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ADDRESSING ORGAN SHORTAGE: AN AUTOMATIC ORGAN PROCUREMENT MODEL AS A PROPOSAL

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Abstract: Organ shortage constitutes an unsolved problem for every country that offers transplantation as a therapeutic option. Besides the largely implemented donation model and the eventually implemented market model, a theorized automatic organ procurement model has raised a rich debate in the legal, medical and bioethical community, since it could show a higher potential to solve organ shortage. In this paper, we study the main arguments for and against this model. We show how, in the light of empirical data extracted from countries with a universal health care system, its implementation could lead to a positive impact on organ procurement rates. Three factors are envisioned as fundamental in the comprehension and a possible regulation of the automatic organ procurement model: the lack of recognition of the conscientious objection, the preservation of the right to choose end of life conditions, and the need to avoid incentives for families or healthcare professionals.

1. **Going on about organ shortage. Different models, different dilemmas.**

All of the countries concerned about organ transplantation policies are facing a notorious and unsolved public health problem: organ shortage, which turns into high human and economic costs every year. It is estimated that world's transplant needs are barely met in their 10%, since the World Health Organization estimates them to be more than one million per year¹.

Both living and cadaveric donation pose ethical, social and legal issues. In our contribution we will focus on deceased organ procurement, assuming that articulating automatic organ procurement from the living would threaten persistent legally protected interests, while procuring them from the deceased would affect interests of a deceased person whose legal personality is extinct.

To cope with organ shortage, three *post-mortem* organ transplantation models have been traditionally postulated and lively discussed by jurists, healthcare professionals and bioethicists. Practice demonstrates us that one of them poses less legal and ethical constraints when obtaining organs from the deceased: *the donation model*. Nevertheless, the remaining alternatives: *the market model* and *the conscription model* seem to obtain a higher benefit in medical terms—due to a higher number of organs obtained under them—, but posing serious and hard to solve ethical and legal challenges.

The donation model is widely implemented in almost all of the countries that are dealing with organ shortage. Based on the principle of non-patrimonial condition of the human body² and the idea that cadaveric organs cannot be retrieved against the (previously expressed) will of the deceased³, this model can be implemented under two types of consent policies: presumed consent or explicit consent. The former implies presuming the consent of the deceased if neither him (while alive), nor his family (after individual's death), have expressed any preference with regard to organ procurement for transplantation. The later requires an explicit consent from the deceased or a family authorization in order to obtain his organs for transplantation⁴. Whether opt-in or opt-out for deceased organ procurement is more effective in increasing the organ supply remains controversial⁵.

The market model has been scarcely implemented: only Iran, Philippines and India have eventually designed regulations in that sense.⁶ Under this model, based on the voluntariness principle, organs should be considered as available goods, thus, all potential donors or their families should be able to make the same type of decisions they make on other goods without facing different limitations. A regulated version of this model has the potential to decrease waiting list, since more available organs for transplantation are obtained⁷. Nevertheless, this model raises some ethical constraints: not only it would deepen social inequalities (since poor people would try to find a source of incomes through their organs' sale, while only those who can afford the price of the organs could opt for this alternative therapy), but it would also incentive organs tourism (people would move to find organs at a lower price in those countries where they could find them devaluated)⁸.

The last postulated model is that one traditionally known as confiscatory or compulsory model, or, if we try to use a more neutral expression, *automatic organ procurement model (AOPM)*. The theory of this model is characterized by a lack of voluntariness in *post-mortem* organ removal: once the individual has died, organs that are suitable for transplantation are procured, regardless of the patients' or their families' will. The rationale behind this model is that organs from the deceased have a therapeutic and life-saving capacity, so the State should subject their use to the general interest (public health). It is important to highlight that this model has grown from theories, and has not been implemented in any State around the globe.

In this paper we focus on the arguments raised for and against in *the automatic organ procurement model* debate. We argue that, in the light of empirical data extracted from countries with a public and universal health system, its implementation could lead to a positive impact on the organ procurement rates obtained in any country.

2. The eventual implementation of an *automatic organ procurement model*

Under an *automatic organ procurement model (AOPM)*, organs would have a very similar status to other public domain goods, thus, opposing organ procurement after death would not be *a priori* contemplated. This way, we will argue that the AOPM has the potential to significantly improve the problem of organ shortage. Nevertheless, since this scenario may only be reached at the expense of limiting other individual's rights, the benefit of a potential shift towards an AOPM needs to be weighed against the moral and political costs of its implementation. In the following lines we will try to shed light on different arguments for⁹

and against¹⁰ an implementation of this model.

2.1. Arguments for an *automatic organ procurement model*

Some authors have supported the *automatic organ procurement model* on the basis of utility and justice reasons. On the one hand, they argue that the confrontation between legally protected interests should be solved in favour of those interests of the recipients, since the possible damage for the deceased and their family is considerably lower than that caused to the interests of the potential recipients and their families —benefits for the recipient would consist in saving his life in the case his life was already at risk, or, if his life was not at risk, at least, in avoiding more dialysis and time spent on the waiting list—¹¹. On the other hand, they claim that it is unfair that every individual has, while alive, the right to access this kind of therapy, and still the right to oppose to become a donor after death¹².

2.1.1. The utility of implementing an *automatic organ procurement model*

Some of the direct benefits of implementing an AOPM include: (a) that there would not be any need for the family (or healthcare professionals) to face an emotionally demanding decision on whether to authorise or reject the removal of organs from their loved one, (b) that organs quality may improve as a result of shortening the procurement process, since administrative processes —such as the consultation with the family— are not needed anymore¹³, (c) that the costs related to educational and promotional campaigns in favour of *post-mortem* organ donation, to the maintenance of donor registries or to the training of those who make a request form, would be reduced¹⁴, and (d) organ trafficking would become a

residual phenomenon¹⁵.

But the most compelling consequence, in terms of utility, seems to be that under this model more organs would be available for transplantation, hence, it would prevent the death of all or part of the patients on waiting lists, and contribute to an improved quality of life of non-life-threatened patients. Nevertheless, the validity of this argument depends on empirical data, exposed in the following paragraphs, referring those extremes. Therefore, two questions remain fundamental in order to confirm whether an AOPM would indeed increase the organ supply: how many usable organs are lost under the *donation model* which could be saved under the AOPM, and how many patients currently die while waiting for a transplant that could be saved by shifting to an AOPM.

Furthermore, it is important to highlight before addressing next sections, that an AOPM would improve the conversion rate: from potential donors to actual donors. Nevertheless, and as it happens under those other models mentioned (opt-in and opt-out), this system would not avoid an increase in the organ need derived from the enlargement of the inclusion criteria on waiting lists. Likewise, this AOPM would not solve some challenges shared with those other models, such as donor-recipient compatibility problems.

