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Would you sell a kidney in a regulated kidney market? Results of an exploratory study

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ABSTRACT

Background: It is often claimed that a regulated kidney market would significantly reduce the kidney shortage, thus saving or improving many lives. Data are lacking, however, on how many people would consider selling a kidney in such a market.
Methods: A survey instrument, developed to assess behavioural dispositions to and attitudes about a hypothetical regulated kidney market, was given to Swiss third-year medical students.
Results: Respondents' (n = 178) median age was 23 years. Their socioeconomic status was high or middle (94.6%). 48 (27%) considered selling a kidney in a regulated kidney market, of whom 31 (66%) would sell only to overcome a particularly difficult financial situation. High social status and male gender was the strongest predictor of a disposition to sell. 32 of all respondents (18%) supported legalising a regulated kidney market. This attitude was not associated with a disposition to sell a kidney. 5 respondents (2.8%) endorsed a market *and* considered providing a kidney to a stranger if and only if paid. 4 of those 5 would sell only under financial duress.
Conclusions: Current understanding of a regulated kidney market is insufficient. It is unclear whether a regulated market would result in a net gain of kidneys. Most possible kidney vendors would only sell in a particularly difficult financial situation, raising concerns about the validity of consent and inequities in the provision of organs. Further empirical and normative analysis of these issues is required. Any calls to implement and evaluate a regulated kidney market in pilot studies are therefore premature.

Organ scarcity has always defined transplantation medicine. The kidney shortage, however, has now grown painfully acute. Thousands of patients with end-stage renal disease are on waiting lists for a kidney transplant. This situation fuels international transplant "tourism"—patients with sufficient resources travelling abroad to purchase a kidney—which can involve harm, exploitation and coercion. More than 76 000 patients are currently registered kidney transplant candidates in the USA.[1] Numbers are comparable, with regard to the resident population, in many other countries. Five to 10 per cent of the 66 000 kidneys transplanted worldwide in 2006 were estimated to be related to international transplant tourism.[2]

This grim picture lends increasing support to an intriguing idea: to increase the supply of kidneys by adopting a kidney market that is ethically constrained, or "regulated". Proponents argue that a regulated kidney market would increase the supply of kidneys because financial incentives would encourage people to provide a kidney. Because of the excellent outcomes of live-donor kidney transplantation and the relatively low physical risk of nephrectomy in healthy individuals under conditions of state-of-the-art health care, the result would be a net gain in alleviated suffering and lives saved.

Furthermore, proponents contest that a regulated kidney market would be ethical because it places constraints on kidney transactions. Charles Erin and John Harris have given the most detailed proposal of a regulated kidney market.[3–5] In summary, they outline the following features for such a market. A government agency responsible for public health and healthcare (such as the National Health Service in the UK) would act as a single buyer, purchasing kidneys for a fixed price and then distributing them equitably among those in need of a transplant. This arrangement, along with the market's national or regional confinement, would reduce wrongful exploitation of the poor. The risk of coercion would be low because the option of selling a kidney is an offer, not a threat, and reasonable alternatives of sustenance remain (eg, the willingness to sell a kidney would not influence eligibility for welfare benefits). Justice would be promoted because former vendors would have priority access to a kidney should they find themselves in need of a transplant. Finally, the single buyer would maximise benefit and minimise harm because it could optimise transplantation and nephrectomy outcomes more effectively than current arrangements.

A further, more recent justification for a regulated kidney market is that it will prevent transplant "tourism". Because a regulated market would save or improve lives locally, the argument goes, it will minimise the pressure on patients with end-stage renal disease to engage in often unsafe and exploitative transactions abroad.[6 7]

This paper focuses on the first, empirical claim about a regulated kidney market—namely, that such a market would increase the supply of kidneys. Market proponents claim that "surveys suggest that the public favours compensation and that compensation would increase donation".[6] However, the data they cite to support this claim are insufficient. Studies investigating the impact of financial incentives in the deceased donation context have limited significance for the context of live donation.[8–11] Moreover, surveys that do not detail the conditions of a regulated kidney market[10 12 13] are too vague to assess how the population would respond to such a market, and the distinction between removing financial disincentives and providing financial incentives is often unclear.[12] Attitudes about legalising live kidney

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sales[10] may not reflect one's willingness to sell an organ. Finally, data from Iran[14]—the only country that has implemented a regulated kidney market today—are difficult to extrapolate, because the Iranian market allows for co-payments among transplant recipients and living conditions in Iran are strikingly different from those in industrialised countries.

