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An Untapped Resource in Addressing Emerging Infectious Diseases: Traditional Healers

AMY GUERIN THOMPSON

INTRODUCTION

Bacteria, viruses, parasites, and fungi are eternal forces that contribute to the emergence and reemergence of infectious diseases. Nature does not recognize artificial borders establishing States; therefore, emerging and reemerging infectious diseases (EIDs) are an issue of global concern. The World Health Organization (WHO) has gone so far as to claim that infectious diseases represent a "world crisis." Because of both the threat posed by EIDs and today's unprecedented amounts of travel and commerce, the tradition of State cooperation to control infectious diseases must be strengthened.

Currently, efforts are being made to alleviate this EID crisis situation; from them, four common objectives emerge. These four objectives entail creating and strengthening: (1) national public health infrastructures that compliment a global public health system; (2) surveillance programs; (3) disease prevention

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2. David P. Fidler, Globalization, International Law, and Emerging Infectious Diseases, 2 EMERGING INFECTIOUS DISEASES 77, 77 (1996). EIDs are "diseases of infectious origin whose incidence in humans has increased within the past two decades or threatens to increase in the near future." See U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION, ADDRESSING EMERGING INFECTIOUS DISEASE THREATS: A PREVENTION STRATEGY FOR THE UNITED STATES 1 (1994) [hereinafter CENTERS]. AIDS, cholera, malaria, and yellow fever are examples of EIDs.
4. Fidler, supra note 1, at 774-75.
and control strategies; and (4) research and development programs. WHO, as the worldwide coordinator for public health concerns, is an important leader in addressing these four objectives. However, the effectiveness of WHO, similar to State actors, is severely limited by financial constraints.

Because of this lack of financial resources, WHO estimates that approximately eighty percent of all people globally receive some form of traditional (non-Western) health care treatment. The urgent need to contain infectious diseases suggests that including healers from all cultures in the implementation of the four objectives discussed above is a necessary approach to containing EIDs. Therefore, this Note argues that existing traditional health care systems are an untapped resource in the global effort to fight the spread of infectious diseases. After discussing traditional medicine's role in the past and present, this Note addresses how traditional healers can be fundamental players in a global effort to contain EIDs. First, national public health infrastructures must be developed and improved to fortify a global public health system. Global health surveillance and prevention and control efforts can be improved by using traditional healing systems as the basis for national infrastructures in countries that otherwise do not have formally established health care systems. Second, in the private sector, traditional healers can play a fundamental role in expediting research and development, particularly with respect to pharmaceuticals.

Incorporating traditional healers into the four strategies in the war against EIDs can benefit all citizens of our "global village." People in traditional healing settings can benefit from improved techniques and methods. Similarly, the Western world can benefit from both the decreased threat of disease importation via infected people and/or commercial products and improved

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6. Fidler, supra note 1, at 820.
7. In 1994, participants at an international meeting agreed that "WHO should . . . take a leadership role in implementing and coordinating global efforts" to contain EIDs. Emerging Infectious Diseases: Memorandum from a WHO Meeting, 72 BULL. OF THE WORLD HEALTH ORG. 845, 848 (1994).
10. For example, within the last 20 years, public health officials of New York City battled the reemergence of tuberculosis resulting from the immigration of tuberculin-infected people from developing countries. Fidler, supra note 1, at 780.
research and development techniques.

I. TRADITIONAL MEDICINE

Prehistoric man developed medicine through instinct, accident, empiricism, and observation.\(^{11}\) As human mental capacity developed, explanations for illness and healing practices were tied closely to a belief in supernatural agencies.\(^{12}\) Witch doctors, or medicine men, emerged as the earliest professional class in the evolution of society.\(^{13}\) The intertwining of religion and medicine placed these healers in powerful positions within their communities.\(^{14}\)

