided in-depth information about stakeholders, their interests, their position, willingness for involvement, capacity to contribute, and relationships, that allowed to understand who to involve, but also how to involve them and when. This difference in the information that can be obtained depending on the methods used in a stakeholder analysis leads to highlight the importance to carefully consider the most valuable information to obtain and which methods to use with the available resources.

Lesson 4. Including a social network analysis (SNA) within stakeholder analysis to investigate stakeholder relationships makes a significant contribution to outlining the planning process. Stakeholder analyses that include a SNA provide access to more comprehensive information.[2] The SNA is valuable to help understand the key stakeholders and how they relate to each other, but also the resulting network visualisation may be useful in the design of communication strategies. Understanding both the stakeholders and the network they form may facilitate the design of interventions to build a strong, well-connected network that contributes to the success of the planning process. The results of the stakeholder analysis carried out in Spain (Chapter 4) showed the richness that SNA can bring to the information gathered about stakeholders, providing a better representation of the "whole picture" surrounding CPSs. Including a SNA in some of the stakeholder analyses performed throughout a planning process may allow to provide results about the evolution of stakeholder positions within the network, and the evolution of the network itself as the process proceeds.

Lesson 5. The amount and variety of stakeholders related to a CPS (as raised by the two stakeholder analyses performed) are in accordance with the idea of continuity of care in patients' journeys through the healthcare system. Such a journey involves the support of family and friends, direct interaction with a variety of healthcare professionals and indirect interaction with other stakeholders who influence patient care by designing the journey, designing or paying for the delivery of care, or making decisions that influence care, etc. Nowadays, healthcare is mainly organised in silos, which entails lack of communication between different healthcare professionals, lack of coordination, etc. Community pharmacies/pharmacists represent one of these

silos. Each "independent" group of healthcare professionals makes efforts to deliver the highest quality of care so "what they do" helps to improve patients' health and quality of life. However, from the patients' perspective, many silos imply many transitions from one silo to the other, which usually means having many stops in the journey due to lack of coordination. Thus, having healthcare professionals and other stakeholders work with greater interdependence may improve patients' journeys through the healthcare system and foster patients' continuity of care. In other words, having all stakeholders work towards achieving a shared goal may improve care, especially for chronic disease.

Lesson 6. The development of a shared vision is an opportunity to bring stakeholders face-to-face and enhance their understanding of each other and the health system as a whole. Each stakeholder/group of stakeholders knows the system from their own perspective. What each of them understands and describes is only one piece of the "whole puzzle". Coming together to develop a shared vision and listening to each other's perspectives improves everyone's understanding of the big picture and the importance of the other stakeholders. It sheds light on the contribution that each stakeholder can make to the common good. Particularly in this thesis, the visioning exercise contributed to improve the stakeholders' awareness of CPSs, and the role community pharmacists can play in healthcare. This is of utmost importance, since there is a lack of awareness among stakeholders on both CPSs and the role of community pharmacists and these are key determinants for a successful integration of the service into practice.[3]

Lesson 7. The context is ready for collaboration: Pharmacy needs to open up to other stakeholders. Pharmacy stakeholders (pharmacists, pharmacy professional organisations, pharmacy practice researchers) represent a quite endogamous group. This is reflected in facts such as: community pharmacists working in their pharmacies isolated from the other parts of the health system; CPSs usually developed with low or no involvement with non-pharmacy stakeholders; pharmacy practice researchers presenting their results mainly at pharmacy conferences, etc. It is good to maintain forums where pharmacists can debate and share their experiences to further develop the discipline. However, it would be worth fostering multidisciplinary forums where pharmacy stakeholders can also interact and develop initiatives with other stakeholders. These forums could be another way to help overcome the lack of awareness of community pharmacists' roles and CPSs mentioned. Promoting collaboration may be a win-win strategy. Stakeholders in this research welcomed

participatory approaches and showed their willingness to collaborate. Pharmacy needs to take a step forward and promote stakeholder participation in planning activities.

Lesson 8. Coordinating and improving/adapting services that already exist may be a suitable alternative to continuously "reinventing the wheel" and proposing new health services. There seems to be a tendency within the pharmacy profession to think that new services are the solution to emerging or persisting health needs. Nowadays, there are continuous attempts by scientific organisations, professional representation bodies, university researchers, etc., pursuing "their own objectives" in designing and implementing new CPSs. This probably happens because the objectives of each individual organisation will influence their ability to access resources in the future. However, it has a downside: all these attempts might be creating duplicities; confusion among patients; and overwhelm healthcare system managers/decision makers, or community pharmacists willing to implement services. In agreement with what stakeholders stated during the development of the vision (Chapter 5), the improvement of existing services to better suit the needs and the context in which they are delivered, or the adoption of evidence-based services from other settings, may represent sometimes a more suitable solution than developing new CPSs. It may be worth investigating what works, what does not and why, from what already exists to provide a foundation on which to build new efforts. Likewise, it may be worth learning how to coordinate the initiatives and efforts that different stakeholders carry out in the CPS arena and learning to incentivise stakeholders that collaborate with each other.

Lesson 9. The early involvement of diverse stakeholders in planning processes may avoid wasting time and resources. There is a need to promote early stakeholder participation in health services planning. Bringing stakeholders together to set shared goals may align efforts and resources. If they are also the ones who set the principles to guide the collaborative process and the corresponding rules, they may feel more ownership and push the process forward.[4] The moral of this situation is that collaboration may pave the way to better integration of health services. In the visioning exercise conducted as part of this thesis, stakeholders were presented with an idea that they modified to better suit their real needs and priorities (i.e., development of the vision, Chapter 5). In this particular case, stakeholders did not want to create anything new, but leverage and improve existing CPSs. This input may

allow the redirection of the research to avoid wasting time and resources, thereby creating something that stakeholders would probably not buy in the future.