We conducted an exploratory survey that specifically studies indicators for behavioural dispositions to and attitudes about a hypothetical regulated kidney market. The first of its kind, the study aimed to gather preliminary data on the following questions:

1. How many people would consider selling a kidney in a regulated kidney market? Who would consider selling, and under what conditions?
2. Would people consider providing a kidney to a stranger if and only if they were paid?
3. Is the view that a regulated kidney market should be legalised associated with an individual disposition to sell a kidney in such a market (and vice versa)?

PARTICIPANTS AND METHODS

Survey methods

All authors of this paper jointly developed a survey instrument based on Erin and Harris's model of a regulated kidney market.[3–5] The instrument consisted of three parts, surveying personal experiences with and knowledge about kidney transplantation, dispositions to sell a kidney in a regulated kidney market, attitudes about legalising such a market, and sociodemographic information (29 questions). The instrument was designed to be self-administered on paper.

The description of the regulated kidney market read as follows (translated from German): "The number of persons waiting for a kidney transplant exceeds the number of available organs. Possible measures to address this situation are discussed in the international literature, for example, to allow healthy persons to sell a kidney in a regulated kidney market. The following hypothetical assumptions could be made regarding a regulated kidney market: (1) A single institution buys kidneys; (2) This institution distributes kidneys transparently and according to statutory criteria (including a medically optimal distribution); (3) Kidney vendors are paid with public funds and receive medical follow-up in the context of statutory health insurance; (4) Kidney vendors have priority access to an organ if they find themselves in need of a kidney transplant; (5) Revenues from kidney sales are exempt from taxes and do not influence welfare entitlements (in contrast to other assets), i.e. no one can be coerced into selling a kidney; (6) The kidney market is nationally or regionally confined; and (7) It is still possible to donate a kidney." In addition, the mortality and morbidity risks of live kidney donation under conditions of state-of-the-art medical care[15] were given.

Following this information, respondents were asked the following question: "Imagine you could sell a kidney in the above described regulated kidney market. Would you in principle consider doing so?" Respondents could answer "No, under no circumstances" or "Possibly yes" and were then directed to different tracks of the questionnaire. Questions about sociodemographic factors were adapted from a national survey of Swiss university students' living conditions.[16] The survey instrument was pretested on a convenience sample of 10 medical students, and this led to minor changes in wording and the choice of illustrative examples. The survey instrument (in German) is available on request.

Data were collected in April 2007. Of the 212 distributed survey questionnaires, 192 were returned (response rate of 90.6%). There was no incentive to complete the survey. Data about non-respondents were not collected. Respondents' personal disposition to sell a kidney in a regulated kidney market was indicated in 178 questionnaires. These questionnaires were fed into data analysis even if otherwise incomplete. Missing responses were judged as insignificant and/or irrelevant for the study questions, and therefore not further explored. They are noted in the tables or texts as appropriate. Questionnaires that did not indicate the individual respondent's disposition to sell a kidney were discarded.

Participants

The survey was given to third-year medical students at the University of Zurich before a class on ethical issues in transplantation medicine. The students were targeted because of their ideal kidney seller characteristics—that is, generally being young and liberal, healthy, educated and familiar with medical information, and presumably with little financial pressure to sell.

General background

The political system in Switzerland, a small country with a population of about 7.5 million and one of the highest gross domestic products per capita in the world, is characterised by both liberalism and federalism. This is also reflected in the way the healthcare system is organised.[17] Private health providers play a large role in the provision of medical care. However, the federal government has important public health responsibilities. The state ensures universal health insurance, including coverage for transplant services. Organs for transplant are allocated nationally. In 2007, when this study was conducted, 588 patients were on the waiting list for a kidney and 19 deceased persons were on the list. The median waiting time for a kidney was 921 days.[18] Organ selling is illegal in Switzerland.

Protection of human participants

Survey participation was voluntary and all responses were anonymous. The study was examined and exempted from review by the institutional review board of the Canton of Zurich.

Statistical analysis

Frequencies and corresponding percentages for dichotomous variates or medians and interquartile ranges for continuous variates were calculated. Comparisons of dichotomous variates were performed using the χ^2 test, with a p value of <0.05 considered to be statistically significant. In an exploratory analysis we assessed the predictive capacity of all candidate predictors shown in table 1 for selling a kidney. Variable selection was performed using a stepwise procedure (using an entry criterion of $p<0.05$), which was bootstrapped 100 times. Variables for the final model were selected if they entered the model at least 30 out of 100 times. Thus, variates could remain in the final model despite a p value >0.05. Results are given as odds ratios (OR) with 95% confidence intervals (95% CI). A biostatistician (LMB) performed statistical analyses with Stata 10.