2.1.1.1. Utility in the increase of available organs for transplantation

In order to know if an AOPM could avoid the loss of usable organs for transplantation given under *the donation model*, we need to focus on the reasons behind that loss. Along the

organ transplantation process in *the donation model*, there are different moments where organs can be lost.

Organ loss could happen, first, if the patient is not identified as a potential donor, either because the deceased died in circumstances that did not make him a suitable donor, organs procured are not compatible with those needed in the moment by the potential recipient, in case a contraindication to donation is mistakenly detected, or because a progression towards brain death is identified by mistake and donation in asystole is discarded¹⁶. Second, the non-establishment of the preservation treatment or intensive care measures for donation when appropriate, or its interruption, could lead also to loss of donation opportunities. This could happen in the case the AOPM contemplates individuals' right to choose end of life conditions within the regulated framework. In this scenario, exercising those rights could lead to a loss of opportunity for organ procurement and transplantation¹⁷. Third, judicial refusals—which can take place in the case of deaths subjected to judicial investigation—result also in organ loss. When a judicial investigation is taken over a deceased's circumstances of death, organs can only be removed provided that there is no obstruction in the results of the institution of criminal proceedings, until there is a report from the medical examiner, and under a written judicial authorization¹⁸. Fourth, the lack of family consultation may also cause a loss of viable organs for transplantation. This circumstance occurs in three cases: when the medical team cannot contact the family¹⁹; when, even when the family is contacted, no interview is conducted (for example, if the medical team considers that the family is not ready to face the decision-making process); and, when the medical team is notified of the deceased's refusal to donation by other means²⁰. Fifth, it may occur that the

family is opposed to the organ removal —if this possibility is granted by the law or in the practice depending on the country policies—. In this case, two situations may arise: the non-establishment of donor maintenance measures, or their suspension in case these measures were already established; leading both situations to the loss of usable organs for transplantation. Finally, the lack of a suitable organ recipient is also considered as an obstacle for the success of the transplantation process²¹.

Taking all of this into account, it seems clear that an automatic organ procurement system will not prevent all of the causes mentioned for organ loss. A system in which organs are automatically obtained from the potential donors would only avoid the organ loss derived by two of the causes mentioned: those concerning the deceased and his family, since the procedure of investigating the deceased's preferences is not necessary anymore, nor it is necessary to know if family authorise or oppose to organ removal —as under the definition of an *automatic model*, these procedures would not be contemplated—.

To put this in perspective we will make use of some available data in Europe. For example, according to the *Newsletter Transplant 2017*, in the case of Bulgaria 13 families out of 43 of those approached refused organ removal (which implies that a total of 30.2% of families impeded organ transplantation); in Italy, the organs of 787 deceased whose families refused donation could have been obtained that year; or in the case of Latvia, as the most remarkable case, 45% of the families who were approached refused donation²². To those figures, we must add the organs not obtained due to the deceased's previous opposition, due to a lack of approach to the family in those countries where family's authorisation is

requested, or in the case of approached, they were not asked their authorisation regarding organ removal.

Regarding such data, we can conclude that usable organs are lost due to the requirements articulated under *the donation model* which do not exist under an *automatic organ procurement model*. Despite an *automatic organ procurement model* does not prevent all of the causes of organ loss given under *the donation model*, we do consider that this model actually shows a potential to avoid the loss of an important part of organs that could be used for transplantation purposes.

2.1.1.2. Utility in the decrease of deaths on the waiting lists

Official data within countries in the same cultural context show high rates of deaths of patients while awaiting for a transplant, regardless of the system adopted (both explicit or presumed consent). For example, the last *Newsletter Transplant 2018* reported in Germany, as an opt-in country with 82.3 million inhabitants, 935 deaths of patients while waiting for a transplant were recorded in 2018; in the case of France, with an opt-out system and 65.2 million inhabitants, this figure reached 676 deaths for the same year. In countries outside the European context, we see this figure is also high: for example, in the US, with 326.8 million inhabitants, 5.753 deaths of patients awaiting for a transplant were reported in the same year, or the case of Argentina, with 44.7 million inhabitants, 784 deaths were reported²³. Most recent data on 2018, according to the Council of Europe, indicates that ten European patients died per day in 2018 waiting for an organ while on waiting list²⁴.

In order to evaluate the potential of an *automatic organ procurement model* in the

shortening of deaths of patients on the waiting lists, we need to know how overcoming both of the organ loss contributing factors mentioned in the previous paragraph —individual's and family's refusals— can result into an increase in organ transplantations.

For that purpose, we will make use of empirical data available from family refusals to organ procurement. If a reduction on the waiting list is proved by taking this only factor into account, the more is to be noticed in case we added individual's refusals. Last data available regarding family's opposition is published in the *Newsletter Transplant 2017*. Within Europe, in the United Kingdom, in the year 2017 there were recorded a total of 1148 family refusals and 436 deaths of patients waiting for a transplant. In Italy, that same year there were recorded 787 family refusals and 367 deaths in the waiting lists. In Belgium, 113 family refusals and 99 deaths on the waiting lists²⁵. In all of these cases and similar ones, it is easy to conclude that if all of the organs lost due to family's opposition had been transplanted to the most critical patients, many of those deaths could have been prevented.

Despite the enlargement of inclusion criteria on waiting lists would increase organ need under any of the models described, we can affirm that an *automatic organ procurement model* has a high potential to reduce the death rates on waiting lists, as it avoids some of the factors that produce an important organ loss under the donation model.

2.1.2. Social justice behind an *automatic organ procurement model*

One of the main reasons for an automatic organ procurement model is that it is observed as a fairer system for distributing transplantable organs, since it does not only interpret justice in terms of solidarity, but also in terms of reciprocity.

Based on altruism and solidarity, the current *donation model* allows individuals to refuse organ procurement after death: only those willing to donate can become donors. So, under this model, certain individuals can be *de facto* potential recipients while alive, but without being willing to donate their organs after death. The theory which defines the current *donation model* is that organs retrieved from the deceased are considered as a public good that is managed by the State according to impartial criteria, such as need or expected benefit derived from the use of those organs. In a context in which organ supply is widely surpassed by the demand, the existence of *free riders*, people who benefit from those criteria by taking advantage of others' generosity for nothing in return, may be considered as an injustice²⁶: it is unfair to accept as potential organ recipients those who refuse to be potential donors²⁷. By contrast, and from a more holistic perspective, one may argue that individuals who refuse *post-mortem* organ retrieval under an opt-in or opt-out system may contribute significantly to society and the health care system in different ways, for instance by donating blood, by serving as research participants, or even by paying taxes. Nevertheless, it may remain debatable if any compensation to the society, such as paying taxes, may support any refusal to become a donor.