Lesson 10. Organising participatory processes requires courage and humility. Courage is needed because participatory processes are not easy. Stakeholders' priorities, interests, powers, political agendas, etc. must be adequately handled. Skilled facilitation is very important to ensure that all participants are heard, that power differentials do not bias the process, and that pre-existing conflicts or conflicts that arise during the processes are properly managed.[5-7] The development of skills to deal with the variety of stakeholders in a planning process is essential and is a suggested topic for further research. On the other hand, humility is necessary because participation, depending on the level of stakeholder involvement, means that those initially launching the participatory process must be ready to accept that their original idea will probably not be the one finally developed, that they must be ready to share power, and that they will probably need to cede control over the project.[4, 8, 9] Humility is also necessary to admit that one does not know everything and is ready to learn as the process unfolds.

Lesson 11. Participatory research processes should not be organised within the timelines of traditional research. Working with stakeholders is complex and timelines are not easy to handle. Finding contact details and contacting stakeholders, preparing the materials to explain the initiative being proposed and how stakeholders could benefit from it, building relationships, finding how to combine stakeholder agendas, searching their agreement, providing them with feedback, etc. is time-consuming and such efforts are not always acknowledged. To illustrate this point, in a study undertaken to develop a community-based falls prevention medication therapy management provided by pharmacists, it took approximately 12 months to design the planning process and build relationships.[10] Trying to fit all the participatory process activities within the timelines of traditional research may lead to underperformance and frustration. Reward and recognition systems for researchers are often based on obtaining a tangible "final product", but it is important to recognise the attainment of intangible results such as creating awareness, building relationships, building trust, etc. and not ignoring the long-term benefits that those may produce. Future research on how to measure the intangible results of research and corresponding reward systems is suggested.

Lesson 12. Training in cross-disciplinary collaboration is still a pending subject within healthcare. Interest in multidisciplinary/interdisciplinary approaches is notably increasing, but it needs to be pushed further forward in order to reap its full benefits. Ways to interact and collaborate with other stakeholders should be taught during the training period of healthcare professionals.[11, 12] In addition to specific knowledge of the discipline, this training would help contextualise the discipline within the wider healthcare system and overcome the prejudices that healthcare professionals may have towards others. The same applies to the research arena. Training researchers in participatory research approaches may foster cross-disciplinary collaborations in research.

Lesson 13. An effort should be made to increase the quantity and quality of reports describing the steps followed in planning processes and so be able to analyse the quality and usefulness of these steps. The traditional restrictions in space and words in scientific articles that could limit the existence of detailed reports in this area may be currently overcome by the online publication of journals.[13, 14] As an example, this thesis resulted in three published reports of the first two steps of a collaborative CPS planning process. This may inspire other researchers and planners to report their current and future work. Moreover, as per discussed in Chapter 2, this thesis also provided the RISA tool to enhance the report of stakeholder analyses, which may contribute to increase the quality and transparency of future stakeholder analyses. To complement this, future research and reporting is suggested on the strategies used to maintain the transparency of participatory processes and how achievements and failures are discussed with stakeholders during the planning process. All this would contribute to increase the quality of participatory planning processes and stakeholder trust in these processes.

As a final reflection, looking at the overall scenario, the evolution of pharmacy practice and CPSs could fit into what Covey defined as the *Maturity Continuum*.[15] In this continuum, to become mature, there is a process that departs from dependence ("paradigm of you" – "you take care of me"), goes through independence ("paradigm of I" – "I can do it") until arriving at interdependence ("paradigm of we" – "we can do it"; merging our skills and resources we can achieve greater results than on our own). It could be said that the dependence stage in pharmacy practice corresponds to a feeling of the need to convince others (or even ourselves) of our capability by *saying* that we can do it. Some reminiscence of this stage may still be identified in publications when it is stated that pharmacists are skilled professionals, well trained,

etc. It is unusual to find this kind of statement, if at all, in publications written by more mature professions (e.g., articles stating that physicians are well-trained professionals). Maybe these types of statements are unconsciously made in pharmacy practice publications in search of a green light to continue. It could be said that current pharmacy practice and CPSs have come to the independence stage by *demonstrating* their abilities with results. Being in this stage might explain the endogamy of the pharmacy sector. There begins to be a push to further progress into the interdependence stage; a push towards which this research tried to contribute. Offering our abilities and resources to other stakeholders, as well as accessing theirs, will enable us to obtain better outcomes for patients' health and quality of life, and facilitate greater satisfaction for all professionals involved in patient care. The time has come to foster collaboration and allow the discipline to reach full maturity.

References

1. McKenzie JF, Neiger BL, Thackeray R. Planning, Implementing & Evaluating Health Promotion Programs, A Primer: 7th ed. United States, WA: Pearson; 2016.

2. Lienert J, Schnetzer F, Ingold K. Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. J Environ Manag. 2013;125:134-148.

3. Hossain LN, Tudball J, Franco-Trigo L, Durks D, Benrimoj SI, Sabater-Hernández D. A multilevel stakeholder approach for identifying the determinants of implementation of government-funded community pharmacy services at the primary care level. Res Soc Admin Pharm. 2018;14:765-775.

4. Ray KN, Miller E. Strengthening stakeholder-engaged research and research on stakeholder engagement. *J Comp Eff Res.* 2017;6:375-389.

5. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. Annu Rev Public Health. 2008;29:325-350.

6. Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26:124-128.

7. Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement Stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

8. Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. Engagement strategies that foster community self-determination in participatory research: Insider ownership through outsider championship. *Fam Pract.* 2017;34:336-340.

9. Sorensen EW, Haugbolle LS. Using an action research process in pharmacy practice research--a cooperative project between university and internship pharmacies. *Res Soc Admin Pharm.* 2008;4:384-401.

10. Mott DA, Martin B, Breslow R, et al. The development of a community-based, pharmacist-provided falls prevention mtm intervention for older adults: Relationship building, methods, and rationale. *Innov Pharm.* 2014;5:140.

11. El-Awaisi A, Joseph S, El Hajj MS, Diack L. A comprehensive systematic review of pharmacy perspectives on interprofessional education and collaborative practice. *Res Soc Admin Pharm.* 2018;14:863-882.

12. Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health policy.* 2015;119:628-639.

13. Hughes CM, Cadogan CA, Ryan CA. Development of a pharmacy practice intervention: lessons from the literature. *Int J Clin Pharm.* 2016;38:601-606.