RESULTS

Respondents

Survey respondents (n = 178) had a median age of 23 years; of these, 111 (62.7%) were female, 140 (78.7%) were members of a Christian church and 83 (46.9%) indicated they were in a

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Table 1 Respondent characteristics

Characteristic	Respondents (n = 178)	Missing n
Age in years, median (IQR)	23 (20–26)	1
Sex		1
Female	111 (62.7)	
Male	66 (37.3)	
Nationality		1
Swiss	164 (92.7)	
Non-Swiss with Swiss high school diploma	12 (6.8)	
Non-Swiss	1 (0.5)	
Religion		1
Roman Catholic	60 (33.9)	
Protestant	72 (40.6)	
Other Christian	8 (4.5)	
Jewish	3 (1.7)	
Muslim	3 (1.7)	
Other	4 (2.3)	
None	27 (15.3)	
Partnership status		1
Partnered	83 (46.9)	
Single	94 (53.1)	
Married	0	
Divorced or widowed	0	
One or more child	2 (1.1)	1
Socioeconomic status		10
High	68 (40.5)	
Upper	51 (30.4)	
Middle	40 (23.7)	
Low	9 (5.4)	
Present monthly income in CHF,* median (IQR)	1000 (500–1500)	13
Expected monthly income in CHF in 10 years, median (IQR)	8000 (7000–10 000)	19
Political orientation		14
Right-wing	9 (5.5)	
Center-right	13 (8.0)	
Center-left	51 (31.3)	
Liberal	34 (20.8)	
Green	27 (16.6)	
Other	29 (17.8)	

Data are number (%) unless otherwise stated.
*1 CHF was approximately €0.61/£0.41/$0.82 at the time of the study.
IQR, interquartile range.

relationship. Only two respondents had a child. The socio-economic status of the vast majority of respondents (94.6%) was high or upper middle. The present median net income was CHF 1000 (€ 610/£410/US$820)[1] per month. Respondents expected to have a median net monthly income of CHF8000 (€4880/£3280/US$6560) in 10 years. With 51 respondents (31.3%) voting center-left, 34 (20.8%) voting liberal and 27 (16.6%) voting green, the predominant political orientation was left-leaning or liberal (table 1).

Respondents were relatively familiar with legal aspects of kidney transplantation: 63.5% correctly identified current Swiss regulations about organ donation (table 2). The majority of respondents (90.5%) had heard about organ selling before.

Willingness to receive a kidney transplant and to donate a kidney

If suffering from end-stage renal disease, most respondents would be willing to undergo kidney transplantation. The majority of respondents were also willing to donate a kidney: 135 (75.8%) said they would donate only to a loved one (eg, a family member or friend), while 25 (14%) indicated they would donate to a loved one or a stranger (table 3). A higher proportion of those who would consider selling a kidney were willing to donate a kidney to a stranger when compared with those who would not consider selling a kidney (p = 0.0001). Further analysis showed that 12 of the 15 potential kidney vendors who were willing to donate a kidney to a stranger (80%) said the reason "I would not donate to a stranger unless paid" was not important for them, suggesting that they might provide a kidney to a stranger without payment.

Disposition to sell a kidney in a regulated kidney market

Forty-eight respondents (27%) stated they would in principle consider selling a kidney in a regulated kidney market. By contrast, 130 (73%) said they would not consider selling a kidney under any circumstances (table 3). Thirty-three potential kidney vendors were unwilling to donate a kidney to a stranger without compensation, and 25 of them confirmed they would only provide a kidney to a stranger if paid. Therefore, the confirmed total number of potential kidney vendors who would provide a kidney to a stranger if and only if paid was 25 (14%).

"Very important" or "important" reasons against selling included the fear of health consequences, the unwillingness to undergo a non-therapeutic intervention and a sense of feeling degraded by the sale of a kidney. Fewer respondents cited concerns that the body is unlike other property as a basis for hesitating to sell. Only a minority were afraid of being stigmatised as a kidney vendor.

"Very important" or "important" reasons in favour of selling a kidney included: a sense of being able to decide for oneself whether to sell parts of one's own body, a sense of fairness to benefit from providing a kidney when everybody else involved in the transplantation procedure benefits and unwillingness to provide a kidney to a stranger without payment (table 3).

