Ok thank you Mr Chairman. With how to improve the rates of living donation you might expect that I mean how to increase the rates of living donation. So there we go.
What is the problem in Europe? We have approximately 120,000 patients on dialysis and 65,000 are waiting for a kidney transplant. However, at the most we transplant 25,000 a year. So that means that the wait time has increased from 3 to 5 years. A lot of people die on the wait list, a lot of people are removed from the wait list and a lot of people are not even put on the wait list because the nephrologists think they will not last those 3-5 waiting years.

Let me show you the Eurotransplant kidney wait list for deceased kidney transplantation. You see an enormous increase in the 90s but now in this last century, it's stable. The wait list is stable and what does that mean? Is that a good sign or is that a bad sign? Well, unfortunately I think it's a bad sign.
Look at this; this is the wait list of last year. It decreased a little bit. Why was that? Because the inflow was slightly smaller than the outflow but the outflow of 6,371 people was not because they were transplanted, only 78% of them were transplanted and 22% died or were delisted.

The Chance for a Deceased Donor Transplant

<table>
<thead>
<tr>
<th>Age/gender</th>
<th>47</th>
<th>47</th>
<th>64</th>
<th>64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloodtype</td>
<td>A</td>
<td>O</td>
<td>A</td>
<td>O</td>
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<table>
<thead>
<tr>
<th></th>
<th>58%</th>
<th>61%</th>
<th>50%</th>
<th>41%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transplant</td>
<td>Removed</td>
<td>Waiting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36%</td>
<td>47%</td>
<td>3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31%</td>
<td>50%</td>
<td>9%</td>
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</tbody>
</table>

Waitlisted 2001-2005
The same analysis was performed in the Netherlands. All those people who were put on the wait list for a deceased donor or a kidney between 2001 and 2005 and that were 3,600. What happened to them? Last year we looked at them and said well if you are younger, 47 is quite young in my view, then almost 60% is transplanted but 40% is not. When you look at the older people, you see that half of them is only transplanted and half of them die or are removed from the transplant list. So when you put someone on the wait list in your transplant area for a deceased donor kidney, the chances are only 50-50 that they will be transplanted.

**Increase the Donor Pool**

- Expand deceased donor criteria
- Opt out legal system
- Active promotion live donation

so what to do? Of course, in general speaking terms increase the donor pool, expand the deceased donor criteria, try another legal system, we tried that in the Netherlands for three times where we were not so lucky as in Belgium or promote live donations in an active way. That's what we did.

**Increase the Living Donor Pool**

- Genetically related
- Genetically unrelated
- Kidney exchange
- Unspecified donation
- Domino-paired chains

We increased the living pool coming from genetically related going to genetically unrelated people. Most of them were partners. We did a crossover programme, paired kidney exchange programme or even larger with chains and unspecified donation, what we called the Samaritan donation into domino paired chains.
We also removed the disincentives. But what are disincentives? They are hurdles and barriers discouraging people to act in a certain way. So that means that we do reimburse medical travel and accommodation costs, loss of income is reimbursed not only for the donor but also for a company and persons. We have also extra for instance, childcare facilities and out of the pocket money.

What we also should do is remove misconceptions. Now, you are never too old or too young at least when you’re at the legal age of 18 to donate if you fulfil all the criteria. Our oldest donor in Rotterdam was 91 years of age and I know that in Oslo the oldest one was also approximately that age. Wrong blood type is not a problem, you can transplant over the ABO blood type barrier and you can also use those couples in a crossover design, which is also possible for positive cross match combinations. If you are genetically or emotionally unrelated and you do not know your recipient, you still can donate like a blood transfusion donor. You should be aware of the risk of renal failure and the risk of death and the risk of renal failure is not increased compared to the general population. The surgical procedures nowadays are laparoscopic procedures and the recovery time is not 2-3 months because of the limbotomy.
but only 3-4 weeks. No it does not affect fertility and no there are no religions or cultures that say it's forbidden to donate a kidney when alive.

Then, you should not only remove disincentives, you should give them incentives that are rewards to encourage people to act in a certain way. This is not only about money, I will not talk about monetary incentives at this point but it is also about raising awareness of the consequences of donation and raising awareness of the consequences of non-donation. You should provide alternative donation programs.