14. Michie S, Fixsen D, Grimshaw JM, Eccles MP. Specifying and reporting complex behaviour change interventions: the need for a scientific method. *Implement Sci.* 2009;4:40.

15. Covey S. *The 7 habits of highly effective people: Powerful lessons in personal change*. New York: Simon & Schuster; 2013.

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Capítulo 6

Discusión: Lecciones aprendidas y futuras investigaciones

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Discusión: lecciones aprendidas y futuras investigaciones

Esta tesis facilita la comprensión general del desarrollo participativo de SPFA. Contribuye a mejorar el conocimiento sobre los procesos de planificación de estos servicios, abordando principalmente la fase de preparación, y demuestra el valor de los análisis de actores y el desarrollo de visiones para centrar los esfuerzos de planificación. En la tesis se presentan informes detallados de los dos primeros pasos del proceso de planificación de un SPFA y, como documentar estos procesos no es habitual, este trabajo puede servir de ejemplo a otros investigadores involucrados en tareas similares.

En particular, en esta memoria de tesis, se ha presentado una síntesis de información sobre el uso, pasos y métodos seguidos para los análisis de actores en procesos de planificación de innovaciones sanitarias, así como información sobre qué atributos de los actores se analizan (Capítulo 2). También se ha presentado una guía para describir detalladamente los análisis de actores (la guía RISA) lo que, a su vez, puede facilitar la evaluación y mejora de dichos análisis.

Además, se han aplicado y descrito dos metodologías diferentes para realizar análisis de actores como primer paso del proceso de planificación de SPFA. Estos estudios, llevados a cabo en Australia (Capítulo 3) y España (Capítulo 4), resaltaron las ventajas y utilidad de los análisis de actores en la fase de preparación de tales procesos. Sus resultados mostraron la cantidad y variedad de actores que pueden influir en los SPFA y, por tanto, deben considerarse para planificar dichos servicios. El análisis de actores realizado en España también mostró que los actores relacionados con un SPFA no estaban aislados, sino interconectados y formando parte de una red. El análisis en Australia, además, puso de manifiesto necesidades y carencias en el cuidado cardiovascular y el papel que pueden desempeñar los farmacéuticos comunitarios en el abordaje de este problema de salud pública.

Por otro lado, para poner en práctica el segundo paso del proceso de planificación, se desarrolló una visión conjunta de los actores para el proceso iniciado en Australia y se identificaron las iniciativas para alcanzar dicha visión (Capítulo 5). Desarrollar una visión conjunta de los actores demostró ser de utilidad para establecer una base común durante la fase de preparación en la planificación de SPFA. Esto dio como resultado un modelo para el cuidado crónico, el NSW-MCC, que es práctico para

entender y anticipar dificultades a las que hay enfrentarse durante los procesos de planificación. Este modelo, a pesar de estar desarrollado en el contexto de NSW, podría ser valioso en otros contextos.

Desde el punto de vista metodológico, esta tesis ha incluido investigación tanto cualitativa como de método mixto. El abordaje cualitativo resultó útil para explorar y describir la realidad en torno a los pasos de planificación de SPFA estudiados, obteniendo información amplia y pormenorizada. El abordaje de método mixto combinó perspectivas cualitativas y cuantitativas, añadiendo el rigor y objetividad del abordaje cuantitativo a las ventajas de la investigación cualitativa. La recolección de datos se llevó a cabo utilizando métodos variados. Se realizó una *scoping review* para recopilar información sobre el uso y métodos para el análisis de actores, un tema apenas explorado en este área de conocimiento (Capítulo 2). Se utilizaron dos talleres, que incluían distintas actividades y conversaciones guiadas, para reunir a los actores que colaboraron para realizar un análisis de actores (Capítulo 3) o desarrollar una visión conjunta (Capítulo 5). Se llevaron a cabo entrevistas a informantes clave para validar el listado de actores inicialmente creado por el equipo investigador y para pilotar las preguntas utilizadas en el análisis de actores realizado en España (Capítulo 4). El uso de un cuestionario en línea en este análisis permitió llegar a un gran número de actores que se encontraban geográficamente dispersos. Por otro lado, se utilizaron también métodos variados para el análisis de datos. El análisis cualitativo de contenido se utilizó para analizar los datos recopilados en la revisión (Capítulo 2), para los análisis de actores (Capítulos 3 y 4), y para el ejercicio de desarrollo de una visión (Capítulo 5). También se utilizaron análisis cuantitativo descriptivo, análisis de redes sociales y una matriz de influencia, interés y actitud para analizar datos en el análisis de actores realizado en España (Capítulo 4). Todo ello muestra la riqueza metodológica de esta tesis.

Como los resultados y otros aspectos de cada uno de los estudios que componen esta tesis se han discutido ya en los Capítulos 2-5, esta sección de Discusión tiene como objetivo hacer una reflexión sobre las lecciones aprendidas a través de esta experiencia de investigación y proponer direcciones de investigación para el futuro.

Lección 1. Aunque esta investigación se ha centrado en los pasos iniciales del proceso de planificación de SPFA, han salido a la luz muchos aspectos que forzaron una reflexión sobre el proceso en su totalidad y mejorar así la comprensión general del mismo. Para lograr la integración final, el desarrollo de un SPFA no se debe realizar de forma independiente, sino junto con las estrategias necesarias para dicha

integración en la práctica. Antes de empezar a ejecutar cualquier paso específico del proceso de planificación, un planificador debe tener en cuenta cuatro aspectos fundamentales: (1) la involucración de actores (planificación del abordaje colaborativo); (2) la definición de los componentes del servicio (planificación del servicio); (3) el desarrollo de estrategias para abordar los factores contextuales que pueden influir en la implantación final del servicio (planificación de la estrategia de implantación); y (4) el análisis de la calidad y efectividad del programa sanitario a lo largo del proceso de planificación (planificación de la evaluación). Estos cuatro procesos están interconectados e influyen entre sí, por lo que deben organizarse de forma simultánea y coordinada.