Conditions for considering the sale of a kidney

Thirty-one of those who would consider selling a kidney (66%) would do so only to overcome a particularly difficult financial situation, such as unemployment (table 3). Twelve (25.5%) would consider selling to secure their future—for example, by investing in their education, even if they were not in a particularly difficult financial situation. Four (8.5%) would consider selling to buy luxury goods—for example, a new car. The median expected minimum compensation was CHF50 000 (€30 5000/£20 500/US$41 000), while the overall expected compensation ranged from CHF5000–9 000 000 (€3050–5 490 000/£2050–3 690 000/US$4100–7 380 000). Only a fifth of the possible vendors wanted to receive a non-monetary reward, such as life-long health insurance or a stipend for attending university.

Male gender, OR 1.64 (95% CI 0.82–3.29; p = 0.16), and high socioeconomic status, OR = 3.24 (95% CI 1.38–7.61; p = 0.007), were the two strongest predictors for selling a kidney. The likelihood of selling a kidney was 40% in male respondents of high socioeconomic status, as compared with a likelihood of 10% in female respondents of low socioeconomic status.

Attitudes about a regulated kidney market

Seventy-six of all respondents (42.7%) thought that a regulated kidney market should be prohibited, 70 (39.3%) were unsure

[1]All currency conversions are as of April 2007 when the study was conducted (1 CHF was approximately €0.61/£0.41/$0.82 at the time).

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Table 2 Attitudes about legalising a regulated kidney market and knowledge about the current legal situation in Switzerland

Characteristic	All respondents (n = 178)	Possible vendors (n = 48)	Probable non-vendors (n = 130)
Regulated kidney market			
Should be legalised	32 (18)	8 (16.7)	24 (18.5)
Should be prohibited	76 (42.7)	15 (31.3)	61 (46.9)
Unsure	70 (39.3)	25 (52.1)	45 (34.6)
Assumed legality of …			
Donating a kidney to a loved one or a stranger*	113 (63.5)	28 (58.2)	85 (65.4)
Donating a kidney to a loved one only	48 (27)	14 (29.2)	34 (26.1)
Donating a kidney to a stranger only	6 (3.4)	2 (4.2)	4 (3.1)
Selling a kidney	2 (1)	2 (4.2)	0
Unsure	9 (5.1)	2 (4.2)	7 (5.4)

Data are number (%) unless otherwise stated. There are no missing n.
*This statement reflects the current legal situation in Switzerland.

and 32 (18%) thought a market should be legalised (table 2). Of those who would consider selling a kidney, eight (16.7%) thought a regulated kidney market should be legalised, 15 (31.3%) thought it should be prohibited and 25 (52.1%) were unsure. This implies that only eight of the 32 respondents endorsing a market (25%) would also consider selling a kidney. Thus, a positive attitude towards a regulated kidney market was not associated with a disposition to sell a kidney if such a market was in place ($p = 0.68$).

In sum, then, eight of all 178 survey respondents (4.5%) endorsed a regulated kidney market *and* would consider selling a kidney if such a market were in place. Further analysis showed that six of these respondents were unwilling to donate a kidney to a stranger. Of the six, five respondents confirmed they would provide an organ to a stranger only if paid. Therefore, in this sample, the confirmed total number of potential kidney vendors who would provide a kidney to a stranger if and only if paid and who would also endorse a regulated kidney market was five (2.8%). Four of these five respondents would only consider selling a kidney to overcome a particularly difficult financial situation. The one respondent who would consider selling a kidney to buy non-necessities expected a compensation of CHF50 000 (€30 5000/£20 500/US$41 000). Only one respondent was a "free-rider", that is, endorsing a market and willing to receive a live-donor kidney, but unwilling to either donate or sell a kidney.

DISCUSSION

This is the first exploratory survey that specifically studies indicators for dispositions to and attitudes about a hypothetical regulated kidney market. A considerable minority of 48 respondents (27%) would consider selling a kidney in a regulated kidney market. However, 12 of these possible vendors (25%) would also donate a kidney to a stranger and insisted they would not only do so if paid. Moreover, 40 of the possible kidney vendors (83.3%) thought a regulated market should not be legalised or were unsure about this. Only eight of those endorsing a regulated market (25%) actually would consider selling a kidney. Finally, 31 of those who considered selling a kidney (66%) would only do so in a particularly difficult situation.