So what should you do? You should educate your country. Nelson Mandela said education is the most powerful weapon, which you can use to change the world. So whom do you have to educate? Of course, the patients and their environment and you could do that in the hospital but better still in the dialysis centres and still better, you should reach out to them, go to their homes, go to their own environment, let them invite their own people who they know and then you can give education at the people's home. Home based education. Health professionals should go not for a diet, medicine, dialysis and if everything goes well, maybe a transplant. No they should go for pre-emptive transplantation, thereby leaving out the
dialysis-related morbidity and mortality of your patients. The general public should be educated because they have to know that living donation is the normal renal replacement therapy and the primary renal replacement therapy and you should tell that also to your insurance companies and to the policy makers.

Slide 12

Survival on Dialysis

So what should you say to them? What should you tell them? First of all, that survival on dialysis is no good. It’s worse than survival from a colon carcinoma. You can see here three lines. The upper line is the young people after a wait time for a deceased donor kidney, which is four years you can see that 75% is still alive even in those young groups 25 are already dead. And in the middle age group 45-65, 50% is not there anymore to receive a deceased donor kidney and the elderly unfortunately, only 25% can receive that kidney and 75% has died.

Slide 13

The Chance for a Deceased Donor Transplant

<table>
<thead>
<tr>
<th>Age/gender</th>
<th>47 ♂</th>
<th>47 ♀</th>
<th>64 ♀</th>
<th>64 ♂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloodtype</td>
<td>A</td>
<td>O</td>
<td>A</td>
<td>O</td>
</tr>
</tbody>
</table>

| Transplant | 58%  | 61%  | 50%  | 41%  |
| Removed    | 36%  | 31%  | 47%  | 50%  |
| Waiting    | 6%   | 8%   | 3%   | 9%   |

Waitlisted 2001-2005

You should tell them I can put you on a wait list but the chances are only 50-50, as I showed you before from the analysis in the Netherlands.
You should tell them that this is not graft survival or patient survival; this is uncensored survival alive with a functioning kidney. It's only 9 years with a deceased donor after deceased kidney donor transplantation that it is 18 years, twice as long with a living donor kidney.

If you do that pre-emptively and so you avoid the mortality and the morbidity on dialysis, then it is even longer, then you can gain 15-20 maybe 25 years compared to first on dialysis and then transplantation.
Impossibilities, of course, there are impossibilities for instance in incompatible blood types or positive cross matches but you can overcome that and the easiest way to overcome that is to have a kidney exchange. In the Netherlands, we have now 544 people who entered our crossover programme and 43% could be helped.
Then we have people like this, the unspecified donors. We call them the Samaritan donors and they are not mad men, they are just good people who have always been given blood by the blood transfusion institutions and they want to help other people. They have an altruistic way of life and they help and the others you can see there did not help, they left the patient.
With such an unspecified donor you can make domino paired transplants. The unspecified donor gives his kidney away to a recipient of an unlucky donor recipient couple from the cross-over programme provided that donor who already wanted to give his kidney away, gives his kidney now to someone else and you can make change as long as you wish and in the United States they made a chain of 61 with your only chance of 4 because that is logistically easier for us.

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### Donation to Unrelated Patients

<table>
<thead>
<tr>
<th>DONATED</th>
<th>TRANSPLANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed (non anonymous)</td>
<td>10</td>
</tr>
<tr>
<td>Waiting list</td>
<td>46</td>
</tr>
<tr>
<td>Domino Paired</td>
<td>86</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>142</strong></td>
</tr>
</tbody>
</table>

At this moment, we have 142 unspecified or Samaritan donors and those 142 Samaritan donors made in total 251 kidney transplants possible.
In the overall results of all those people who were not in our crossover programme and were helped by our crossover or by domino transplantation was 52%. So they had impossibilities when they started. But more than half of them could be helped anyway.

Of course, you can go over the ABO blood barrier with this obstruction filter.
We have done that, we have done now 80 of them and you can see that the survival of those ABO compatibles is as good as other living donation. These are years and this is censored graft survival.

