Evidence-based medicine vital for health and medical progress in China

Evidence-based medicine – using the best available evidence to make decisions about individual patients’ care — holds vast untapped potential for improving health in China. Youping Li talks to Ursula Zhao.

Q: How did you become interested in this field?
A: A month after I finished four years as a research fellow in organ transplantation immunology at the University of Pittsburgh in the United States (of America) (USA) in May 1996, I returned to the West China Hospital, where I had worked before. One day, an associate professor named Ming Liu, who had been working with the Cochrane Stroke Group in Edinburgh [Scotland], came to my office, asking whether I would help her launch a Cochrane Centre in China. I felt strongly that this field – i.e. evidence-based medicine – was essential and, after a brief discussion with the dean and others at the hospital, we approved the proposal and raised 100 000 yuan (about US$ 12 000 in 1996) within a week. What happened after that was beyond my expectations. Two months later, Liu was unexpectedly sent abroad, leaving me to carry out this important project all on my own.

Q: Where did the idea come from to set up such a centre?
A: Early in 1996, officials from the health ministry, joined by Ming Liu as their translator, visited the United Kingdom Cochrane Centre in Oxford, where Iain Chalmers told them about the Cochrane Collaboration and asked them if they would like to establish a Cochrane centre in China.

Q: How did you go about this?
A: In October 1996, I received an encouraging message from a deputy health minister and, in November, [the late] Chris Silagy, who was director of the Australasian Cochrane Centre at the time, sent me a two-page explanation of how to set up a Cochrane Centre. First, in February 1997, we submitted an official request to set up a Cochrane Centre in China. I felt strongly that this field – i.e. evidence-based medicine – was essential and, after a brief discussion with the dean and others at the hospital, we approved the proposal and raised 100 000 yuan (about US$ 12 000 in 1996) within a week. What happened after that was beyond my expectations. Two months later, Liu was unexpectedly sent abroad, leaving me to carry out this important project all on my own.

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Q: How did the centre start its work?
A: We started by assessing the effectiveness of some of the disease interventions on which the Cochrane Collaboration produces systematic reviews, including in the areas of maternal and child health, cardiovascular diseases, metabolic endocrinology, respiratory diseases, mental health, the musculoskeletal system and cancers – as these are also important in China. In addition, we also looked at internal medicine and surgery, and traditional Chinese medicine. At first we tried to get doctors involved, but some were busy, some knew little about clinical epidemiology and did not have the necessary computer skills, while others felt their authority was being undermined. So we targeted medical students, who continue to make up a large portion of our participants.

Q: Was there any resistance?
A: Yes. Many people had no idea what evidenced-based medicine was and questioned its potential contribution to our country. We spent a lot of time explaining the work of the Cochrane Collaboration to the medical establishment and to the public by publishing articles in mainstream and specialized publications and giving interviews to newspapers and television networks.

Q: How did your centre join the Cochrane Collaboration?
A: The Chinese government played a critical role and the Cochrane Collaboration – through the Australasian Cochrane Centre – provided us with generous help during our entire application to join. In 1997, we organized the first Cochrane seminar in Chengdu, facilitated by Chris Silagy. When he saw the strong support of the health ministry, the participation of 147 trainees from 17 provinces and my ability to manage the event, he became convinced that we were ready to establish a Cochrane centre in China. After following his advice and studying past applications, we became the 14th Cochrane centre in 1999.
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Q: What happened then?
A: Our first task was to learn how to search for and manually retrieve documents from Chinese journals. We sent trainees to the Australasian Cochrane Centre for three months and invited trainers from Cochrane centres in Australia, Germany and the United Kingdom to provide training in China. Only the top students qualified for the next step: that of preparing a systematic review under a trainer’s instruction. We then organized more training for other promising participants, facilitated by qualified Cochrane review authors. Today, many of these participants have become star systematic review authors in China and are playing a key role in promoting evidence-based medicine in our country. Thanks to the work of our centre, evidence-based medicine has been recognized by the health ministry and was described in the China health yearbook in 1998, 2000 and 2002 as one of the few areas that was catching up fast with world standards.

Q: Is this systematic review as the gold standard of evidence synthesis? When did Chinese researchers start doing systematic reviews?
A: There were very few before we joined the Cochrane Collaboration. Today the sector is booming. With the support of the Cochrane Collaboration, we have trained over 10 000 potential contributors and we now have a national network of 2264 contributors from over 25 cities and provinces who search and analyse the relevant randomized controlled trials to conduct Cochrane systematic reviews. However, some of the evidence generated may not address important public health issues and the biggest problem we face is the uneven quality of systematic reviews in China, partly because our university courses in clinical epidemiology, statistics and computer information retrieval lag behind those offered overseas.

Q: How recently did Chinese researchers start doing randomized trials?
A: The first was published by Zhuming Jiang on parenteral nutrition in an overseas journal in the 1980s. The research group, led by Liusheng Liu and Wen Wang, did some major studies with Professor Richard Petø’s team at Oxford University. Unfortunately neither the Chinese government nor the health sector has shown any interest in making policy to encourage researchers not only to do randomized controlled trials, but any kind of clinical trials. Clinical research into diseases affecting millions of people is a recent phenomenon in our country. Despite our efforts at the Chinese Cochrane Centre, there is still huge untapped potential for producing primary studies that can be used to promote people’s health.

Q: Why are studies with animals, not humans, still the dominant form of health research in China?
A: Few people realize how important clinical trials are – not only in China – but all over the world. Ground-breaking inventions and discoveries, for example of the microscope and antibiotics, have dominated science over the last century. In China, most of our medical journals publish studies based on animal experiments but, unlike the evidence from clinical trials in human beings, the results cannot be used directly to improve clinical practice. In China, we didn’t realize the risks of relying too much on animal studies until the outbreak of severe acute respiratory syndrome (SARS) in 2003. At that time, basic research did not provide solutions for the clinical management of SARS. The disease drove China and other countries to reconsider the importance of clinical research for the prevention and treatment of emerging infectious diseases.

Q: What role can evidence-based medicine play in evaluating traditional Chinese medicine, including acupuncture?
A: Since 1999, the main leaders of the National Bureau of Traditional Chinese Medicine, Zhenggi Li and Baoyan Liu, have been open to the evidence-based approach and consider it critical for helping us to introduce traditional Chinese medicine to the world. I have always said that evidence-based medicine, an approach initially developed to solve problems in western medicine, can only be adopted in China by addressing this important sector. That is why the Chinese Academy of Traditional Chinese Medicine, which is responsible for the oversight of activity in the field, has become a sub-centre of our Evidence-Based Medicine Online Cooperative Research Centre.

Q: How do you see the future?
A: Some of the clinical evidence we produce in China does not meet world standards because we do not have enough qualified researchers or adequate regulations for clinical trials. For example, there is no requirement for clinical trials to be registered in advance and the requirements for ethics review are also weak. Evidence-based medicine in China is a long-term project that requires the collaboration of many people to deliver the best results. I hope that our government will, in future, provide us with stronger policy support, establish much-needed regulations regarding clinical trials and increase the budget for evidence-based research.

SAGE: request for nominations

The Strategic Advisory Group of Experts (SAGE) is the principal advisory group to WHO for vaccines and immunization. WHO is soliciting proposals for nominations for vacancies in this group. In view of the current composition of the group, only nominations from experts from the African, American, Eastern Mediterranean, South East Asian and Western Pacific regions are solicited at this time.

Nominations for members must be submitted by 7 May 2014, following the instructions at: http://www.who.int/immunization/sage_nominations