There are some countries —such as Israel, Chile or Singapore— that have included an specific reciprocity principle in their organ transplantation process, by stablishing prioritizations (not exclusions) for those who are registered donors²⁸. Still, they have not prevented the issue of *free-riders*. That is the reason why the *automatic organ procurement*

model has been considered by some authors as the only way to eradicate such injustice, as no transplant beneficiary could oppose *post-mortem* donation.

Nevertheless, this model would pose strong injustices at the same time, since it would be disadvantageous for two groups of individuals: those who may have legitimate reasons not to donate, like individuals with a legitimate disagreement on the diagnosis of death or holding strong *post-mortem* beliefs; and vulnerable groups of population who will not donate, precisely, for their vulnerability, like population groups with a well-founded fear of being undertreated or that their deaths may be unjustly hastened precisely because they may be considered potential donors. These injustices unfolded over those who hold strong beliefs against organ transplantation, raise a fundamental question: whether an AOPM could regulate the right to conscientious objection. Nevertheless, the articulation of the conscientious objection could turn the AOPM into something very similar to the current one (presumed consent system in the donation model), in which, due to very particular reasons, people can object to organ donation. We will deeply address the conscientious objection issue below.

3. Arguments against an *automatic organ procurement model*

There are several issues raised by the AOPM that discourage its implementation. Among them, detractors have claimed the damage caused to posthumous interests and relatives' preferences regarding organ procurement, the risk that measures needed to avoid the death of potential donors and to treat them in the last stage of their life with due consideration may not be applied in full, or that this model would be rejected by part of the population since it generates distrust in both the national transplant system and its health

professionals. In what follows, we will try to shed light on these reasons.

3.1.1. The violation of posthumous interests

One common argument against the *automatic organ procurement model* is that it violates the former autonomy²⁹ of the deceased, and therefore frustrates their “posthumous interests”³⁰. This argument firstly focuses on the importance of respecting the formerly expressed autonomy of the deceased. The argument goes as follows: we must honour their wishes because, when explicitly stated, they were formulated by an autonomous individual, so, as it happens with the advance directives given by patients that will not recover their autonomy again, there is an obligation to respect them to the same extent. Secondly, it focuses on a public interest, since if the deceased’s wishes are not respected, the living would suffer thinking that their will would not be fulfilled when they died. In conclusion, under this argument there exists a moral obligation to respect the deceased’s wishes, including their interest in not donating their organs.

Nevertheless, the validity of this argument against the AOPM has been questioned by some authors, especially when confronting posthumous interests with living’s interests. According to Harris, the “persisting” deceased’s interests are less important than the “experiential” interests of the living (the recipients and their families)³¹. In addition, posthumous interests actually meet some limits under certain circumstances: current legislations enable public authorities to contravene deceased’s of their families’ interests regarding mortal remains when there exists an easy to understand reason, such as a public interest —i.e. autopsies under a suspect of violent death, and exhumation and autopsy of a

body in case of epidemiological risk—, regardless of any consent being required, or the interference with any conviction hold by the individuals involved, such as respect for the dignity of a dead body³². Taking these clear examples into consideration, it seems to be peacefully and widely accepted that, under certain circumstances, the posthumous interests of those who had explicitly stated their desire to preserve their *post-mortem* bodily integrity, may be ignored, and it does not raise general concern. So, why giving organ procurement a different treatment to these mentioned circumstances?

The answer to this question has been addressed in detail by David B. Hershenov and James J. Delaney³³, who identified (and eventually refuted) five attempts to show why a mandatory autopsy policy is legitimate but organ conscription is not: 1) the social contract gives the State a greater duty to protect its citizens from each other than from disease; 2) there is a greater moral obligation to prevent murders than disease-caused deaths because killing people is morally worse than allowing people to die; 3) autopsies don't confiscate body parts while organ transplants do; 4) population knowing that their organs are very likely to be taken will generate more anxiety than the remote possibility of a mandatory autopsy; and 5) a religious conviction that one's organs will be needed in order to be resurrected is threatened by organ transplantation but not by autopsies that "return" body parts.

These authors discussed the consistency of these objections and reached conclusions that are far from encouraging the very supporters of such objections. Considering the first two objections, these authors alleged that autopsies are conducted not only in cases of violent death. As already noted, the health authorities are entitled to exhume the bodies of those who may have died from an infectious contagious disease, without the need of a court order, at

least in some countries. In these cases, the aim is obviously not to protect public order or the certainty of not being murdered, but to protect public health. So it is important to nuance that it is not true that protecting ourselves against the violence from other individuals is more urgent than to protecting ourselves from public health threats. With regard to the third objection, although autopsies usually require samples and not a whole organ, sometimes they could become more invasive and cause greater damage to physical integrity than organ removal, in case they even destroy the organ and make it impossible to return it to the body. Hence, the only difference between both cases is that, in an autopsy, damage is caused only to one organ, whereas in organ procurement usually every organ that may be suitable for transplantation is removed from the body. However, this issue does not seem substantial for someone who opposes coercive organ removal: both reasons should be applicable to all or none of the body organs, without compromise. Finally, the anxiety issue needs many nuances, particularly because when addressing organ procurement, it could be argued both ways: for the case one thinks becoming a donor turns into a higher interests of doctors in certifying death in order to remove the organs³⁴, and also in case there is no organ available when needing it. According to these authors, the anxiety based on the first reason is to be overcome, since it comes from ignoring the guarantees and the mindset of healthcare professionals, who, in general, would put their patient's interests ahead of any other interests, including potential recipients with whom they are unrelated. Conversely, these authors argue that the collective anxiety derived from the eventual lack of an organ when needing it would be reduced if an obligation to donate was imposed. Fearing that our organs may be retrieved without our acquiescence seems to be a less stressful scenario than one in which not enough organs are

available to meet our medical demands. This is even more plausible, if we consider that it is not true that it is more likely to become an organ donor than to undergo an autopsy³⁵.

Overall, it is difficult to conclude that the nature of autopsies and automatic organ procurement differ substantially, or that they deserve distinct ethical or legal consideration. Discussion should therefore focus on whether the legally protected interest by an AOPM (the life or lives in mortal danger) is relevant enough to deserve more protection than the legally protected interests hold by the deceased (ideological freedom or freedom of conscience), or, as Cronin and Harris pointed out, we must make clear whether the freedom to control the destination of the parts of the body after life should (or not) be more important than protecting another's life³⁶.