Lección 2. Los procesos de planificación de SPFA son complicados y merece la pena invertir tiempo y recursos en una fase de preparación para sentar las bases adecuadas para el proceso. Los contextos en los que se desarrollan e implantan SPFA son complejos, y los pasos tempranos en la planificación mejoran su comprensión y ayudan a visualizar tal complejidad. La investigación llevada a cabo en esta tesis respalda la idea de que efectuar un análisis de actores y reunirlos para desarrollar una visión conjunta es una forma útil de iniciar la fase de preparación del proceso de planificación de un SPFA. McKenzie et al.[1] sostienen que la fase de preparación es un conjunto de "acciones que ocurren antes de que la planificación comience técnicamente" y, por tanto, consideran que dicha fase es una "cuasi-fase" en el proceso de planificación. Teniendo en cuenta la complejidad de las actividades que componen la fase de preparación y lo que sus resultados aportan al proceso de planificación en general, se podría argumentar que la fase de preparación tiene suficiente entidad como para que se le considere una fase real del proceso de planificación. Además de ayudar a organizar el proceso, estos primeros pasos marcan el rumbo para la siguiente fase: el análisis de necesidades. Por tanto, debido a la utilidad de la fase de preparación, sería conveniente promover los pasos que la componen.

Lección 3. Los análisis de actores son clave para entender el contexto tanto al inicio como en las fases posteriores de los procesos de planificación de innovaciones sanitarias. Estos análisis permiten identificar quién son los actores relacionados con una innovación sanitaria específica, entender su importancia relativa y posiciones, sus intereses, e incluso los recursos que podrían movilizar para impulsar o dificultar el proceso de planificación. Por ello, los análisis de actores facilitan que los planificadores/investigadores de SPFA puedan involucrar a los actores adecuados y

preparar estrategias para incrementar las posibilidades de éxito del desarrollo, implantación y evaluación del servicio. La evidencia recabada en la *scoping review* sistemática (Capítulo 2) mostró que los análisis de actores eran aplicables a todas las fases del proceso de planificación, lo cual respalda su importancia y naturaleza iterativa. El trabajo de campo descrito en los Capítulos 3 y 4 demostró la utilidad de llevar a cabo análisis de actores al inicio del proceso de planificación de SPFA. Entre la gran variedad de métodos mostrados en la revisión, dos se utilizaron para realizar los análisis de actores en esta tesis, lo que puso de manifiesto una diferencia en la profundidad de la información obtenida con ellos. El análisis de actores realizado en Australia (Capítulo 3) proporcionó información básica sobre éstos, que permitió entender a quién involucrar en el siguiente paso del proceso de planificación (el desarrollo de una visión conjunta de los actores). El análisis llevado a cabo en España (Capítulo 4) proporcionó información pormenorizada sobre los actores, sus intereses, su posición, voluntad de participación, capacidad para contribuir y relaciones, que permitió entender a quién involucrar, pero también cómo y cuándo involucrarlos. Esta diferencia en la información que se puede obtener en un análisis de actores según qué métodos se utilice lleva a resaltar la importancia de valorar cuidadosamente qué información es más valiosa y qué métodos usar para obtenerla con los recursos disponibles.

Lección 4. Incluir un análisis de redes sociales (ARS) dentro del análisis de actores para investigar las relaciones entre ellos contribuye significativamente a esbozar el proceso de planificación. Los análisis de actores que incluyen un ARS brindan acceso a información más completa.[2] El ARS es valioso para ayudar a entender los actores clave y cómo se relacionan entre sí pero, además, la visualización de la red resultante puede ser útil para el diseño de estrategias de comunicación. Entender los actores y las redes que forman puede facilitar el diseño de intervenciones para construir una red sólida y bien conectada que contribuya al éxito del proceso de planificación (ej.: movilizando recursos, facilitando la implantación del SPFA, etc.). Los resultados del análisis de actores realizado en España (Capítulo 4) mostraron la riqueza que el ARS puede aportar a la información recabada sobre los mismos, proporcionando una mejor representación del panorama general que rodea los SPFA. Incluir un ARS en algunos de los análisis de actores realizados a lo largo de un proceso de planificación puede permitir generar resultados sobre la evolución de la posición de los actores dentro de la red, y la evolución de la propia red a medida que avanza el proceso.

Lección 5. La cantidad y variedad de actores relacionados con un SPFA (según se muestra en los dos análisis de actores realizados) concuerdan con la idea de continuidad de la atención sanitaria en los viajes de los pacientes a través del sistema sanitario. Tal viaje implica el apoyo de familiares y amigos, la interacción directa con una variedad de profesionales sanitarios y la interacción indirecta con otros actores que influyen en la atención sanitaria al paciente porque diseñan el viaje a través del sistema, diseñan o pagan por la prestación de la asistencia, toman decisiones que influyen en la atención, etc. En la actualidad, la atención sanitaria se organiza principalmente en silos, lo que conlleva falta de comunicación entre distintos profesionales sanitarios, falta de coordinación, etc. Las farmacias comunitarias/los farmacéuticos comunitarios representan uno de estos silos. Cada grupo "independiente" de profesionales sanitarios se esfuerza para brindar atención sanitaria de la más alta calidad, de manera que "lo que hacen" ayuda a mejorar la salud y calidad de vida de los pacientes. Sin embargo, desde la perspectiva del paciente, muchos silos implican muchas transiciones de un silo a otro, lo que generalmente se traduce en muchas paradas en el viaje debido a la falta de coordinación. Por tanto, el que los profesionales sanitarios y otros actores trabajen con mayor interdependencia puede mejorar el viaje de los pacientes a través del sistema sanitario y fomentar la continuidad en la atención sanitaria. En otras palabras, que todos los actores trabajen por la consecución de una meta común puede mejorar la atención sanitaria, especialmente en enfermedades crónicas.

