concerned about their own possible infection, the patient receives minimal or inadequate attention, both physically and psychologically, or may even be refused care. Widely publicized during the AIDS epidemic, such responses have properly led to the questioning of the professional commitment of some health care workers.

Unfortunately, the universal precautions promulgated by the Centers for Disease Control (CDC) in 1988 are commonly construed as a list of the seemingly innumerable ways in which blood-borne viruses may infect health care personnel.[8] Misread in this way, they may contribute to neglect of the patient "posted for precautions," or even to an unwillingness to enter the patient's room. If anxiety can be put aside, however, the CDC statement provides a safe and comfortable path through the daily work routine.

Both national surveillance studies and prospective studies indicate that work in the health care setting has been associated with human immunodeficiency virus (HIV) transmission very infrequently.[9] For reasons not understood, HIV infections of hospital workers due to needlesticks and the like have been very few, in contrast with infections by the blood-borne hepatitis viruses. The Florida dermatologist transmitted HBV but not HIV by his failure to observe precautions, even though HIV-infected patients were in his practice.[2]

The term "universal precautions" was perhaps not the best title for the 1988 CDC document, because the two words may promote the feeling that health care facilities are dangerous environments where bad things are likely to happen unless we are extraordinarily careful. What I think they are meant to tell us, however, is that any patient, regardless of diagnosis, has the potential to transmit an infection of which we may or may not be aware. Hence, we need to use the same precautions for every patient. They tell us also that health care facilities are places where we do need to be careful; a workable set of precautions should be integrated into a routine that becomes second nature. Such precautions do not guarantee that no untoward event will ever occur, but the odds are against it if we use common sense. □

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New Lessons from China: Equity and Economics in Rural Health Care

The article by Clayton and colleagues, "Hepatitis B Control in China: Knowledge and Practices among Village Doctors,"[1] in this issue of the Journal and recent press articles[2–4] on problems in health care in China raise important questions about the changes in a rural health care system that 15 years ago had been widely viewed as a model for other developing countries. It was then extensively reported that China's innovations in health services had brought health care and medical care to a rural population of some 800 million people (80% of China's total population), a group that had previously largely lacked access to personnel trained in modern medical methods and to facilities equipped with modern medical technology.

A series of reports during the 1970s described China's development of its barefoot doctors, the cooperative medical care system, and a three-level health care system. These services were grounded in the rural economic, social, and political units called "communes" and their component production teams and production brigades. Barefoot doctors were peasants, trained for relatively brief periods, who performed health care and medical care services on a part-time basis and who were paid by the production brigade in the same way as the peasants who did agricultural work. The cooperative medical care system was a form of medical care insurance supported by the commune economy and by the peasants' regular small payments towards higher-level medical care.

The three-level health care system consisted of (1) basic production-brigade health stations staffed by barefoot doctors, midwives, and health aides; (2) better-equipped commune facilities supported by the entire commune and staffed by full-time physicians and nurses; and (3) county hospitals, supported by the central government, that were staffed by primary care physicians and some specialists and that provided a higher technical level of care. When necessary, patients would be transferred to higher-level facilities and their care paid for by the cooperative medical care system.[5–8]

Dramatic improvements in the health status of the rural Chinese population were reported, and, although it was difficult to determine to what extent these changes were due to advances in health services or to the remarkable improvements in nutrition, housing, education, and other social conditions, it seemed clear that China's medical and health care system was playing an important role in rural areas. Indeed, the World Health Organization (WHO), the United Nations

Editor's Note. See related article by Clayton et al. (p 1685) in this issue.

Children's Fund, and other international health agencies found China's rural health care system to be so exemplary that they publicized it intensively as part of WHO's campaign for Health for All by the Year 2000.[9-11]

In the late 1970s and early 1980s, the ideology on which China's economic system and its human services were based dramatically shifted. To spur private ownership of enterprises and private investments that would speed national economic development, the government dictum "Serve the People" was replaced by "To Get Rich is Glorious." This, together with what might in the United States be termed "trickle-down economics," was expected to lead to rapid improvement in the economic status and therefore in the quality of life and the health status of China's population.[12,13] As part of these changes, the communes were dissolved. Because the organization and financing of rural health care was largely dependent on the commune system, rural health care services changed substantially. The commune facilities were turned over to the townships (political but not economic entities), and the production-brigade facilities were sold to private owners. The health clinic in Chen Village, for example, was sold to the village barefoot doctor "who, true to the prevailing entrepreneurial spirit, alienated patients by raising the fee for any injection."[14] The barefoot doctors have now been largely replaced by "village doctors," who are paid on a fee-for-service basis rather than on a communal basis. The cooperative medical care systems have disappeared in all but the wealthiest rural areas.

Along with other problems emerging in China in the wake of the new economic policies, reports of corruption among medical suppliers and personnel have begun to appear. A rural factory was reported to have washed more than 1 million disposable hypodermic needles, failed to sterilize them, and then sold them as new.[3] Examples have abounded of the bribery of physicians and technicians in order to obtain what should be routine care.[2] Although informing a pregnant woman of the sex of her fetus (as determined by ultrasonic examination) is illegal in China, physicians and technicians have been bribed to perform such examinations and report the outcomes; this has apparently resulted in the selective termination of pregnancies of female fetuses and an extraordinary rise in the sex ratio of newborns to 118.5 males for every 100 females.[4]

Although the practices described in Clayton et al.'s paper[1] do not approach these egregious examples of the consequences of a health care system's shift to profit-making, Clayton and colleagues' demonstration of the overuse of parenteral injections, inadequate sterilization of syringes and acupuncture needles, and low levels of immunization against hepatitis B is further evidence of serious problems in China's current rural health care system.

In sum, it is clear in China—as indeed it is in all societies but made more obvious by the dramatic swings of China's policies—that a nation's medical and health care system is a reflection of the society's social, political, and economic conditions. Although China's Maoist era certainly entailed severe problems, including unconscionable political repression, the period's ideological commitment to improving rural quality of life and providing equitable services led to an extraordinary development of rural health services. Conversely, China's current ideology of unrestrained free-market entrepreneurialism combined with political repression has destroyed the economic and social bases for equitable rural services.

China once again teaches fundamental lessons to those concerned with the just delivery of medical and health care. Unless a society as a whole is concerned with equity and justice in their broadest meanings, that society will have enormous difficulty developing and sustaining the equitable provision of health services to all its people. □

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