**Slide 24**

**Education**

- Patients and their environment e.g. home based, in dialysis centers
- Health professionals: should go for preemptive transplantation
- General public: Living donation is the normal RRT
- Insurance companies, policy makers

So education, patients in their environment reach out, health professionals should go for preemptive transplantation, the general public should know that living donation is the default and you should make that clear to the insurance companies and to the policy makers.
Then, there is the issue of monetary incentives. Much debate on this because the benefit for society of a living donor kidney is approximately 500,000 to 600,000 euros which is a lot of money. Everybody profits from that, society profits from that, the patient profits from that, the family of the patient profits from that, the doctors, the laboratory personnel, the health care professionals in the hospital are kept out of the treatment because they have a job and of course, the insurance companies gain, everybody gains except for the donor. So why is it then permitted to donate but not to sell a kidney? There are a number of arguments, the Libertarians say we don't like rules or regulations, everybody has to know that for themselves because people are autonomous creatures. Utilitarians of course say well if there is a win-win situation, it's alright. I don't agree with those concepts because that leads to exploitation of people. But there are other arguments.

Permitted to donate, but not to sell?

- Selling is repugnant, it corrupts the very meaning of human dignity?
- Organ donation should only be an altruistic act?
- Slippery slope to the abuses of the black market?
- Undermines donation programs not based on payment?
Selling is repugnant because it corrupts the very meaning of human dignity. Do you know what that is? Human dignity? Do you know what the very meaning of human dignity is? Well, I do not know. It's a concept of Emmanuel Kant, human dignity who said people have an inborn idea of what is morally good and morally bad, what is acceptable and what is not acceptable. He thought that his moral ideas should apply to the rest of the world. The problem is that not everybody agrees with him. By the way, there are more things that are repugnant but still not forbidden: prostitution, pornography, Guantanamo bay, selling arms to Syria, and isn't it more repugnant that 50% of your patients die on the wait list. Die or buy. Should organ donation then only be an altruistic act? We prefer that, everybody prefers that but is it true in practice. It's not the only valuable motive. When you give your kidney to your partner, you helped your partner but you yourself can also have a better life than with a partner who is ill. I don't think payment is at odds with altruism. Those colleagues of ours working in the HIV clinics in say South Africa in the slums they do that for altruistic reasons but nevertheless, they are paid 40 times more than the patients for whom they are working. So they earn money but they also are altruistic. Maybe it is more important why the money is needed for. I have told this story about 20-40 times I think but it goes like this. There are two people living in the slums of whatever Manila, Bombay, Mumbai and both have a daughter of 20 years of age and both daughters are ill. Daughter letter A has renal insufficiency and needs a transplant. So the father decides to give his kidney away to his daughter and she recovers and is healthy again. Everybody thinks that man is a hero. His neighbour with daughter B, daughter B is also ill but not of renal insufficiency but of a lymphoma and they need money to cure her for medicine, so the father decides to sell his kidney and with that money he can cure his daughter. So why is neighbour A a hero and neighbour B a villain that should be prosecuted? I don't know. Other arguments are this is a slippery slope to the abuses of the black market. Yes, everybody is against exploitation and nobody likes the black markets because black markets increase exploitation. Black markets are the evil and black markets can be induced by forbidding things. When you forbid something, it goes underground, you don't know what it is anymore, and prices go up. Maybe selling organs undermines donation programs not based on payment that is a possibility of donor approval. So I don't think that there are really ethical arguments to forbid the selling of organs, there are of course, legal arguments, there are social arguments, there are psychological arguments, there are strategic arguments, there are political arguments but not ethical arguments. The next question is then, do we need this?

Living Kidney Donors Rotterdam
This is the increase in the numbers of living donations in Rotterdam and you can see there is no selling of organs in the Netherlands. You can increase this by 4 to 500% in a couple of years not allowing for the selling of organs.

Slide 28

Living Kidney Donors Netherlands

Rotterdam is not the only place in the Netherlands; you can see these figures from the Netherlands, no selling of organs and still an enormous increase in live donation.

Slide 29
A decrease of the wait list for transplantation.

Slide 30

Improve living donation rates

- Remove disincentives by reimbursement of costs and by eradicating misconceptions
- Raise awareness about the consequences of (non) donation
- Educate your patients, their environment, healthcare professionals, general public
- Offer alternative programs

So improve your living donation rates by removing disincentives, reimbursement of costs, eradicating misconceptions, raise awareness of the consequences of donation but also of non-donation and educate your patients and their environment, preferably at their own home, a safe environment. Educate professionals, the general public and the issue in companies and offer alternative programs.