Lección 6. El desarrollo de una visión conjunta es una oportunidad para reunir a los actores cara a cara y mejorar su entendimiento de los demás y del sistema sanitario en general. Cada actor o grupo de actores conoce el sistema desde su propia perspectiva. Lo que cada uno de ellos entiende y describe es sólo una pieza del "puzle entero". Reunirse para desarrollar una visión compartida y escuchar las perspectivas de los demás mejora la comprensión de todos sobre el panorama general y la importancia de los demás actores, arrojando luz sobre la contribución que puede hacer cada uno de ellos al bien común. En concreto, en esta tesis, el desarrollo de la visión conjunta contribuyó a mejorar el conocimiento de los actores sobre los SPFA y el papel que los farmacéuticos comunitarios pueden desempeñar en la atención sanitaria. Todo esto es de suma importancia, ya que existe una falta de concienciación de los actores sobre los SPFA y el papel que los farmacéuticos comunitarios pueden jugar, y éstos son determinantes clave para la integración de servicios en la práctica.[3]

Lección 7. El contexto está preparado para colaborar: la farmacia debe abrirse a otros actores. Los actores del mundo de la farmacia (farmacéuticos, organizaciones profesionales farmacéuticas, investigadores en farmacia asistencial) representan un grupo bastante endogámico. Esto se refleja en hechos como que los farmacéuticos comunitarios trabajen en sus farmacias aislados de otras partes del sistema sanitario; que los SPFA se desarrollen habitualmente con poca o ninguna participación de actores que no sean del mundo de la farmacia; que los investigadores en farmacia asistencial presenten sus resultados principalmente en congresos de farmacia, etc. Es bueno mantener foros en los que los farmacéuticos puedan debatir y compartir sus experiencias para seguir desarrollando la disciplina. Sin embargo, merecería la pena fomentar foros multidisciplinares donde los actores del mundo de la farmacia puedan también interactuar y desarrollar iniciativas con otros actores. Estos foros podrían constituir otro modo de contribuir a superar la falta de conocimiento sobre el papel de los farmacéuticos comunitarios y los SPFA mencionado anteriormente. Promover la colaboración puede ser una estrategia "ganar-ganar". Los actores en esta investigación acogieron positivamente el abordaje participativo y mostraron su voluntad de colaborar. El mundo de la farmacia necesita dar un paso adelante y promover la participación de otros actores en las actividades de planificación.

Lección 8. Coordinar y mejorar/adaptar servicios que ya existen puede ser una alternativa adecuada a "reinventar la rueda" y proponer nuevos servicios sanitarios continuamente. Parece que, dentro de la profesión farmacéutica, hay una tendencia a pensar que la solución a necesidades sanitarias emergentes o persistentes son los nuevos servicios. Hoy en día, organizaciones científicas, organizaciones de representación profesional, investigadores universitarios, etc. persiguen "sus propios objetivos" realizando intentos continuos de diseño e implantación de nuevos SPFA. Esto probablemente ocurra porque los objetivos de cada organización individual influirán en su capacidad para acceder a recursos en el futuro. Sin embargo, tiene un inconveniente: todos estos intentos pueden estar creando duplicidades; confusión entre los pacientes; y abrumar a los gerentes/tomadores de decisiones del sistema sanitario, o a los farmacéuticos comunitarios dispuestos a implantar servicios. De acuerdo con lo expresado por los actores durante el desarrollo de la visión (Capítulo 5), mejorar servicios que ya existen para que se adapten mejor a las necesidades y contexto en el que se prestan, o adoptar servicios basados en evidencia de otros contextos, puede representar a veces una solución más adecuada que el desarrollo de nuevos SPFA. Puede merecer la pena investigar qué funciona, qué no funciona y por qué, de lo que ya existe, para proporcionar una base sobre la que construir

nuevos esfuerzos. Asimismo, podría ser de utilidad aprender cómo coordinar las iniciativas y esfuerzos que realizan diferentes actores en el ámbito de los SPFA, y aprender a incentivar a los actores que colaboran entre sí.

Lección 9. La participación temprana de diversos actores en los procesos de planificación puede evitar el malgasto de tiempo y recursos. Es necesario promover la participación temprana de actores en la planificación de servicios sanitarios. Reunir a los actores para establecer metas comunes puede alinear esfuerzos y recursos. Si además son ellos quienes establecen los principios para guiar el proceso colaborativo y las normas correspondientes, es posible que sientan mayor apropiación e impulsen el proceso hacia adelante.[4] La moraleja de esta situación es que la colaboración puede allanar el camino para integrar mejor los servicios sanitarios. En el ejercicio de desarrollo de una visión llevado a cabo en esta tesis, se les presentó a los actores participantes una idea que ellos modificaron para que respondiese mejor a sus necesidades y prioridades (Capítulo 5). En este caso, los actores no querían crear nada nuevo, sino aprovechar y mejorar los SPFA que ya existían. Esta información puede permitir reorientar la investigación y así evitar perder tiempo y recursos desarrollando algo que los actores probablemente rechazarían en el futuro.

Lección 10. Organizar procesos participativos requiere coraje y humildad. Se necesita coraje porque los procesos participativos no son fáciles, deben manejarse adecuadamente las prioridades, intereses, poder, agenda política, etc. de los actores. La facilitación especializada es muy importante para garantizar que se escuche a todos los participantes, que las diferencias de poder no introduzcan sesgos, y que se gestionen debidamente conflictos preexistentes o aquellos que surjan durante el proceso.[5-7] El desarrollo de habilidades para lidiar con la variedad de actores en un proceso de planificación es esencial y es un tema que se propone para investigaciones que se lleven a cabo en el futuro. Por otro lado, se necesita humildad porque la participación, dependiendo del nivel al que se involucra a los actores, significa que aquellos que originan el proceso participativo deben estar preparados para aceptar que su idea original probablemente no sea la que se acabe desarrollando, que deben estar preparados para compartir el poder, y que probablemente tendrán que ceder el control sobre el proyecto.[4, 8, 9] También es necesaria humildad para admitir que uno no lo sabe todo y está preparado para aprender a lo largo del proceso.

