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Organ Sales in Iran: Is It Worth a Look?

ORGAN SALES IN IRAN: IS IT WORTH A LOOK?

Change and challenge is in the wind as 2008 comes to an end. The same is true when examining this month's ReachMD XM160 special series - Focus On Global Medicine. We take a look at both the changes and the challenges impacting global medicine.

Iran, not a paragon of virtue, may have a lesson to teach to the United States in Healthcare. Welcome to The Clinician's Roundtable. I am your host, Dr. Maurice Pickard and joining me today is Dr. Benjamin Hippen. Dr. Hippen, is a transplant nephrologist in private practice in Charlotte, North Carolina and he is a large member of Unisys Ethic Community. He is also an associate at the American General of Transplantation.

DR. MAURICE PICKARD:

Thank you very much, Dr. Hippen for joining us.

DR. BENJAMIN HIPPEN:

Thank you for having me.

DR. MAURICE PICKARD:

We are going to be discussing why there is no weight for organs especially kidneys in Iran, but before we get to that, could you kindly give us an overview of what is happening in the United States as far as our organ shortage is at the present time.

DR. BENJAMIN HIPPEN:

Well, as your listeners may or may not know there is a growing disparity between the demand and supple of organs for transplantation in the United States and indeed around the world. The number of people with kidney failure in the United States has been steadily rising from year to year. However, the number of organs that we have been able to procure for transplantation, while has gone up somewhat, has not gone up at the same rate. Consequently, this growing disparity between the demand and supply is translated into longer and longer waiting times for organs and for people with kidney failure, both in United States and around the world, time on the waiting list means time closer to the death. In the United States, the 5-year median survival on dialysis is 35%; that is people who start dialysis, 5 years later, two thirds of them are dead. Now, to select few, about 20% in the United States, who are listed for transplantation,

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represented a cohort of people that are healthier that that, but even among that small cohort, the rate of death is about 50% after 10 years and the reason for this is the dialysis takes an enormous toll on the cardiovascular system and most people who end up dying on dialysis, die from heart disease or related cardiovascular complications. So, as a result that time on the waiting list becomes crucial, both in terms of surviving long to get the transplant and also doing well after transplant. We know that the longer one waits on the list, the worse one does after transplantation, largely because of the accumulated comorbidities.

DR. MAURICE PICKARD:

What does the future look like, you know we have been spending an awful lot of time, it seems, spinning our wheels in United States with attempts at solicitation using the internet, using the newspaper, having various people who are looking for organs, using every modality to get to the public, which again brings up the whole question at just the level of playing field? We have had the network back, which allowed matching and exchanges. We have driver cards. We have all types of attempts. We even have presumed consent now taking place. Are any of these things making a dent?

DR. BENJAMIN HIPPEN:

Well, some of them are. In the last several years, the United Network for Organ Sharing or UNOS, which is the regulatory body that oversees solid organ transplantation in the United States, has made a considerable effort to try and improve the rate of procurement deceased donor organs and this is, as always, occurring under a multidisciplinary rubric called the organ donor collaborative and the collaborative has been successful in increasing the number of organs from deceased donors. It is up about 30% over the last 10 years. The problem is that the rate of growth in the number of people who needs kidneys and indeed could benefit from kidneys has gone up for a couple of reasons. One is, I already mentioned, the number of patients with kidney failure is going up at a higher rate, but also with improvements in the medication that's available in terms of immunosuppression, more and more people, people who perhaps 10 years ago, might not have been considered for transplantation we know now will benefit from transplantation. So that's added to the numbers of people waiting for kidney. Also, the organs that have been procured through the efforts of the collaborative are not the best organs and what I mean by that is many of these organs fall into the category that transplant professionals call extended criteria organ. These are organs from people, who when they die, are often older, older than the age of 55 or may have had high blood pressure, diabetes during her lifetime, but what we know about these kidneys is that while getting a kidney from the extended criteria donor is better than staying on dialysis in terms of patient's survival. The 5-year outcomes from these kidneys are about 50% graft survival, which is considerably less than the outcomes from a standard criteria deceased donor kidney, which is about 75%. So the bulk of the growth in the number of organs that were getting through these efforts, which were working to some extent, are really not the best kidneys and in fact many of these folks may end up needing a retransplantation, which only defers the problem, it does not actually fix it and the number of organs from living donors, for reasons that I am not sure anybody really knows, has been flat since 2005 in spite of the growing demand. That's what have led this up to the current problem.

DR. MAURICE PICKARD:

Could you tell us a little bit about the cost? We know that chronic renal disease is the only disease that is underwritten by medicare and I think when that first took place, I don't think anybody realized the cost that was going to take place. So, could we balance the cost of dialysis against the cost of the transplantation?