Hippocrates first questioned the close tie between religion and medicine and attempted to treat them as distinct entities.\(^{15}\) Hippocrates taught medical students, \textit{inter alia,} that illnesses result from natural causes, not from evil spirits or as punishment for sins.\(^{16}\) This early attempt to sever medicine from religion was not effective because traditional practices of medicine persisted where there were no other available forms of health care. In other words, Traditional Medicine (TM) was—as it is today—perpetuated where plants, incantations, and blessed water were the only available resources for health care services.\(^{17}\) Even during the early stages of colonization, European colonists commonly sought the aid of local healers because Western doctors were not available and indigenous healers were familiar with local remedies.\(^{18}\)

Colonists, however, began rejecting indigenous healing practices as the colonies became increasingly established in the United States.\(^{19}\) Between 1800 and 1880, for example, Western physicians became more readily available to, and employed by, colonists.\(^{20}\) This trend continued during the following fifty years, from 1880 to 1930, as European pride grew because of scientific progress.\(^{21}\) Europeans came to believe that they were superior over both man

\(^{12}\) \textit{Id.} at 11.
\(^{13}\) G.R. Davidson, \textit{Medicine Throughout the Ages} 10 (1968).
\(^{14}\) \textit{Id.}
\(^{15}\) \textit{Id.} at 12, 19-20.
\(^{16}\) \textit{Id.} at 20.
\(^{18}\) David Arnold, \textit{Introduction: Disease, Medicine, and Empire, in Imperial Medicine and Indigenous Societies} 11 (1988).
\(^{19}\) \textit{Id.} at 12.
\(^{20}\) \textit{Id.} During these 80 years, Western medicine was not made available to indigenous people. \textit{Id.} at 11.
\(^{21}\) \textit{Id.} at 11-12.
Louis Pasteur's bacteriology and Robert Koch's understanding of disease in terms of microbial invasions illustrate the intellectual progress that led to a heightened sense of self-importance based on scientific advancements. As European pride grew, the importance of the social, cultural, and economic contexts of disease diminished. Science was eventually deemed by Westerners to be the answer to every health problem.

Because of the heightened importance of science, disease became an important factor in the European conceptualization of indigenous people and society. Science was the basis for European ethnocentrism and mockery of what was perceived as indigenous superstition and barbarity. In other words, "medicine became a hallmark of the racial pride and technological assurance that underpinned the 'new imperialism' of the late nineteenth century." Indigenous customs and beliefs were treated as obstacles to both overcome and replace with "genuine knowledge" based on science. For example, Florence Nightengale's mission was "to bring a higher civilisation into India" and David Livingston viewed medicine based on science as a way to "rescue" and civilize Africa.

Though Westerners viewed imperialism as beneficial to indigenous people throughout the world, it actually had a negative affect on them. The West's commercial and political penetration forever destroyed indigenous peoples' natural quarantine. Western diseases such as smallpox, measles, and other epidemics forever became a part of formerly isolated indigenous cultures. The Western sense of superiority left little room for regret about this negative ramification.

Eventually—though it was through an ethnocentric perspective, with self-interested motivation—the Western medical community recognized the value of combining native efforts with "modern" medicine to provide necessary health care services. Europeans realized that it was in their best interest to protect

22. Id. at 17.
23. Id. at 18.
24. Id.
25. Id.
26. Id. at 7.
27. Id.
28. Id.
29. Id. at 18.
30. Id. at 3.
31. For example, approximately half of Australia's indigenous population was killed by smallpox in 1789.
32. See id. at 8.
indigenous people from sickness. Western health care was, therefore, provided to maintain healthy and efficient indigenous colonial workers.\textsuperscript{33} Earning maximum profits was clearly one of the motivating factors in European involvement in indigenous health care. Western practitioners also realized that they alone could not meet the demand for health care in the colonies—especially with their increased number of patients. Therefore, local indigenous recruits were used to supplement limited Western manpower to carry out menial medical roles such as dressing wounds and administering vaccinations.\textsuperscript{34}

The employment of indigenous workers to help European physicians render health care services in the New World foreshadowed the inevitable discovery that the perceived omnipotence of Western medicine was merely an illusion. By the 1920s, the limits of Western medicine were becoming clear.\textsuperscript{35} Since then, Western health care services in many former colonies have deteriorated.\textsuperscript{36} Indigenous people commonly have less access to preventive and curative health services now than they did in early colonial times.\textsuperscript{37} Though the availability of modern medicine decreased as the colonies disappeared, it was not until the 1970s that the important role of TM in non-Western society was recognized globally.\textsuperscript{38}