Limitations of this study

The present study has obvious limitations. First and foremost, the sample of medical students from one university is not representative. The respondents of this survey were young. Their socioeconomic status was above average, and the majority of respondents held liberal or left-leaning political views. It is therefore unlikely that the results of this survey reflect the opinions of the general public. However, the goal of the present study was not to reach definitive conclusions about the feasibility of a regulated kidney market. The goal was to gather preliminary data on how a potential target group of possible kidney vendors would respond to a regulated kidney market. In our view, the present data suffice to show that the dynamics on the supply side of a regulated kidney market are insufficiently understood (see discussion below). Further empirical research is therefore needed to evaluate the practical and ethical implications of a regulated kidney market.

A second limitation is that behavioural dispositions do not necessarily correlate with actual behaviour. Hypothetical decisions capture those components of actual decisions that are themselves based on projecting hypothetical situations. However, hypothetical decisions fail to capture the emotional components of actual decisions.[19] Kidney vendors, just like kidney donors, are likely to experience strong emotions about undergoing nephrectomy. These emotions can influence actual decisions to donate or sell. Therefore, respondents who said they would consider selling a kidney in a regulated kidney market might actually not sell one (and vice versa). Similar dynamics are known from the research setting, where it has been shown that fewer than 20% of those willing to enrol in future trials actually participate.[20] But although attitudes are not the sole determinant of actual behaviour, they significantly and substantially predict how people will act.[21] This is also true in the healthcare setting. For example, conjoint analysis—which is commonly used in marketing research to elicit consumer preferences—has been applied successfully in various areas of health policy.[22] Given the controversies about a regulated kidney market, health policy makers will need some level of evidence suggesting that it might actually work. To date, this evidence is not available.

A third limitation is that dispositions to sell a kidney and attitudes about a hypothetical regulated kidney market might change as debates continue or as practices become more acceptable. The data collected in this preliminary study reflect spontaneous dispositions and attitudes that were formed in an overall liberal society which, however, traditionally rejects organ sales. Nonetheless, health policy makers need to assess the real-time consequences of introducing a regulated kidney

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Table 3 Willingness to receive, donate or sell a kidney

Characteristic	All respondents (n = 178)	Vendors (n = 48)	Non-vendors (n = 130)	Missing n
Would undergo transplantation for end-stage renal disease				1
Live-donor kidney	158 (89.3)	44 (91.7)	114 (88.3)	
Cadaver-donor kidney only	13 (7.3)	3 (6.3)	10 (7.8)	
No	6 (3.4)	1 (2)	5 (3.9)	
Would donate kidney				
Loved one only	135 (75.8)	29 (60.4)	106 (81.5)	
Stranger only	1 (0.6)	0	1 (0.8)	
Loved one and stranger	25 (14)	15 (31.3)	10 (7.7)	
No	17 (9.6)	4 (8.3)	13 (10)	
Would consider selling a kidney				
Yes	48 (27)			
No	130 (73)			
Important reasons† against selling				
Degrading to sell parts of the body			74 (56.9)	
Cannot simply decide about selling parts of the body			44 (34.1)	1
Do not want to undergo a non-therapeutic intervention			86 (66.2)	
Fear of health consequences			97 (74.6)	
Fear of being stigmatised against			21 (16.2)	
Important reasons† in favour of selling				1
Can decide myself about selling parts of the body		45 (93.8)		
Fair to benefit when everybody else benefits		30 (62.5)		
Would not donate to a stranger unless paid		28 (59.6)		1
Conditions of sale				
Only to overcome particularly difficult financial situation		31 (66)		
To secure future		12 (25.5)		
To buy non-necessities		4 (8.5)		
Expected minimum compensation (in CHF)*				
5000		4 (8.3)		
10 000		7 (14.6)		
20 000		9 (18.8)		
50 000		14 (29.2)		
100 000		4 (8.3)		
500 000		5 (10.4)		
>500 000		5 (10.4)		
Expected compensation, median (IQR)		4 000 000 (3 000 000–8 000 000)		
Nature of compensation				
Money		38 (79.2)		
Non-monetary reward		10 (20.8)		

Data are n (%) unless otherwise stated.
*1 CHF was approximately €0.61/£0.41/US$0.82 at the time of the study.
†Important reason: Reflects participants choosing "very important" and "important" from a 4-point Likert scale of importance (very important—important—not so important—unimportant).
IQR, interquartile range.

market and compare the anticipated outcomes with the consequences of available alternatives. One of the central issues in this assessment is whether it is reasonable to expect that a regulated kidney market will increase the supply of kidneys today and, if so, how this supply will be generated.