DR. BENJAMIN HIPPEN:

Absolutely, transplantation in addition to conferring an improved quality and quantity of life to those who receive it, is also considerably cheaper than the cost of dialysis. So, for example, in 2005, medicare alone paid 21 billion dollars for all renal replacement therapies of dialysis and transplantation combined. Off that 21 billion dollars, only 2 billion of that went to transplantation and that's the cost of the

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surgery, the hospitalizations, and the medications. Interestingly, Medicare pays for 80% of the transplant immunosuppression medications for 3 years. After 3 years, if the patient doesn't have private insurance, they have to pay for it out of pocket or find another way to get those medications and that can sometimes be a real hardship for people who are on disability or fixed income or who are unemployed. So, we are now seeing the perverse consequences of an open-ended and funded mandate for a modality that is manifestly inferior to another modality that came along later, but is clearly superior and so, there are a couple of economists, who have looked at how much money you could pay for an organ and still break even and it depends on how you calculated that, whether you were looking at just how much money it would cost to pay for dialysis for someone versus pay for an organ in the immunosuppression to doctors versus the rest or whether you want to calculate it in terms of increased quality of life because quite number of people who get a transplant who are working age, go back to work and become tax payers again and so one can also calculate it by filtering in those things, but the bottom line is you can pay someone upwards 50, 000 to 75,000 dollars per organ and still come very close to breaking even versus maintaining someone on dialysis and indeed you have given for many more years of life to the person who got the transplant.

DR. MAURICE PICKARD:

You touched on an interesting thing. Dr. Gary Becker, I know, has published on this, an economist that for 15,000 dollars in United states, we would increase the number of transplants by 44% and that it would take almost 40,000 dollars in cash to the donor to actually increase the number of transplants by two-thirds. This is an interesting figure, it sounds like a lot, but when you put it next to the amount of money you have just described they were spending in dialysis, it looks like a win-win situation. You kind of agree with that?

DR. BENJAMIN HIPPEN:

I do, although I think the exact number is something that people who know far more about economics, probably that I. It is probably best to adjudicate. The solution that I favor actually is a multi pronged one. Mind you, there are lot of different center of programs that could be put into place and as a clinician; I am much more concerned about the side constraints or the safety mechanism or checks on these different kinds of centers that would be necessary to make them merely defensible. To me, what the specifics of the incentive , whether it would be a cash payment or something less fundable than that such as a deposit in 401K or 529 or a health savings account that is something that's of value, but is not as fundable as cash. To me, it is less important than that the incentive, not be exploitative that it be fair compensation and that it can't be abused or gained in various ways that would harm either the people selling the kidney or the people receiving the kidney.

DR. MAURICE PICKARD:

You know, the numbers are staggering though. Some people say that 18 people on the list die everyday and that 100 join the list everyday and I say also that the list may actually be artificially small that many people don't even get on the list because they are not encouraged to, because the outlook is so poor to getting a donor and also that by the time, they do get a donor, they medically are not going to be able to go through the rigors of surgery. So, our list may actually be artificially small, do you have any data to substantiate even that concept.

DR. BENJAMIN HIPPEN:

I do. Actually, there was a recent study in the journal that I serve as an associate in the American Journal of Transplantation that looked at demographic data from the end-stage renal disease population and what they were specifically looking at, was demographic features of dialysis patients that would suggest that they would survive longer than 5 years on dialysis and if they did survive longer than 5 years on dialysis, the hypothesis was that they all to be referred to transplantation since they would seem just, prima facie those folks would be a good transplant candidates. This issue came up because there were some concerns that there are number of people on the

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transplant waiting list that are listed inactive, but what that study showed was that while there were a number of patients on the waiting list that there were some concern about with regard to their transplant candidacy, there were more than 100,000 people they estimated in the United States out of the some 380,000 dialysis patient in the United States that had demographic features that suggested that they are to be transplant candidates, but were not even referred for transplantation. So as you say, the list may be vastly underestimating the potential need.

DR. MAURICE PICKARD:

So, having described what exists in the United States and the alarming aspects for so many of our citizens, we now know that Iran off all the countries has no waiting list. Why is this? What is their system like?

DR. BENJAMIN HIPPEN:

Well in Iran, there is a regulated market in organs. It loosely regulated, but there are certain conventions as to how that market proceeds and they have been engaged in this since 1988 and they have kept track of their outcomes at least for their recipients since that time and the reason that Iran got involved in this is because Iran, like other countries in the world, were facing epidemic of people with kidney failure and this is for variety of reasons, but dialysis both in this country and around the world is quite expensive and in countries where the expenditures on public health is quite limited, there is a lot of interest and attention in finding alternative modalities that would allow people to continue living without the extravagant cost of something like dialysis and Iran was doubly struggling in the mid 80s because after the 1979 Islamic Revolution, a number of transplant professionals fled mostly to Europe and so they were faced both with an epidemic of kidney failure as well as with a lack of trained and skilled personnel to take care of patients both from the standpoint of providing dialysis and transplantation and so the need for a cheap and reproducible modalities that work like transplantation became very important in Iran and in 1988, they started a process whereby they would identify people who are interested in selling their kidney, they would go through a screening process, which we can talk about and by 1999, the waiting list for people, waiting for kidneys, had been eliminated and has been eliminated since. That doesn't mean that everyone in Iran with a kidney failure, gets a transplant, but Iran, proportionally to the United States, transplants their patients for kidney failure at about 3 times the rate we transplant our patients and if we were transplanting patients at that rate, we probably would have eliminated our list in a few years as well.

DR. MAURICE PICKARD:

This certainly is probably not a perfect system, but certainly it is a step in a direction towards saving lives that might be used as a model of some sort in the United States. We have been talking to Dr. Benjamin Hippen and I would like to thank him.

I am Dr. Maurice Pickard, your host and you have been listening to The Channel for Medical Professionals. To listen to our on-demand library, visit us at www.reachmd.com, register with promo code radio and receive 6 months for free streaming for your home or office. Thank you for listening.

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