

New era for organ donation and transplant in China

China is establishing a new national system for organ donation and transplantation, based on Chinese cultural and societal norms, that aims to be ethical and sustainable. Haibo Wang talks to Fiona Fleck

Q: China has said it will end its reliance on the organs of executed prisoners for transplantation, when did the move towards a new system start?

A: Many major transplant countries used the organs from executed prisoners during the history of the development of their organ transplantation services. But with social progress, this unethical practice was abandoned and they started to develop national donation systems that addressed the need for transplant organs. In 2006, Vice Minister Jiefu Huang of the Ministry of Health, who is in charge of organ donation and transplantation in China, stated publicly to the transplant community [all the agencies involved in organ donation and transplantation activities] that China cannot continue to rely on the organs of prisoners and that it's time for China to move on and develop an ethical and sustainable organ donation system. In 2007, the human organ transplant regulation was passed by the State Council of China. This is a crucial piece of legislation for the development of a transplantation system for the Chinese people who need organ transplants. The World Health Organization's (WHO) support has been vital in making this law consistent with international norms.

Q: When will the practice of harvesting the organs of executed convicts stop?

A: While we cannot deny the executed prisoner's right to donate organs, an organ transplantation system relying on death-row prisoners' organs is not ethical or sustainable. Now there is consensus among China's transplant community that the new system will relinquish the reliance on organs from executed convicts. The implementation of the new national system will start early next year at the latest. This will also mark the start of phasing out the old practice. Although it took decades to establish a sophisticated national organ donation system in western countries, I am optimistic that China can leapfrog to success in a relatively short period of time given the combination of governmental support and international experience.

Q: The legislation is in place, how will you make it a reality?



Courtesy of Dr Haibo Wang

Haibo Wang

Haibo Wang is the director of the China Organ Transplant Response System Research Center of the Ministry of Health, a position he has held since 2011. Wang is a member of the National Organ Donation Committee and Organ Transplant Committee. Since 2004, he has been assistant director of the China Liver Transplant Registry at the Li Ka Shing Faculty of Medicine at the University of Hong Kong in the Special Administrative Region of China, where he helped to develop a national computer system for the allocation of transplant organs. He graduated in clinical medicine at the Sun Yat-Sen University of Medical Sciences in Guangzhou, China in 1998 and earned a master's degree in chemistry at the University of Maryland, United States of America in 2001.

A: It has been five years since the law was passed and now it's being revised to address the challenges of establishing a new national system, such as defining the role of national accountable organizations and their responsibilities in line with WHO guidelines. Based on this law, we are establishing procedures for the new system and this is a great challenge for China. On the one hand, we face a great public demand for transplant organs but, on the other hand, organ donation is not only a scientific matter but cultural and societal. That is why, we must address these non-scientific aspects of organ donation to gain public confidence and support.

Q: To gain that confidence you need transparency. How are you building transparency into the new system?

A: The Red Cross Society of China has been commissioned by the Ministry of Health to run the organ donation system. It also acts as a watchdog to see that organ donation, procurement and allocation within the medical system are done in accordance with the law. In addition, our research team at the University of Hong Kong has developed and maintains our national organ computer system, which allocates organs according to national policy that reflects urgency, compatibility and patient need, known as the China Organ Transplant Response System or COTRS. It is free of human intervention and monitored by many

bodies to ensure the transparency, fairness and traceability of organ procurement and allocation. These measures provide the basis for public trust in organ donation.

Q: How will the new system work?

A: We need public awareness campaigns encouraging people to donate their organs and explaining that there is now a transparent system to handle this. The idea is for people to volunteer by registering with the donation scheme, run by the Red Cross Society of China, and, after their death, their organs can then be allocated via the COTRS.

Q: What are the barriers to success?

A: National organ donation systems are based on the concept of death. Death is not merely an isolated natural process. It has culture and societal aspects that are unique to each society, which must be respected by that society's organ donation system. Brain death, as defined in law, is used to determine death in many countries and is often taken as the basis for the surgical removal of organs for transplant. In China we do not have such legislation and that makes it difficult – but not impossible – for us to do organ donation after death. I have been asked many times by our international colleagues: "How can China do organ donation after death without brain death legislation?" That is exactly the research question that needs to be addressed in

the new system. It is not customary – in terms of our culture, law and medical practice – to take brain death as the definition of death in China. Members of the public want organ donation to save lives, but they also want to be sure that, when this involves organ procurement after death, that their loved one is definitely dead. It's not just a legal issue. Even if we had brain death legislation, some people would still say 'I will only donate my organs once my heart has stopped'. This is not unique to Chinese society but exists in other countries to a different extent.