Lección 11. La organización de procesos participativos no se debería llevar a cabo dentro de los plazos utilizados en la investigación tradicional. Trabajar con actores es complejo y los plazos no son fáciles de manejar. Encontrar los datos de contacto de los actores y contactar con ellos, preparar los materiales para explicar la iniciativa que se propone y cómo los actores se podrían beneficiar de ella, establecer relaciones, combinar las agendas de los distintos actores, establecer acuerdos, informarlos, etc. lleva tiempo y son esfuerzos que no siempre se reconocen. A modo de ejemplo, en un estudio realizado para desarrollar una intervención comunitaria de gestión de la medicación de prevención de caídas llevada a cabo por farmacéuticos, llevó aproximadamente 12 meses diseñar el proceso de planificación y establecer relaciones.[10] Tratar de encajar todas las actividades que requieren los procesos participativos dentro de los plazos de la investigación tradicional puede conducir a un rendimiento insuficiente y frustración. Los sistemas de recompensa y reconocimiento para los investigadores a menudo se basan en la obtención de un "producto final" tangible, pero es importante reconocer el logro de resultados intangibles como concienciar, crear relaciones, crear confianza, etc. y no ignorar los beneficios que pueden producir a largo plazo. Se sugiere investigar en el futuro sobre cómo medir los resultados intangibles de la investigación y los sistemas de recompensa correspondientes.

Lección 12. La formación en colaboración interdisciplinar sigue siendo una asignatura pendiente en el área de la salud. El interés en abordajes multidisciplinares/interdisciplinares está incrementando notablemente, pero se debe impulsar más allá para recoger todos los beneficios que comporta. Debe enseñarse cómo interactuar y colaborar con otros actores durante el periodo de formación de los profesionales sanitarios.[11, 12] Además del conocimiento específico de la disciplina, esta formación ayudaría a contextualizar la disciplina dentro del sistema sanitario y superar los prejuicios que los profesionales sanitarios puedan tener entre ellos. Lo mismo ocurre en el ámbito de la investigación, formar a los investigadores en abordajes participativos puede impulsar colaboraciones interdisciplinares en investigación.

Lección 13. Se debería realizar un esfuerzo para aumentar la cantidad y calidad de descripciones de los pasos seguidos en los procesos de planificación y así poder analizar la calidad y utilidad de dichos pasos. Las restricciones de espacio y palabras impuestas tradicionalmente en los artículos científicos que podrían limitar la existencia de descripciones detalladas en este área se pueden superar actualmente

mediante la publicación de revistas en línea.[13, 14] En esta tesis se presentan tres informes publicados de los dos primeros pasos de un proceso de planificación participativa de SPFA. Esto puede inspirar a otros investigadores y planificadores a describir su trabajo actual y futuro. Además, tal y como se ha mencionado en el Capítulo 2, esta tesis también ha proporcionado la herramienta RISA para mejorar las descripciones de análisis de actores, lo que puede contribuir a aumentar la calidad y transparencia de futuros análisis de este tipo. Para complementar esto, se sugiere que en el futuro se realicen investigaciones y se describan las estrategias utilizadas para mantener la transparencia de los procesos participativos y cómo se discuten los logros y fracasos con los actores a lo largo del proceso de planificación. Todo esto contribuiría a aumentar la calidad de los procesos de planificación participativos y la confianza de los actores en estos procesos.

Como reflexión final, observando la situación general, la evolución de la farmacia asistencial y de los SPFA podría encajar en lo que Covey definió como *Continuum* de Madurez.[15] En este continuum, para llegar a la madurez, hay un proceso que parte de la dependencia ("paradigma del tú" —"tú cuidas de mí"—), pasa por la independencia ("paradigma del yo" —"yo puedo hacerlo"—) hasta llegar a la interdependencia ("paradigma del nosotros" —"nosotros podemos hacerlo"—; combinando nuestras habilidades y recursos podemos alcanzar mejores resultados que por nosotros mismos). Se podría decir que la etapa de dependencia en farmacia asistencial se corresponde con la necesidad de convencer a los demás (o incluso a nosotros mismos) de nuestra capacidad *diciendo* que podemos hacerlo. Algunas reminiscencias de esta etapa aún se pueden identificar en las publicaciones cuando se afirma que los farmacéuticos son profesionales capacitados, bien formados, etc. Es inusual encontrar este tipo de afirmaciones, si es que existen, en publicaciones escritas en profesiones más maduras (ej. artículos afirmando que los médicos son profesionales bien formados). Tal vez este tipo de declaraciones se hagan inconscientemente en las publicaciones de farmacia asistencial en busca de una luz verde para continuar. Se podría decir que actualmente la farmacia asistencial y los SPFA han llegado a la etapa de independencia *demostrando* las habilidades con resultados. Estar en esta etapa podría explicar la endogamia en el sector farmacéutico. Empieza a haber un impulso para avanzar más allá, hacia la etapa de interdependencia; impulso al que ha intentado contribuir esta tesis. Ofrecer nuestras habilidades y recursos a otros actores, así como acceder a los suyos, nos permitirá obtener mejores resultados en la salud y calidad de vida de los pacientes, y proporcionará mayor satisfacción a todos los profesionales involucrados en la

atención al paciente. Ha llegado el momento de fomentar la colaboración y permitir que la disciplina alcance plena madurez.

Referencias

1. McKenzie JF, Neiger BL, Thackeray R. Planning, Implementing & Evaluating Health Promotion Programs, A Primer: 7th ed. United States, WA: Pearson; 2016.

2. Lienert J, Schnetzer F, Ingold K. Stakeholder analysis combined with social network analysis provides fine-grained insights into water infrastructure planning processes. J Environ Manag. 2013;125:134-148.

3. Hossain LN, Tudball J, Franco-Trigo L, Durks D, Benrimoj SI, Sabater-Hernández D. A multilevel stakeholder approach for identifying the determinants of implementation of government-funded community pharmacy services at the primary care level. Res Soc Admin Pharm. 2018;14:765-775.

4. Ray KN, Miller E. Strengthening stakeholder-engaged research and research on stakeholder engagement. *J Comp Eff Res.* 2017;6:375-389.

5. Cargo M, Mercer SL. The value and challenges of participatory research: strengthening its practice. Annu Rev Public Health. 2008;29:325-350.

6. Hinchcliff R, Greenfield D, Braithwaite J. Is it worth engaging in multi-stakeholder health services research collaborations? Reflections on key benefits, challenges and enabling mechanisms. *Int J Qual Health Care.* 2014;26:124-128.