At the thirtieth World Health Assembly, WHO endorsed the use of traditional healers in national health care systems by formally adopting the Programme on Traditional Medicine.\textsuperscript{39} This Programme emphasized the importance of nations maintaining independence, while addressing the problem of minimal resources, in an attempt to increase worldwide availability of health care services.\textsuperscript{40} A few years later, WHO issued a report that called for research on TM.\textsuperscript{41} WHO’s goal was to improve methods, techniques, and the composition of traditional methods of healing by collecting information.\textsuperscript{42} The

\textsuperscript{33} See id. at 15.
\textsuperscript{34} Id. at 19.
\textsuperscript{35} Id. at 21.
\textsuperscript{36} STANLEY J. ULJASZEK, HEALTH INTERVENTION IN LESS DEVELOPED NATIONS 2 (Stanley J. Ulijaszek ed., 1995).
\textsuperscript{37} Id. at 7.
\textsuperscript{38} Boris Velimirovic, \textit{Is Integration of Traditional and Western Medicine Really Possible?}, in ANTHROPOLOGY AND HEALTH CARE 51 (Jeannine Coreil & J. Dennis Mull eds., 1990).
\textsuperscript{39} Id.
\textsuperscript{40} Id.
\textsuperscript{41} Id. at 54. At that time, WHO estimated that approximately 75-80\% of the world's population used TM. See Antonio Scarpa, \textit{Pre-Scientific Medicines: Their Extent and Value}, 15A SOC. SCI. & MED. 317, 317 (1981).
\textsuperscript{42} Velimirovic, supra note 38, at 54.
1978 Declaration of Alma Ata on Health for All by the Year 2000 recommended that governments use all available resources, including TM, in rendering primary health care (PHC). That is, inter alia, traditional healers were to be used to develop community health teams to treat local citizens according to Western scientific principles.

By the early 1980s, however, literature indicates that WHO's enthusiasm for incorporating TM had diminished significantly. For example, in 1981, WHO's Global Strategy for Health for All by the Year 2000 only discretely mentioned TM. In more recent years, WHO appears to have been primarily focused on researching herbal remedies and using traditional birth attendants to provide Western-like care to indigenous mothers. For example, in 1992, WHO issued guidelines to help countries insure the safety of herbal remedies.

Though WHO's recent focus has been on these two particular modes of traditional practices, TM takes many forms. Herbalist, diviner, spiritual/faith healer, traditional midwife, shaman, traditional Chinese doctor, and Ayurvedic doctor are some of the capacities in which traditional healers serve their communities. Perhaps no universally accepted definition of TM exists because of this diversity. The closest WHO ever came to adopting a definition of TM was in 1978 when it announced: "[TM is] the sum of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention, and elimination of physical, mental or social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing." 

Despite this breadth, traditional healing methods unite in their contrast with contemporary scientifically-based practices. Westerners generally perceive modern medicine as scientific, rational, and universalistic, while they perceive

43. WORLD HEALTH ORGANIZATION, Traditional Healers as Community Health Workers, A Review of Projects Using Traditional Healers as Community Health Workers, at 3, U.N. Doc. SHS/DHS/91.6 (1991) [hereinafter WHO]. PHC has been defined as: "E[ssential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation, and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination." Id. at 34.
44. Id. at 3.
45. Velimirovic, supra note 38, at 59. The goal of achieving "Health for All by the Year 2000" was first articulated by WHO in 1978. M.V. GUMEDE, TRADITIONAL HEALERS at iii (1990). However, "Health for All" is WHO's modified, current goal.
46. See id. at 60.
47. Coleman, supra note 9.
49. Velimirovic, supra note 38, at 51.
50. Id. This definition was originally created to apply solely to African TM. Id. at 52.
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TM as irrational, superstitious, and particular. Likewise, traditional healing communities do not view modern medicine as better than their own. An example of this tension between traditional and modern healing methods is the criticism surrounding WHO's definition of health: "a state of complete physical, mental and social well-being." This definition's holistic focus is very similar to that of TM, which generally applies a comprehensive approach to healing the body and mind. In contrast, the focus of the Western health care system is on the patient, a material body. Thus, to many modern Western practitioners, WHO's definition of health is, like TM, theoretical and impractical.