One possible response to this challenge is leaving aside the idea of autonomy or public interest to resort instead to concepts such as individuals' ideological freedom and freedom of conscience³⁷. This argument is related to the fifth objection to the comparison between autopsies and automatic organ procurement identified by Hershenov and Delaney. The key point in this aspect consists, in general, in emphasizing the importance of the protection of individual's or family's convictions or beliefs related to the treatment of the body after death, both from the religion—for example, the traditional rabbinic belief in body resurrection requires that the body must be buried with all its parts³⁸—or from a perspective less tied to religion, referred to one's convictions or beliefs—how each person decides such a sensitive question according to their worldview—³⁹. In order to overcome this argument, when referring to concerning convictions, be them religious or not—most religions not only do not forbid the use of cadaveric organs, but even encourage it⁴⁰—the most appropriate argument

seems to be that, as it happens with every right, the freedom of conscience has limits related to common interest or welfare, especially if they are related to the deceased's freedom. Hence, those who defend the preponderance of the right to freedom of conscience must provide the reasons why they think it should prevail over legal interests of the living, such as the life or the health of others⁴¹.

When addressing organ procurement for the purpose of transplantation, conscientious objection must be particularly considered. It is well known that conscientious objection can be formulated by an individual in an specific situation in which a conflict between a legal imperative and an ethical imperative is raised (that is, a conviction, be it religious or not)⁴². Under the donation model, conscientious objection could be considered under three scenarios: the conscientious objection of the deceased, that is, the owner of the body that projects after death the conviction held while alive; the conscientious objection of the deceased's family if granted any ownership right over the deceased's body by the regulation (be it a domestic or a supranational regulation); or the conscientious objection of the medical staff that opposes to an automatic organ procurement itself, or refuses to conduct brain death certification as a prelude to and precondition of deceased organ donation⁴³, pleading conscientious reasons. Nevertheless, only one of those scenarios could be contemplated under the AOPM: that of the medical staff, since the left scenarios (individual and family's conscientious objection) could not be contemplated under an AOPM, because, by definition, this model withdraws any right for the individual or his family to make any decision over the destination of the organs of the deceased. Otherwise, granting a conscientious objection right for the individual or his family would turn this model into a very similar construction to the

opt-out donation model, in which, in general, the individual or the family can plead conscientious reasons to refuse organ procurement.

In sum, the existence of posthumous interests may justify the *prima facie* duty of respecting the deceased's memory and privacy, as well as the *prima facie* obligation to respect the content of their wills⁴⁴. However, the moral relevance of posthumous interests is not such that it should prevail over the living's needs and, thus, it is only a relative duty to respect them. In other words, a duty that will be strictly respected provided that posthumous interests do not conflict with those affecting the living⁴⁵. If such conflict arises, it turns difficult to assess and compare the damage caused to the former by forcing them to donate their relatives' organs, and to the latter by depriving them of a life-saving therapy.

It is important to highlight that, when taking part in the decision making process, the family projects (at least, partially) their preferences against organ removal onto non-vital and also alien interests, while the denial of a transplant may have fatal consequences for both the vital interests of the recipients, who experience it first-hand, and of their family and friends watching them suffer or die. It cannot be denied that the deceased's relatives may also suffer due to organ expropriation, and there may be people who suffer when thinking that their posthumous interests may not be respected after their death. In any case, this psychological and moral suffering does not seem comparable to the damage suffered by both potential organ recipients and their families.

To conclude, none of the arguments examined related to the protection of posthumous interests show enough entity to lead us to consider that their protection justifies denying the access to this therapy to an individual in need for an organ, nor justifies therefore an

opposition to an automatic organ procurement model.

3.1.2. The threat to potential donors' end-of-life treatment

There seems to be consensus on the claim that the possibility of obtaining the organs from a potential donor should not interfere with the quality of end-of-life treatment terminal patients undergo⁴⁶. In other words, patients' death should not be hastened or caused in order to obtain more or better organs or, in general, patients should not suffer any type of damage or futile intervention they would not undergo if they were not donors. Nevertheless, this basis of respect and protection of the donors is not always compatible with obtaining the maximum number of transplantable organs at their best condition, since *pre-mortem* measures do not have a palliative or therapeutic purpose for the donor, but for benefiting the potential recipient of the organs. A lack of respect for the donor derived from preservation measures may occur if such interventions are not consensual with the individual or his family, and, especially, if they go against individuals' preferences, even if they are innocuous. Under these circumstances, organ removal may imply that donors are used as tools, even if they do not suffer any damage. The possibility of organ procurement may create the perception, justified or not, that the treatments for seriously ill patients are compromised, thereby reducing their chances of recovery. These circumstances could generate public distrust, not only towards the organ procurement and transplantation system, but more generally towards the health care system as a whole. For this reason, some seriously ill patients or their families may refuse to go to hospital in critical situations, fearing that they would not receive the appropriate treatments or that their deaths would even be hastened. While in a system of presumed or

explicit consent these individuals may refuse to become donors, this would not occur in an AOPM where everyone is a potential donor.

There are several reasons to reject an automatic organ procurement system based on the lack of donor protection. First, patients who are considered as potential donors could undergo non-therapeutical interventions that may hasten or cause their death or, conversely, unconsented futile interventions solely intended to maximize the utility of a future transplant. That has already been the case of patients with massive brain haemorrhage who do not meet the criteria of brain death, or patients treated with a decompressive craniectomy, once the life-saving treatments used have proved to be ineffective, they undergo uncommon interventions (e.g. cranioplasty with bandaging) to die by neurological criteria, thus becoming multi-organ donors⁴⁷. Second, not all the so-called cadaveric donors experience a total and irreversible loss of their neurological functions at the time of organ removal (such circumstances are not a requirement for donation in asystole). This could imply, according to some authors, that those donors may keep or recover, as a result of preservation measures, certain neurological functionality compatible with consciousness⁴⁸. In these cases, apart from being erroneously considered as dead, patients do not receive sedative measures at the time of organ removal as it is assumed that cadavers cannot feel. And third, the doubts about the validity of the current legal criteria for the determination of death, both neurological and cardiorespiratory, could lead to an increase of false positives, considering individuals prematurely death when they are not, as some authors point out.

Notwithstanding, there are currently ethical barriers and guarantees to prevent that the prospect of a donation may compromise the treatments for seriously ill patients and alter end-

of-life decisions. An example illustrating such barrier is the requirement that, in controlled asystole donation protocols (after withdrawal of life support), organ removal can be considered only after it has been decided to limit life-sustaining treatments. However, whenever a family mentioned or requested donation before this decision is made, this ethical barrier would have already been removed.