7. Luyet V, Schlaepfer R, Parlange MB, Buttler A. A framework to implement Stakeholder participation in environmental projects. *J Environ Manag.* 2012;111:213-219.

8. Salsberg J, Macridis S, García Bengoechea E, Macaulay AC, Moore S. Engagement strategies that foster community self-determination in participatory research: Insider ownership through outsider championship. *Fam Pract.* 2017;34:336-340.

9. Sorensen EW, Haugbolle LS. Using an action research process in pharmacy practice research--a cooperative project between university and internship pharmacies. *Res Soc Admin Pharm.* 2008;4:384-401.

10. Mott DA, Martin B, Breslow R, et al. The development of a community-based, pharmacist-provided falls prevention mtm intervention for older adults: Relationship building, methods, and rationale. *Innov Pharm.* 2014;5:140.

11. El-Awaisi A, Joseph S, El Hajj MS, Diack L. A comprehensive systematic review of pharmacy perspectives on interprofessional education and collaborative practice. *Res Soc Admin Pharm.* 2018;14:863-882.

12.   Mossialos E, Courtin E, Naci H, et al. From "retailers" to health care providers: Transforming the role of community pharmacists in chronic disease management. *Health policy.* 2015;119:628-639.

13.   Hughes CM, Cadogan CA, Ryan CA. Development of a pharmacy practice intervention: lessons from the literature. *Int J Clin Pharm.* 2016;38:601-606.

14.   Michie S, Fixsen D, Grimshaw JM, Eccles MP. Specifying and reporting complex behaviour change interventions: the need for a scientific method. *Implement Sci.* 2009;4:40.

15.   Covey S. *The 7 habits of highly effective people: Powerful lessons in personal change*. New York: Simon & Schuster; 2013.

Chapter 7

Conclusions

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Conclusions

- Stakeholder analyses are applied to all phases of health innovations planning processes. In the initial phases of the process, stakeholder analyses are used to understand the implementation context of the innovation, to identify who to involve in the process or to understand whose interests should be taken into account. In the latter phases of the process, stakeholder analyses are also used to understand the implementation context, but also to assess success or failure based on how previous phases unfolded, and to understand how the planning process or the innovation were shaped by stakeholders. To perform stakeholder analyses, a plethora of methods are used, for example, research team brainstorming, expert or stakeholder consultations, interviews, questionnaires or group discussions. These methods are, in turn, combined in different ways. A variety of stakeholder attributes are investigated, such as the attitude or position towards the project, power, influence, level of interest, legitimacy, etc. (Chapter 2)

- There was great variability in how stakeholder analyses are reported in the literature. A tool based on existing theory and tested in practice has been proposed to guide the systematic reporting of stakeholder analyses (i.e., the RISA tool). This is a comprehensive tool including items to facilitate reporting of the stakeholder analysis context; the application of methods to identify stakeholders and their stakes, their categorisation or prioritisation, and the investigation of their relationships; and to facilitate reporting of the actions and stakeholder engagement activities to be carried out considering the results of the analysis. (Chapter 2)

- The two methodologies used to carry out stakeholder analysis for the identification and initial engagement of stakeholders contributed to an understanding of the context where CPSs were meant to be implemented and provided different levels of information on and from stakeholders. Both methodologies were found to be useful for understanding the wide range of individuals and organisations that may have relevance and interest in the development of a CPS aimed at preventing CVD. The stakeholder analysis carried out in Australia (Chapter 3) provided information to proceed to the next step of the process, the development of a stakeholder-shared vision. The stakeholder analysis with social network analysis carried out in Spain (Chapter

4) provided richer information, that allowed drawing a first outline of how stakeholders may be involved beyond the next step of the process. Some stakeholders were identified that could contribute to assessing the needs, developing the service components, developing implementation strategies or evaluating the service.

- Stakeholders were identified across the entire healthcare system, both in Australia and Spain, supporting the need to draw from multilevel and multidisciplinary stakeholder groups to better plan and integrate CPSs and community pharmacists into primary care. (Chapters 3 and 4)

- For the development of a CPS aimed at preventing CVD in NSW (Chapter 3), 12 of the 46 identified stakeholders were considered a "core group" that may drive or hinder the planning process. These stakeholders had complementary roles and were suitable for involvement in the next step of the planning process (development of the stakeholder-shared vision). The secondary information produced in the stakeholder analysis was found to be useful in the preparation of the introductory part of the subsequent visioning workshop. This information was related to current gaps and needs in cardiovascular care, the possible roles that community pharmacists may play, and factors affecting the implementation of the CPS.

- For the development of a CPS aimed at preventing CVD in Andalucía (Chapter 4), a group of 57 critical stakeholders was selected for involvement over the potential planning process out of the 217 stakeholders identified. Information on stakeholder attitudes, potential contributions and desire for involvement was valuable in deciding who to involve in the different phases of the planning process and how. The stakeholder collaboration network identified in the research, the stakeholder willingness to collaborate in the process and the variety of critical stakeholder profiles, supported the need to avoid silos when planning CPSs and to foster participatory approaches.

- The development of a stakeholder-shared vision (Chapter 5) led to define 7 general principles of care to guide chronic care in NSW, which were: patient-centred care, multidisciplinary team approach, shared goals, long-term care relationships, evidence-based practice, ease of access to healthcare settings and services by patients, and good communication and coordination. This vision also included 6 factors that may influence the implementation of the principles of care, which were payment systems, health funding, financial incentives,

electronic systems, evaluation systems and health system organisational changes. The principles of care and factors to their implementation, combined with the stakeholder groups previously identified, resulted in a model of chronic care (i.e., the NSW-MCC). Twenty-four initiatives necessary to achieve the stakeholder-shared vision were identified and two of them were given the most priority by stakeholders: (1) enhancing the teamwork, including co-designing of protocols and effective communication between members of the healthcare team; and (2) conducting a needs assessment to prioritise and focus health planning efforts.

- The model of chronic care developed for NSW (Chapter 5), may serve as a starting point to inspire the development of CPSs and health services in general, or to plan research in other settings.