Despite disagreements regarding the definition of health and methods of treatment, all health care providers have a common goal: healing the sick. Worldwide sentiment supports the notion that if "Health for All" is to be achieved, health care systems outside of the Western model—such as TM—must be explored. This is so for at least three reasons. First, a rich cultural history of TM use and acceptance within indigenous communities exists. Second, TM costs significantly less than modern medicine. Finally, greater accessibility to TM renders it more common than Western medicine.

Many examples exist to demonstrate the importance of TM in countries with scarce biomedicine and high levels of poverty. For instance, India's Federal Health Minister stated that more than eighty percent of India's people depend on herbal medicine to meet their health care needs. Similarly, in sub-Saharan Africa, an estimated eighty percent of the population uses TM. Chinese citizens also commonly use TM. Finally, Mali, a West African country, recently established a government laboratory to license medicinal

51. Arnold, supra note 18, at 18.
53. WHO, supra note 43, at 34.
54. Id.
56. Id.
57. WHO, supra note 43, at 3. WHO has estimated that 80% of all people rely chiefly on TM. Coleman, supra note 9.
60. Peter Huston, Trying to Understand Traditional Chinese Medicine, SKEPTICAL INQUIRER, Winter 1994, at 207-08, 207.
herbal remedies.\textsuperscript{61}

Citizens of countries that lack Western medical resources are not the only people who believe in the legitimacy of TM. Even in countries with general access to modern health care services, the belief in the healing capabilities of TM is prevalent. In fact, some developed countries have gone so far as to integrate herbal remedies into their health care systems. Examples of these countries include: Australia, Belgium, France, Germany, Japan, New Zealand, and the United Kingdom.\textsuperscript{62} In the early 1980s, alternative medicine was deemed one of Britain's few growth areas.\textsuperscript{63} Furthermore, in 1993, herbal remedies were a $1.13 billion industry in the United States.\textsuperscript{64}

A 1990 Harvard survey estimated that Americans make 425 million trips to traditional healers annually.\textsuperscript{65} Nonetheless, visits to traditional healers are commonly a last resort for American patients—when all Western cures have failed.\textsuperscript{66} If Americans seek TM when modern medicine fails, the enormous TM industry should send a loud and clear message that there are deficiencies in Western methods that traditional medicine may be able to address. Thus, it appears that Western healing methods can be improved through increased awareness, understanding, and incorporation of effective traditional methods of healing. Scientifically-based practices must begin to include alternative resources; the health of the world's population may hinge upon the convergence of these two approaches to health care.

\begin{footnotes}
\item[61] Balzar, supra note 17, at 1.
\item[62] In many of these countries, expenditures on herbal medicine are reimbursed through national insurance plans. Coleman, supra note 9. For example, Germany’s health insurance covers Gingko prescriptions. Id.
\item[63] ROGER COOTER, STUDIES IN THE HISTORY OF ALTERNATIVE MEDICINE at x (1988).
\item[64] This figure excludes teas and homeopathic remedies. Coleman, supra note 9. Growth of the herbal remedy market was expected to continue at 10-15% annually through 1997. Id. Currently, there are approximately 400 herbs in general commerce in the United States. Id.
\item[65] Katherine Griffin & Karmen Butterer, The New Doctors of Natural Medicine, HEALTH, Oct. 1996, at 60, available in LEXIS, News Library, ASAPII File. It is interesting to note that Native Americans are in a unique situation because, unlike many of the world's indigenous people, they have access to both systems. For example, Navajos have been known to seek physicians as symptomatic healers, while, simultaneously seeking traditional ceremonial cures to address their underlying imbalance of relationships with nature and spiritual forces. Jerold E. Levy, Traditional Navajo Health Beliefs and Practices, in DISEASE CHANGE AND THE ROLE OF MEDICINE: THE NAVAJO EXPERIENCE 118, 118-19 (Charles Leslie et al. eds., 1983).
\item[66] Nayar, supra note 55. Today's medical students learn about drugs, not holistic remedies; thus physicians in the United States commonly avoid embracing traditional healing methods. Coleman, supra note 9.
\end{footnotes}
II. CREATING NATIONAL PUBLIC HEALTH INFRASTRUCTURES