Another example of these guarantees can be found with regard to conflicts of interests. Conflicts of interests are characterized by a bias in professionals' clinical judgement that may induce them to subordinate a primary interest (e.g. their patients' benefit) to a secondary interest (e.g. potential organ recipients' benefit). At present, the damage resulting from conflicts of interests is limited by various legal measures and good practice guides directly intended to avoid such conflicts, e.g., by excluding transplantation teams from the process of diagnosis of brain or cardiorespiratory death, and ensuring that the decision-making process about the limitation or the withdrawal of life support would be prior and independent to the donation process. In addition, family's intervention in the decision making process functions also as a guarantee of a good practice. If the family perceives that the medical team conditions the treatment received by their relative to the prospect of the benefit of transplantation, the family is likely to oppose donation. It is important to notice that within an AOPM, families could not avoid certain malpractice resulting from conflicts of interests and loyalties in the process of organ removal for transplantation, since their intervention is not required.

Although under an AOPM could lead the organ supply-demand imbalance to disappear —hence, the need to resort to certain situations to favour organ procurement may

disappear too—, everything indicates that an eventual implementation of this model would need to be regulated under a strict legislation that ensures that organs are not obtained at the expense of the interests hold by the potential donors while alive.

3.1.3. Growing social distrust in the health care system

The traditional models that base organ removal on the ideas of voluntariness and altruism, allow people (including the deceased's family) to have a perception of control over what happens to the body after death. This control is strengthened because potential donors know that their refusal would be respected and, if not, their interests in not donating would be protected by the respect to their families' opposition. This perception of control may be reassuring for certain people, especially when they must face an impending death and, in a more general sense, regarding their relation with the public health system.

Awareness that the health system cannot unilaterally appropriate organs after death may widely contribute to citizenry's trust in Medicine and in the public health system. This hypothesis seems to be supported by the fact that one of the main motivations not to donate is the suspicion that being a donor may undermine the treatment received in hospital⁴⁹. A model in which this perception of control over one's body destination disappears, could generate not only fears when facing an impending death, but also, from a more general perspective, could undermine the social perception of the clinical relation and the trust in the exercise of a profession where loyalty towards patients is expected and required from professionals.

With regard to this, it remains fundamental to know population's actual opinion over an eventual *automatic organ procurement model*. Few studies have been conducted on this

purpose.

In one study in the USA conducted in 2003, respondents were asked for a conscription system that included the possibility to object for religious reasons: 31% of the respondents were in favour of this system (19% ‘very much’ in favour) and 66% were against (53% ‘very much’ against)⁵⁰.

In Europe, a systematic review of the literature⁵¹ on the population’s knowledge and attitudes towards consent donation models between 2008 and 2017, identified only one study conducted in Germany. In this study, the informants were asked for their opinion on a system of organ procurement without consent⁵². The results show that 38% of the participants (general population) would accept such system. Also in Europe, our research group conducted a survey in 2018 in which 812 respondents, representative of the Spanish population (within the Community of Andalucía), were asked to show their degree of (dis)agreement with a model in which the organ from the deceased should be obligatory removed, regardless of the individual’s preferences while alive. The results showed that 25.6% of the respondents agreed (8.9% ‘totally agree’) and 68% of the participants disagreed (46.2% ‘totally disagree’)⁵³. In addition, in a later online survey conducted in 2018 based on a sample of 800 Spanish respondents in which our research group participated, the respondents were asked if they agreed with a model in which organs from the deceased could be removed without individuals’ or families’ consent, or even against their preferences⁵⁴. In this last study, 45.8% of the respondents positioned in favour, and 54.1% are against this proposal. Also, 51.6% of the respondents agreed with “the removal of organs from the deceased for transplantation, without giving them or their families the opportunity to oppose”, and 48.3%

disagreed. This survey helps to determine that those who reject an *automatic organ procurement model* have mainly a deontological justification: a moral duty of respecting the individual's autonomy; while those who are in favour, are mainly motivated by a consequentialist justification: i.e. the belief that the positive consequences of this model for society prevail over other considerations, such as the respect to autonomy.

These surveys let us formulate hypothesis behind a social rejection towards an automatic organ procurement model. First, people may consider that this model would lead to a negative bias in end-of-life treatments, depriving patients of certain suitable clinical efforts to keep them alive. Second, people may perceive an organ confiscation regardless of individual's preferences as a violation of their personal autonomy. Third, people that have a sense of ownership of their and their relatives' bodies, may perceive this model even as an way of expropriation by the State. And fourth, this model would deprive people from the sense that organ donation is an act of generosity and altruism, a gift of life that gives meaning to the death of a loved one⁵⁵.

In any case, none of the surveys conducted provides details on the actual reasons to reject an automatic organ procurement policy. Some of these reasons may nonetheless be extrapolated from negative attitudes towards opt-out. Recent qualitative studies identified three main themes for opposing presumed consent policies⁵⁶: (1) the perception that opt-out violates individuals autonomy by giving the government illegitimate control and ownership over an individual's body after death; (2) concerns regarding self-protection, that is, the fear of reduced lifesaving care and suspicions towards the health care system and medical staff in general in the event of a life-threatening illness or injury; and (3) the notion that opt-out may

increase susceptibility of stigma and reproach when registering an opt-out decision. However, we do encourage the bioethical, medical and legal community to conduct a qualitative research in order to provide details on the arguments raised by the population against an *automatic organ procurement model*.

4. Conclusions

Throughout this paper we have examined the arguments raised for and against an *automatic organ procurement model* as an alternative to address organ shortage problem, and we have made use of empirical data that provide the basis for a better assessment of the potential impact of such model on donation rates and public opinion.

Strong consequentialists reasons seem to support this model: not only it would save some costs related to the donation model, or turn organ trafficking to a residual phenomenon, but it would also increase the rates of available organs for transplantation and reduce deaths while waiting for a transplant, as we have proved with the examination of empirical data. Besides, this model shows potentially fairer than the current donation and market models. Under the *automatic organ procurement model*, every individual is a potential recipient and a potential donor at the same time, while under the *donation model*, every individual is a potential recipient but preserves the possibility to refuse to donate their organs after death, facilitating some individuals to take advantage of others' generosity for nothing in return, in case they oppose to organ donation after death. Under an *automatic organ procurement model* justice is not only understood in terms of solidarity, but also reciprocity, which, on our point of view, adds greater social justice to the system. In addition to all of this, this model

would also avoid the family to take such an emotionally demanding decision about the destination of their loved one's organs.

