- 6 Bjurling K. The dark side of healthcare. Stockholm: Swedwatch, 2007.
- 7 NHS Purchasing and Supply Agency. Framework for an ethical procurement strategy for the healthcare sector. June, 2008. www.pasa.nhs.uk/PASAWeb/ NHSprocurement/Sustainabledevelopment/Sustainabilityreports.htm (accessed Nov 28, 2008).
- 8 Kjellstrom T, Hakansta K, Hogstedt C. Globalisation and public health overview and a Swedish perspective. *Scand J Public Health* 2007; **35**: 2–68.
- 9 Ram R. Further examination of the cross-country association between income inequality and population health. Soc Sci Med 2006; **62:** 779–91.
- Labonte R, Schrecker T. Globalization and social determinants of health: the role of the global marketplace (part 2 of 3). *Globalization Health* 2007; **3:** 6.
 Stockholm County Council Sustainable procurement 2008 www.sll se/sll/
 - Stockholm County Council. Sustainable procurement. 2008. www.sll.se/sll/ templates/NormalPage.aspx?id=45796 (accessed Nov 28, 2008).
 BMA. The BMA's Medical Fair and Ethical Trade Group has received support
- 12 BMA. The BMA's Medical Fair and Ethical Trade Group has received support in the new UK Government Global Health Strategy. Sept 30, 2008. http:// www.bma.org.uk/ap.nsf/Content/fairandethicaltradegroup (accessed Nov 26, 2008).

Government policy and organ transplantation in China

Transplantation in China began in the 1960s, and the number of procedures increased until 2004; since then, the numbers have fallen (figure). In 2006, with 11000 organ transplants, China ranked second in terms of number of transplants per country. The need for donors, both deceased and living, increases the need for regulation to ensure that the rights of all parties are protected. Therefore a legal framework is urgently needed to regulate professional behaviour, to establish clinical protocols, and to restore equilibrium between the extreme demand for organs and their limited supply.

In China, regulations have lagged behind medical progress, with transplantation expanding in an underregulated manner. There are four major concerns for China and the international community: regulating quality, an organ market, tourism for transplantation, and the source and rights of the donor. Regulation of transplant centres and quality and the rights of the donor are important issues for developed countries.¹⁻³ China's desire to regulate its transplant programmes and the willingness of developed countries to assist is reflected in a grant to the Peking Union Medical College and the University of Chicago from the China Medical Board to improve the practice and policy of transplantation.

In March, 2006, the Ministry of Health issued the Interim Provisions on Clinical Application and Management of Human Organ Transplantation.⁴ The provisions stipulated the requirements that medical centres must meet for transplant services, and made the provinces responsible for plans for clinical applications. Institutions that do transplantation need to show leadership by incorporating ethics, medical and surgical expertise, and intensive care. In April, 2006, the Ministry set up the Committee of Clinical Application of Human Organ Transplantation Technologies to standardise clinical practice, organised a national summit on clinical management in November, 2006, and issued a declaration that outlined regulatory steps. In March, 2007, the Regulation on Human Organ Transplantation⁵ was approved by the State Council and came into effect on May 1, 2007. These actions have received praise from WHO and The Transplantation Society.⁶

Published **Online** October 20, 2008 DOI:10.1016/S0140-6736(08)61359-8

(W

The under-regulated growth of transplantation in China provided an atmosphere for organ donors to get financial compensation. The Chinese Government addressed this issue firmly and directly in the Regulations on Human Organ Transplantation by banning such activities with severe penalties, and saying that altruism should be the driving principle.

The huge volume of transplants led to an influx of non-Chinese individuals travelling to China for the procedure, where access to organs was more rapid and programmes were less expensive than in developed countries. In July, 2007, the Ministry issued a notice that ensured Chinese citizens would be given priority for receipt of an organ. This move supports the recent Istanbul Declaration condemning transplant tourism.⁷

In China, more than 90% of transplanted organs are obtained from executed prisoners.⁸ Additional safeguards set up to ensure the rights of these individuals include: written consent for organ removal from the donor; review of all death sentences by the Supreme People's Court; transplant professionals must not be involved until death is declared; and participation by the Red Cross to publicise the need for organ donation. The Ministry is working with many organisations to set up an organ-donation policy that will allow people to express their wishes on their driver's licences.⁹ The Ministry also organised a symposium to discuss the diagnostic criteria for brain death in April, 2008, which is a necessary initial step to set up alternative sources of organs in China.