Practical and ethical considerations for health policy makers

Despite the limitations discussed above, the present study raises important practical and ethical considerations for health policy makers. First, respondents distinguished between what they would do at the individual level and what they think society

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should do at the policy level. Those who endorsed a regulated kidney market would not necessarily consider selling a kidney if such a market existed. Conversely, those who would consider selling a kidney in a regulated kidney market did not necessarily think it should be legalised. This finding is important because it shows that dispositions to sell a kidney in a regulated kidney market are difficult to extrapolate from data on attitudes about legalising kidney sales.

Second, respondents who said they would consider selling a kidney in a regulated kidney market were also more likely to donate a kidney either to a loved one or a stranger than respondents who would not consider selling a kidney. Twelve of the potential vendors (25%) indicated that payment was not a necessary requirement for providing a kidney to a stranger. These findings could simply indicate that potential kidney vendors were less risk averse than probable non-vendors. However, the data might also suggest that a substantial minority of those who would consider selling a kidney were at least partially motivated by altruistic considerations. If this is true, payment might not be the only strategy for motivating individuals to provide a kidney to a stranger.

Third, 130 of all respondents (73%) said they would not consider selling a kidney, no matter the circumstance. Further, 31 of those who would consider selling a kidney (66%) would do so only in a particularly difficult financial situation, a finding that raises concerns about the validity of consent as well as inequities in the provision of kidneys. Questions relating to inequities have been of less salience in the literature (one exception is a paper by Robert Veatch[23]). A regulated kidney market aims for equitable access to kidneys. However, inequities in the provision of kidneys are not addressed[3–5] or are dismissed with reference to other acceptable but inequitable social practices, such as payment for high-risk work.[24–26] Not everyone will share this position, however. For many people, who gives, not just how many give, is morally relevant.

Moreover, exploratory results indicate that the effects of financial duress may not be obvious. High socioeconomic status was identified as the strongest predictor of respondents' willingness to sell a kidney. Although in line with results of the only other study that investigates individuals' disposition to sell a kidney in a regulated kidney market,[13] this finding may seem counterintuitive. Low income or wealth and responsiveness to financial incentives are often correlated. For example, financial incentives for participating in survey research elicit a higher response in low-income populations,[27] and financial compensation for participating in phase I research is valued most by healthy volunteers with low income and low education.[28]

However, financial incentives for foregoing a body part might operate differently from financial incentives in other domains of life (maybe unless selling a kidney is the only way to alleviate poverty,[29–31] which is excluded by the regulated market[3–5]). This matters in so far as the number of kidney vendors in a regulated market will depend upon who gives, and under what conditions. Present data suggest that individuals of high socioeconomic status are willing to sell a kidney if they were in a particularly difficult financial situation. However, this scenario is unlikely, in particular in the presence of a functioning welfare system. Is it possible, then, that a regulated kidney market might prove ineffective? While the present data cannot answer this question, they suffice to demonstrate our poor understanding of how financial incentives would influence individuals' willingness to provide a kidney to a stranger, and thus how a regulated kidney market would actually play out on the supply side.

Fourth, given the above discussion, it is unclear whether a regulated market would result in a net gain of possible kidney providers. The study found that 25 of all respondents (14%) would possibly provide a kidney to a stranger if and only if paid; a total of five respondents (2.8%) also endorsed a regulated kidney market. This finding is in accord with the results of the only other comparable study, which found that 18.1% of the Dutch population (n = 550) thought the chance that they would provide a kidney to a stranger would possibly or definitely increase with an attractive financial compensation.[13] However, these numbers lend no direct support for the effectiveness of a regulated kidney market. Since it is unclear who would sell a kidney, and under what conditions, the expected number of kidney vendors is difficult to estimate. Moreover, there are no data to estimate whether a regulated market would influence either deceased or live kidney donation rates.

CONCLUSIONS

This preliminary study provides the first data testing one of the central assumptions of a regulated kidney market, namely that paying people for providing a kidney will increase the supply of available organs. Study results suggest intricate relations between behavioural dispositions to sell a kidney in a regulated market and attitudes about adopting a policy implementing a regulated market. Data also reveal a lack of understanding about the expected dynamics on the supply side of organs in a regulated kidney market. Hence, it is unclear whether a regulated market will result in a net gain of possible kidney providers. Further empirical and normative analysis of these issues is required. Any calls to implement and evaluate a regulated kidney market in pilot studies[6 7 25 32] are therefore premature.

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