By contrast, there has been analysed some arguments against this model. The first one is related to the violation of posthumous interests—both of the individual or his family—, or, specifically, to the violation of the freedom of consciousness. This analysis lead us to compare this model with other current similar situations: autopsies, concluding that both situations should not receive a different legal treatment: under general interests, posthumous interests should be subject to living interests. In the specific situation of organ supply, we consider that posthumous interests should not overrun those of the living patients on a waiting list that would be frustrated if they do not receive these organs. Additionally, it has been argued that end-of-life care is threatened under the automatic organ procurement model. This risk has also been reported in the framework of the *donation model* and may be increased by the implementation of an *automatic organ procurement model*. We consider that an eventual regulation of it should take these circumstances into especial consideration in order to guarantee the interests of the living. Lastly, although last data provided by surveys regarding population's opinion on the automatic organ procurement model is not determining, they do show that an important part of the population is against this type of organ procurement model.

Besides, it is important to remark that an eventual shift towards an *automatic organ procurement model* should be regulated taking into especial consideration several issues we have notice of fundamental importance in an appropriate implementation of the theory of the model.

The first one has to do with the right to the conscientious objection⁵⁷. If we accept that organs procurement may be not fulfilled due to ideological or religious reasons (both of the deceased or the family), there are two options: either to force citizens to detail the reasons for their objection, or to accept their refusal without going further in their consciences. The former would imply to judge reasonableness of conscience, which seems inappropriate, while the latter would allow anyone to keep their organs, maybe only by meeting the requirement of being registered as objectors. In this last case, it does not seem that the system differs substantially from the opt-out donation model. Therefore, we conclude that, if we are willing to recognize the right to conscientious objection in this model, maybe the very idea of a system of automatic procurement is meaningless. In other words, as happens with autopsies and as we have mentioned in the text, conscientious objection should not play any role in the decision making process when there is a general interest —that is, public health— to be satisfied.

Secondly, an implementation of the *automatic organ procurement model* should not interfere with individuals' right to choose end-of-life conditions, within the regulated framework. For example, the patients' right to refuse the prolongation of futile treatments should prevail, even if this decision could hinder or even make impossible the purpose of preserving the organs and optimizing the transplant. In this sense, it would be highly convenient to promote the use of previous instructions on end-of-life medical treatments.

And finally, an implementation of an *automatic organ procurement model* should avoid compensation for families and incentives for health professionals involved in the donation process, in order to avoid malpractices in the decision making process.

- ¹. Ministerio de Sanidad, Consumo y Bienestar Social. El Registro Mundial de Trasplantes cifra en 139.024 los trasplantes realizados en el mundo en el último año, con un aumento del 2,3%, http://www.ont.es/Documents/28-08-2019_NP_REGISTRO_MUNDIAL_TRASPLANTES.pdf (accessed 15 July 2020), and World Health Organization. WHO Task Force on Donation and Transplantation of Human Organs and Tissues, <https://www.who.int/transplantation/donation/taskforce-transplantation/en/>
- ². See Martin D. Trade in kidneys is ethically intolerable. *Indian J Med Ethics* 2016; 3: 180-183.
- ³. The principles of non-remuneration and voluntariness are emphasized at the WHA 63.22 organized by the WHO in 2010 and under the title “Human organ and tissue transplantation” in relation to the *donation model*.
- ⁴. See Delgado J, Molina-Pérez A, et al. The Role of the Family in Deceased Organ Procurement: A Guide for Clinicians and Policymakers. *Transplantation* 2019; 103: e112-e118.
- ⁵. See Abadie A, Gay Sebastien. The impact of presumed consent legislation on cadaveric organ donation: A cross-country study. *Journal of Health Economics* 2006; 25: 599 – 620; and Rithalia A, McDaid, C, et al. A systematic review of presumed consent systems for deceased organ donation. *Health Technology Assessment* 2009; 13: 1 – 117.
- ⁶. These abolished systems are exposed in: James R., India Kidney Trade. TED Case Studies 2001, <http://www.american.edu/projects/mandala/TED/KIDNEY.HTM>. Nevertheless, in the case of India, for instance, after the passing of the law banning such extreme, the existence of an illegal organ acquisition and supply has been demonstrated. See Muraleedharan VR, Jan S, Prasad R. The trade in human organs in Tamil Nadu: the anatomy of regulatory failure. *Health economics, policy, and law* 2006; 1: 41-57.
- ⁷. This prediction is based on studies such as the one conducted for the *Journal of Economic Perspectives* in 2007. According to the estimates made, a compensation of \$15,000 for each living donor would prevent kidney shortage [see Becker GS and Elías JJ. Introducing incentives in the market for live and cadaveric organ donations. *Journal of Economic Perspectives* 2007; 21: 3-24].
- ⁸. Laws that legalize human organs trade were derogated in India and Philippines in 1994 and 2008, respectively. On the regulated organ market in Iran, see Ghods AJ. Renal Transplantation in Iran. *Nephrol Dial Transplant* 2002; 17: 222-228; Hipen BE. Organ sales and moral travails: Lessons from the living kidney vendor program in Iran. *Policy Analysis* 2008; 614: 1-17; and Larijani B, Zahedi F, and Taheri E. Ethical and legal aspects of organ transplantation in Iran, *Transplantation Proceedings* 2004; 36: 1241-1244.
- ⁹. One of the earliest and most thorough defences of the *automatic organ procurement model* is Silver T. The case for a Post-Mortem Organ Draft and a proposed Model organ Draft. *Boston University Law Review* 1988; 68: 681-728; and, later, Fabre C, Whose Body is it Anyway? Justice and the Integrity of the Person. Oxford: Clarendon Press, 2006, who also argues in favour of the confiscation of kidneys, medulla and hepatic segments from living people. In Spain, this model is supported by De Lora P. El trasplante de órganos y el caso del tranvía: ¿Por qué no confiscamos órganos de cadáver?, *Jueces para la Democracia*, 2012; 74: 11-25. This option is also defended by the same author in Justicia y distribución de recursos. El caso de los trasplantes de órganos y tejidos. In Gascón Abellán M, González Carrasco MC, and Cantero Martínez J (coords) *Derecho Sanitario y Bioética. Cuestiones actuales*. Valencia: Tirant lo Blanch, 2011, pp.1013-1029; *El derecho a la asistencia sanitaria. Un análisis desde las teorías de la justicia distributiva*, Madrid: Iustel, 2009, pp.223-264; and *Bioética: Principios, Desafíos, Debates*, Madrid: Alianza Editorial, 2008, pp.188-205.
- ¹⁰. Rivera López E, who argues in favour of the *donation model*, believes that, in the *automatic organ procurement model*, posthumous interests are violated. He adds that, by respecting the deceased’s interests, the posthumous interests of the living are also protected. The reason is that it is not only about meeting the deceased’s wishes, but also reassuring the living that their posthumous wishes will be met. [Rivera López E. *Ética y trasplante de órganos*. México: Fondo de Cultura Económica, 2001, p.69].
- ¹¹. Regarding kidneys, the most frequently replaced organ, transplantation is considered as the best treatment for chronic renal insufficiency as for survival, quality of life, lower number of complications and better cost-profit ratio in comparison to dialysis. This is supported, among others, by Matesanz Acedos R and Domínguez-Gil González B. Strategies to optimize deceased organ donation. *Transplantation Reviews* 2007; 21: 177.
- ¹². On this issue, see De Lora P and Zúñiga Fajuri A. *El derecho a la asistencia sanitaria. Un análisis desde las teorías de la justicia distributiva*. Madrid: Iustel, 2009, p.239.
- ¹³. See Spital A and Erin CA. Conscription of cadaveric organs form transplantation: let’s at least talk about it. *AJKD* 2002; 39: 611-615. There is a tendency here to generate a certain percentage of negative answers from subjects who, in principle, are in favor of *mortis causa* donation. This tendency is explained by Urruela Mora A. Trasplante de órganos y tejidos: aspectos jurídicos y sociológicos ligados al consentimiento familiar. In Romeo Casabona CM (coord) *El nuevo régimen jurídico de los trasplantes de órganos y tejidos*. Granada: Comares, 2005, p.340.
- ¹⁴. Spital and Erin, 2002; and Spital A. Conscription of cadaveric organ for transplantation: a stimulating idea whose time has not yet come. *Camb Q Healthc Ethics* 2005; 14: 107-112.
- ¹⁵. Moya Guillem C, *La protección jurídica frente al tráfico de órganos humanos. Especial referencia a la tutela penal en España*. Madrid: Marcial Pons, 2018, pp.25-71.
- ¹⁶. As an example, in Spain the ONT has detected 10 losses in 2018 due to problems in the organization, which may be included within the first cause. See, in this sense, Organización Nacional de Trasplantes. *Memoria de Resultados de la Autoevaluación*. Programa de Garantía de Calidad del Proceso de Donación, 2018.
- ¹⁷. According to the *Memoria de Resultados de la Autoevaluación*, 2018, in Spain there were 30 losses in 2018 for this reason.