The new regulations have successfully established baseline requirements for medical institutions to do

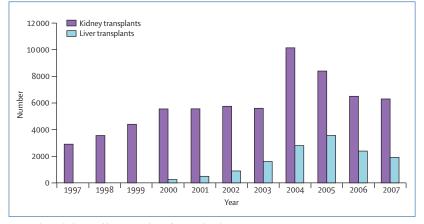


Figure: China—kidney and liver transplants for past decade Data from Chinese Ministry of Health.

transplantations. At present, 87 institutions have full approval from the Ministry of Health; 77 others have provisional approval and 18 months to comply with all the regulations. This number is a reduction from the more than 600 institutions that did transplants 1 year ago. Regulations have been set up to ban transplant tourism. The penalty for participating in a transplant that involves payment for organs is substantial. Reforms have decreased the number of cadaveric organ transplants by more than two or three fold and increased the number of living-related organ transplants by more than 100% in China in 2007. The drop in transplantation over the past 3 years is a result of these changes acting in tandem. Currently, post-transplant registries are being developed.

An organisational structure for transplantation must be established to oversee, implement, audit, and set up a balance of authority between the central and provincial governments. A registry of recipients that uses robust methods of data-collection should be started. Donation, use of organs, and selection of patients are currently hospital based, without centralised standards, and a

🖉 Traditional Chinese medicine

Published Online October 20, 2008 DOI:10.1016/S0140-6736(08)61354-9 Systematic reviews show that Chinese herbs and acupuncture can be effective for atopic eczema and chemotherapy-induced nausea, respectively.¹² Traditional Chinese medicine (TCM) is one of the oldest healing systems. TCM includes herbal medicine, acupuncture, moxibustion, massage, food therapy, and

transparent system for organ procurement, equitable organ allocation, and selection of patients is needed.

China is planning regulations for the new phase of transplantation, which will largely conform to international standards. There are nuances within the system to accommodate cultural differences. For example, the laws for brain death will incorporate language that will respect the family's wishes, especially when they are based on religious belief that requires the whole body be buried. Despite a sharp decrease, capital punishment still exists in China. The long-term goal for social development is to abolish the death penalty but, until then, regulations need to protect prisoners' rights and desires and separate transplant programmes from the prison system.

*Jiefu Huang, Yilei Mao, J Michael Millis

Vice-Minister of Health, Beijing, China (JH); Peking Union Medical College Hospital, Beijing, China 100730 (JH, YM); and Section of Transplantation, University of Chicago, Chicago, IL, USA (JMM) liuyong@moh.gov.cn

We are supported by a grant (06-837) from the China Medical Board, New York, NY, USA. We declare that we have no conflict of interest.

- Department of Health and Human Services: Centers for Medicare and Medicaid Services. Medicare program; hospital conditions of participation: requirements for approval and re-approval of transplant centers to perform organ transplants. *Fed Regist* 2007; **72**: 15198–280.
- 2 United Network for Organ Sharing. Designated transplant program criteria. 2007. http://www.unos.org/policiesandBylaws2/bylaws/UNOSByLaws/ pdfs/bylaw_122.pdf (accessed Sept 8, 2008).
- 3 Cronin DC 2nd, Millis JM, Siegler M. Transplantation of liver grafts from living donors into adults—too much, too soon. N Engl J Med 2001; 344: 1633–37.
- 4 Huang JF. Ethical and legislative perspectives on liver transplantation in mainland China. *Chinese J Surgery* 2007; **45:** 292–96.
- 5 Health CMO. Regulation on human organ transplantation. June 23, 2008. http://www.gov.cn/zwgk/2007-04/06/content_574120.htm (accessed on Sept 8, 2008).
- 6 Tibell A. The Transplantation Society's policy on interactions with China. Transplantation 2007; 84: 292-94.
- Steering Committee of the Istanbul Summit. Organ trafficking and transplant tourism and commercialism: the Declaration of Istanbul. *Lancet* 2008; **372:** 5–6.
- 3 Huang J. Ethical and legislative perspectives on liver transplantation in the People's Republic of China. *Liver Transpl* 2007; **13:** 193–96.
- Wenjun C. Organ action as liver transplants go on a roll. June 18, 2008. http://www.shanghaidaily.com/sp/article/2008/200806/20080616/ article_363391.htm (Sept 8, 2008).

physical exercise, such as shadow boxing. TCM is a fully institutionalised part of Chinese health care and widely used with western medicine. In 2006, the TCM sector provided care for over 200 million outpatients and some 7 million inpatients, accounting for 10%–20% of health care in China.³