Q: How is death defined in China and how is this used in the donation of organs after death?

A: Our deceased organ donation criteria respects current cultural and societal norms and provides three options for the Chinese people who want to donate organs after death: organ donation after brain death; organ donation after circulatory death [heart stop]; and organ donation after brain death followed by circulatory death. Data from our pilot organ donation programme that paved the way for a new national system suggest that only 9% of organ donations are on the basis of brain death, while the rest were based on brain death with circulatory death or just on circulatory death. This is the reality, but once we make progress with the new organ donation system, this will shift the cultural and societal norm regarding death.

Q: Is it absolutely necessary to have legislation on brain death or just to have an understanding of what this is among members of the public?

A: Lack of legislation can put the medical professionals engaged in organ transplantation at legal risk, that's one reason why we are extremely careful in designing the national protocol when it comes to organ procurement from patients pronounced dead based on neurological criteria [brain death]. However, first, brain death legislation should not be established for organ donation but because advances in medical technology require it. Second, transplant professionals should not be the sole and main drivers of death determination criteria and legal requirements, as this would present a conflict of interest and raise public concern. Third, even with legal recognition of death determination on neurological criteria or brain death

legislation, there is no guarantee of the success of donation in terms of public willingness to donate.

Q: How will the new system achieve a balance between meeting the public demand for organ transplants and maintaining public confidence?

A: Medical criteria and procedures for organ procurement after brain death and circulatory death declaration have been established and we now have rules for organ allocation. As mentioned, we have been working hard to establish a national organ allocation system for people who want to donate their organs to save people's lives, but who want to be sure that their organs will not be traded. In addition, experts are currently discussing how to provide social support for the disadvantaged donor and recipient families; using China's existing social support mechanism to cover their expenses, but not to be a form of payment for the organs. This is not necessarily reflected in the regulations, but must be decided and built into policies governing the process as a whole.

“ We must address these non-scientific aspects of organ donation to gain public confidence and support. ”

Q: What are the cultural or religious concerns about organ donation after death in China?

A: There are several religions and traditions in Chinese culture, including Confucianism, Daoism and Buddhism. None of them forbids the donation of human organs after death. According to some of these beliefs, the integrity of the human body after death should be preserved, but according to the same beliefs, it's a good thing to save people's lives and after death the body has no importance anymore. Within all of these cultural and religious beliefs, there are no contraindications for organ donation after death, so this is something that works in our favour and something on which the community can build to ensure a supply of organs to save lives but that will not harm anyone. Vice Minister Huang

answered this question in June during an interview on national television: "What lags behind is not the tradition or moral status of Chinese people, it's our system."

Q: What are the next steps?

A: The Chinese Ministry of Health and the Red Cross Society of China have just held meetings with the national organ donation and transplant committees to outline the next steps for organ donation based on the results of a two-year pilot programme for national organ donation. The two committees have examined the issues raised by the pilot and are starting to implement the new system on a national scale. A national meeting hosted by the Ministry of Health and the Red Cross Society of China in September launched the national organ procurement and allocation system, which is the centrepiece of the new national organ donation system in China.

Q: Do many hospitals have the staff and equipment to harvest organs after death and transplant them?

A: Many hospitals are technically able to do this, ones with an intensive care unit and a trauma centre generally are able to identify potential donors and a transplant team can be invited to carry out organ procurement. The question is about the coordination between the team in charge of the deceased donor and the transplant recipient. The new national organ procurement organization, which we launched this year, will work to improve this coordination. We can only design a system that is workable in the environment in China, the key thing is that it should have Chinese characteristics and be capable of gaining the confidence of the Chinese people.

Q: So it would be a system under which people volunteer to donate their organs after death, an "opt in" system, not an "opt out" system?

A: Yes, we cannot make the decision for the people, they must make it for themselves. Legally we can only ask the donor's next of kin for their approval, but culturally the whole family and in some cases, the community such as the village in which the family lives will be involved in the decision-making process. We must do all we can to respect people's feelings and avoid hurting them. Everyone in the organ donation process must feel comfortable with it. After all it's for the benefit of the many people in need. ■