- Overall, conducting a stakeholder analysis and developing a stakeholder-shared vision were found to be useful initial steps in the preparatory phase of a CPS planning process, and provided useful insights on which to base planning efforts.

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Capítulo 7

Conclusiones

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Conclusiones

- Los análisis de actores se aplican en todas las fases de los procesos de planificación de innovaciones sanitarias. En las fases iniciales del proceso, se usan para entender el contexto de implantación de las innovaciones, para identificar a quién involucrar en el proceso o entender qué intereses han de tenerse en cuenta. En fases más avanzadas del proceso, también se usan para entender el contexto de implantación y, además, para comprender cómo se desarrollaron las fases previas del proceso y así evaluar el éxito o fracaso, y también para entender cómo los actores moldearon el proceso de planificación o la innovación. Para llevarlos a cabo, se utilizan una gran cantidad de métodos, por ejemplo, tormenta de ideas del equipo de investigación, consulta de expertos o actores, entrevistas, cuestionarios o conversaciones grupales. Estos métodos, a su vez, pueden combinarse de diferentes maneras. Asimismo, se investigan una variedad de atributos de los actores, como la actitud o posición del actor hacia el proyecto, poder, influencia, nivel de interés, legitimidad, etc. (Capítulo 2)

- Se encontró gran variabilidad con respecto a cómo se describen los análisis de actores en la literatura. Para guiar la descripción sistemática de estos análisis, se propuso una herramienta basada en la teoría existente y probada de forma práctica en la revisión, la herramienta RISA. Ésta es una herramienta completa que incluye ítems para facilitar la descripción del contexto del análisis de actores; la aplicación de métodos para identificar actores y sus intereses, categorizarlos o priorizarlos, e investigar sus relaciones; e ítems para facilitar la descripción de las acciones e involucración de actores derivadas de los resultados del análisis. (Capítulo 2)

- Las dos metodologías utilizadas para realizar los análisis de actores para la identificación e involucración inicial de actores contribuyeron a un mayor entendimiento del contexto en el que se pretendían implantar los SPFA y proporcionaron información con distinto nivel de profundidad sobre los actores. Ambas metodologías fueron útiles para entender la amplia gama de individuos y organizaciones que pueden tener relevancia e intereses en el desarrollo de un SPFA orientado a prevenir la ECV. El análisis de actores llevado a cabo en Australia (Capítulo 3) proporcionó suficiente información para proceder con el siguiente paso del proceso, el desarrollo de una visión

conjunta de los actores. El análisis de actores con análisis de redes sociales realizado en España (Capítulo 4) proporcionó una información más rica, que permitió esbozar un primer esquema de cómo los actores pueden participar más allá del siguiente paso del proceso. Se identificaron actores que podrían contribuir a evaluar las necesidades, desarrollar los componentes del servicio, desarrollar estrategias de implantación o evaluar el servicio.

- Tanto en Australia como en España, se identificaron actores en todo el sistema sanitario, lo que respalda la necesidad de recurrir a grupos multidisciplinares de actores, pertenecientes a distintos niveles, para planificar mejor e integrar a los SPFA y a los farmacéuticos comunitarios en atención primaria. (Capítulos 3 y 4)

- Doce de los 46 actores identificados para el desarrollo del SPFA orientado a la prevención cardiovascular en NSW (Capítulo 3) fueron considerados como un "grupo central" que puede impulsar o dificultar el proceso de planificación. Estos actores tenían papeles complementarios y eran adecuados para participar en el siguiente paso del proceso de planificación (el desarrollo de la visión conjunta de los actores). La información secundaria producida en el análisis de actores (carencias actuales en atención cardiovascular, papel del farmacéutico comunitario en prevención cardiovascular y factores que afectan a la implantación de los SPFA) resultó útil para preparar la parte introductoria del posterior taller de desarrollo de la visión.

- Para el desarrollo de un SPFA orientado a la prevención cardiovascular en Andalucía (Capítulo 4), se seleccionó un grupo de 57 actores críticos, de los 217 identificados, para participar en un potencial proceso de planificación. La información sobre la actitud de los actores, su potencial contribución y su deseo de participación resultó útil para decidir a quién involucrar en las distintas fases del proceso de planificación y cómo hacerlo. La red de colaboración entre actores que destapó la investigación, la voluntad de los actores para colaborar en el proceso y la variedad de perfiles en los actores críticos respalda la necesidad de evitar silos cuando se planifican SPFAs y de fomentar abordajes participativos.

- El desarrollo de una visión conjunta de los actores (Capítulo 5) llevó a definir 7 principios generales de cuidado para guiar el cuidado crónico en NSW, que fueron: cuidado centrado en el paciente; abordaje desde equipos multidisciplinares; práctica basada en la evidencia; facilidad de acceso de los

pacientes a los establecimientos y servicios sanitarios; y buena comunicación y coordinación. La visión también incluyó 6 factores que pueden influir en la implantación de estos principios: sistemas de pago; fondos sanitarios; incentivos económicos; sistemas electrónicos; sistemas de evaluación; y cambios organizativos del sistema de salud. Los principios generales de cuidado y los factores para su implantación, en combinación con los grupos de actores previamente identificados, dieron como resultado un modelo para el cuidado crónico (el NSW-MCC). Los actores identificaron, además, 24 iniciativas necesarias para alcanzar su visión conjunta y priorizaron dos de ellas por encima de las demás: (1) mejorar el trabajo en equipo, incluido el diseño conjunto de protocolos y la comunicación efectiva entre los miembros del equipo sanitario; y (2) llevar a cabo un análisis de necesidades para priorizar y centrar los esfuerzos de planificación sanitaria.

- El modelo de cuidado crónico para NSW (Capítulo 5), puede servir como punto de partida para inspirar el desarrollo de SPFAs y servicios sanitarios en general, o para planificar investigaciones en otros contextos.

- En general, llevar a cabo un análisis de actores y desarrollar una visión conjunta de los actores resultaron ser pasos iniciales útiles en la fase de preparación de un proceso de planificación de un SPFA, y proporcionaron información útil en la que basar los esfuerzos de planificación.

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Annexes