- ¹⁸. For the case of Spain, such judicial authorization will be requested only if there is no explicit opposition to donation by the deceased (art. 5.3, Law 30/1979), and upon the prior record of will about donation for transplantation signed by the family. See, Caballero F and Matesanz R. Capítulo 15. Autorización Judicial para la Extracción de órganos para trasplante. Casos judiciales. Manual de donación y Trasplante de Órganos Humanos, <http://www.coordinaciontrasplantes.org/index.php/bloque-09/capitulo-15> (accessed November 5, 2019).
- ¹⁹. The sustained impossibility of contacting the family may result in the loss of the organs that are at risk of ischemia or in an interruption in the measures for organ preservation within four hours after their application. The *Memoria de Resultados de la Autoevaluación*, 2018, has reported five losses due to this cause in Spain in 2018.
- ²⁰. This may occur, for example, if the will of the deceased, recorded while alive in the advanced directives registry, is known. As an example, only 51.6% of all the registered documents in the Valencian Community up to 2008 were in favour of organ donation for transplantation. On this subject, Nebot C, Ortega B, et al. Morir con dignidad. Estudio sobre voluntades anticipadas. *Gaceta Sanitaria*, 2010; 24: 437-445. According to the data provided by the ONT, out of the 2124 cases of donors with brain death in 2018 in Spain, 314 organs were lost due to refusal to donation. Out of those 314, 124 were refusals by donors while alive.
- ²¹. For the case of Spain, according to the *Memoria de Resultados de la Autoevaluación*, 2018, there were 44 cases of no adequate recipient in the year 2018 that derived in organ loss. The ONT *Progress Report* in 2018 is available at: <http://www.ont.es/prensa/NotasDePrensa/14%2001%202019%20Espa%C3%B1a,%201%C3%ADder%20mundial%20en%20donaci%C3%B3n%20y%20trasplantes,%20celebra%20el%2030%20aniversario%20de%20la%20ONT%20con%2048%20donantes%20p.m.p.pdf> (accessed 15 July 2019). This information is not included for the first time in the 2019 *Newsletter* of the Council of Europe.
- ²². Gobierno de España, EDQM, Council of Europe. Newsletter Transplant, International figures on donation and transplantation 2017, Vol. 23, 2018.
- ²³. These data refer to the following organs: kidney, liver, lung, heart and pancreas. This information is the result of the sum of the disaggregated data provided by: Gobierno de España, EDQM, Council of Europe. Newsletter Transplant 2018, Vol. 24, 2019.
- ²⁴. Ministerio de Sanidad, Consumo y Bienestar Social. El Registro Mundial de Trasplantes cifra en 139.024 los trasplantes realizados en el mundo en el último año, con un aumento del 2,3%, http://www.ont.es/Documents/28-08-2019_NP_REGISTRO_MUNDIAL_TRASPLANTES.pdf (accessed 15 July 2020)
- ²⁵. Gobierno de España, EDQM, Council of Europe, 2018.
- ²⁶. Zúñiga Fajauri A. El consentimiento presunto y la reciprocidad como mecanismos para aumentar la donación. *Rev. méd. Chile* 2015; 143: 1334.
- ²⁷. This argument is also used, among other, by De Lora and Zúñiga, 2009, p. 239; Rivera López, 2001, pp.105-106; and Gordillo Cañas A. *Trasplantes de órganos: 'pietas' familiar y solidaridad humana*. Madrid: Civitas, 1987, p.102.
- ²⁸. On the legislation in these three countries, see Zúñiga, 2015, pp.1332-1333.
- ²⁹. Schwark D. Organ Conscriptio: How the Dead Can Save the Living. *J.L. & Health* 2011; 323: 323-353, at 352.
- ³⁰. See Glannon W. Do the sick have a right to cadaver organs? *J Med Ethics* 2003; 3: 153-156; and Hammer CL and Rivlin MM. A Stronger policy for organ retrieval from cadaveric donors: some ethical considerations', *J Med Ethics* 2003; 3: 196-200.
- ³¹. Harris J. Organ procurement: dead interests, living needs. *J Med Ethics* 2003; 29: 130-134.
- ³². See Harris, 2003.
- ³³. Delaney DB and Hershenov J. Mandatory autopsies and organ conscription. *Kennedy Institute of Ethics Journal* 2009; 19: 367-391. Organ confiscation is compared to autopsies also by Rivera López, 2001, pp. 80-81, among others. The inheritance tax is also compared to organ confiscation by Schmidt-Petri, based on the following arguments: a) they both occur after the death of the person, b) they are not undertaken to benefit the deceased but in order to benefit somebody else and c) they involve the transfer of resources [Why not confiscate? In Jox R, Assadi G and Marckmann G (eds) *Organ Transplantation in Times of Donor Shortage. Challenges and solutions*. Springer, 2016, pp. 71-81].
- ³⁴. See Delaney and Hershenov, 2009, p. 378.
- ³⁵. Figures indicate rather the opposite. For example, 700 autopsies are conducted on average in one Spanish region alone, Murcia (see Instituto de Medicina Legal y Ciencias Forenses de Murcia. Memoria de Actividad, 2018: 69). These figures are significantly higher than those for organ donation, which have never exceeded 100, according to the ONT. See, on this point, the historical data on organ donation, available at: <https://reports.ont.es/datoshistoricos.aspx> (accessed 15 July 2020).
- ³⁶. Cronin AJ and Harris J. Authorisation, altruism and compulsion in the organ donation debate. *J Med Ethics* 2010; 36: 627-631, at 628.
- ³⁷. Richards A. Don't Take Your Organs to Heaven . . . Heaven Knows We Need Them Here: Another Look at the Required Response System. *N. Ill. U. L. Rev* 2006; 26: 365, 393.
- ³⁸. Dorff EN. Choosing Life: Aspects of Judaism Affecting Organ Transplantation. In Younger S, Fox R, O'Connell L (eds) *Organ Transplantation: Meanings and Realities*. Madison, WI: University of Wisconsin Press, 1996, 179, cited by: Delaney DB and Hershenov JJ, 2009.
- ³⁹. See Glannon, 2003.
- ⁴⁰. See Schwark, 2011.

- ⁴¹. De Lora P. Transplantation and the Trolley Case: Why Not Confiscate Cadaveric Organs? 27 March 2012, available at: <https://ssrn.com/abstract=2030011> (accessed 20 July 2020).
- ⁴². Bertolino R. *L'obiezione di coscienza negli ordinamenti giuridici contemporanei*. Torino, 1967, pp. 8-9; Navarro-Valls R and Martínez-Torrón J. *Las objeciones de conciencia en el derecho español y comparado*. Madrid: McGRAW-HILL, 1997, pp. 17-35; Llamazares Fernández D. *Conciencia y Derecho. Libertad de conciencia y libertad de comportamiento. Objeciones de conciencia*. Navarra: Civitas, 2007, pp. 341-486.
- ⁴³. See: Rodríguez-Arias D, Molina-Pérez A, Díaz Cobacho, G. Death Determination and Clinicians' Epistemic Authority. *The American Journal of Bioethics* 2020; 20: 1-3.
- ⁴⁴. Banyubala DN. Posthumous Organ Retention and Use in Ghana: Regulating Individual, Familial and Societal Interests. *Health Care Anal* 2016; 24: 301-320.
- ⁴⁵. See Banyubala, 2016.
- ⁴⁶. House of Lords. European Union Committee. *Increasing the supply of donor organs within the European Union. T. S. O. Volume I: Report*. 17th Report of Session 2007-08; Reich DJ, Mulligan DC, et al. ASTS recommended practice guidelines for controlled donation after cardiac death organ procurement and transplantation. *Am J Transplant* 2009, 9: 2004-2011.
- ⁴⁷. Rodríguez-Arias D, Seoane JA, et al. Ethics, new ways of dying and organ donation. *Med Intensiva* 2014; 38: 196-197.
- ⁴⁸. Dalle Ave AL and Bernat JL. Inconsistencies Between the Criterion and Tests for Brain Death. *J Intensive Care Med* 2018; and Dalle Ave AL and Bernat JL. Using the brain criterion in organ donation after the circulatory determination of death. *Journal Critical Care* 2016; 33: 114-118.
- ⁴⁹. Shepherd L and O'Carroll RE. When do next-of-kin opt-in? Anticipated regret, affective attitudes and donating deceased family member's organs. *Journal of Health Psychology* 2014; 19: 1508-1517; Katsari V, Domeyer PJ, et al. Giving Your Last Gift: A Study of the Knowledge, Attitude and Information of Greek Students Regarding Organ Donation. *Ann Transplant* 2015; 20: 373-380; Symvoulakis EK, Komninos ID, et al. Attitudes to kidney donation among primary care patients in rural Crete, Greece. *BMC Public Health* 2009; 9: 54; and Lauri MA. Metaphors of organ donation, social representations of the body and the opt-out system. *British Journal of Health Psychology* 2009; 14: 647-666.
- ⁵⁰. Spital A. Conscripted of Cadaveric Organs for Transplantation: A Stimulating Idea Whose Time Has Not Yet Come. *Camb Q Healthc Ethics* 2005; 14: 107-112. The questions wording was: 'In view of the tremendous shortage of life-saving organs, would you be willing to accept a policy that allows trustworthy medical teams to remove organs from people who have died without asking for permission, unless they had objected on religious grounds?'. Furthermore, the question was preceded by an explanatory paragraph on organ shortage.
- ⁵¹. Molina-Pérez A, Rodríguez-Arias D, et al. Public knowledge and attitudes towards consent policies for organ donation in Europe. A systematic review. *Transplant Rev (Orlando)* 2019; 33: 1-8.
- ⁵². Decker O, Winter M, et al. Between commodification and altruism: gender imbalance and attitudes towards organ donation. A representative survey of the German community. *Journal of Gender Studies* 2008; 17: 251-255. The exact wording of the question is not detailed.
- ⁵³. The survey was conducted by Rodríguez-Arias D and Molina Pérez A, in cooperation with the IESA-CSIC, in Autumn-Winter 2018. The results have not been published yet. Personal communication.
- ⁵⁴. The survey was commissioned to IMOP Insights by the Institute for Advanced Social Studies and CSIC. On the technical details of this study, see Viciano H. Encuesta: El apoyo social a la eutanasia en España es muy alto y sigue creciendo. *The Conversation*, 5 May 2019.
- ⁵⁵. However, this would not endanger the efficiency of the transplantation system insofar as altruism and solidarity would be no longer necessary. Nevertheless, the deterioration of the values that contribute to social cohesion may have costs that are more intangible and symbolic in nature.
- ⁵⁶. Miller J, Currie S, O'Carroll R. 'If I donate my organs it's a gift, if you take them it's theft': a qualitative study of planned donor decisions under opt-out legislation. *BMC Public Health* 2019; 19, 1463 and Miller J, Currie S, McGregor L., O'Carroll R. 'It's like being conscripted, one volunteer is better than 10 pressed men': A qualitative study into the views of people who plan to opt-out of organ donation. *British Journal of Health Psychology* 2020; 25: 257-274.
- ⁵⁷. Pierscionek B. What Is Presumed When We Presume Consent? *BMC Medical Ethics* 2008; 9: 8.