Several global attempts exist to address the crisis situation surrounding infectious diseases. For example, in recent years, the Group of Seven leading industrialized nations and the nations participating in the Asia Pacific Economic Cooperation forum have included EIDs on their agendas. WHO has also been instrumental in efforts to contain EIDs by, for example, creating the Division of Emerging and Other Communicable Diseases Surveillance and Control (EMC). The EMC proposed to develop rapid response capabilities, logistical guidelines, and training programs in basic epidemiology. Finally, there have been both U.S. Senate and Presidential efforts, as well as interagency working groups, focused on addressing the global problem of EIDs.

While these globally-focused efforts to address EIDs are commendable, they will be difficult to achieve without established national public health infrastructures. In other words, national weaknesses complicate global efforts to mitigate the impact of EIDs. An effective global health protection system can exist only when its components, national public health infrastructures, are established and maintained. Funding, however, is a major problem with respect to creating and strengthening both national and global health care systems.

One way of overcoming this lack of financial resources, particularly in developing nations, is to build national public health infrastructures from the informal traditional healing systems that already exist. That is, informal traditional health care systems are potential resources for creating organizations within nations that facilitate both surveillance and prevention and control programs. Because traditional health care systems already exist, the cost of using them as a foundation for national infrastructures in countries without formally established systems will be less than creating a completely new system.

Issues surrounding public health traditionally rest within the jurisdiction of the State; therefore, requesting individual countries to incorporate local traditional healing systems into more formal national systems, to serve as the basis for a global public health system, is a conservative step because State

67. Fidler, supra note 1, at 784-85.
68. Id. at 828.
69. Id. at 828-29.
70. Id. at 782-83.
71. Id. at 828.
72. Id. at 829-30.
sovereignty is preserved. \(^7\) Existing traditional healing systems are more informal than typical Western systems; therefore, flexibility in using them to create national infrastructures is necessary. Thus, one should expect unique results from each country incorporating traditional healers into national systems.

Another factor that leads to the lack of national and global public health infrastructures, similar to the lack of resources, is complacency. \(^4\) Perhaps, if EIDs remain unchecked—escalating into an even more serious global problem—fear will inspire national leaders to overcome their prejudices against traditional healers. Then, national leaders can communicate and cooperate to create a mutually beneficial working relationship with traditional healers for the purposes of, *inter alia*, surveillance and prevention and control. However, the world cannot afford to allow the EID problem to escalate past the current crisis situation. Complacency is dangerous to us all because, if EIDs remain unchecked, future eradication efforts may come too late to be successful.

One argument against using traditional healing systems to create national public health infrastructures is that the people of traditional healing cultures may be suspicious of and resistant to Western programs because they threaten deeply-held indigenous beliefs. Likewise, Westerners may feel threatened and unduly burdened by the incorporation of traditional healing systems into their health care programs. However, by sensitively working to communicate and clarify misunderstandings, a conservative effort of mutual incorporation can be successful.

Uniting unique national public health infrastructures to form a uniform global public health system is arguably preferable to the status quo of global disorganization because of the lack of national systems. Westerners need not fully accept, appreciate, or even understand TM to use effectively existing traditional healing systems as the basis for coordinating national public health infrastructures. The serious threat posed by EIDs creates a situation where all available resources, including informal traditional healing systems, should be used to protect citizens.

73. The power to address public health issues is traditionally left to individual States while WHO's role is to coordinate and advise nations. See Velimirovic, *supra* note 38, at 60. WHO's Constitution states that "[g]overnments have a responsibility for the health of their people . . . achieved, *inter alia*, through the establishment of a nation-wide provision . . . of skilled, universally available preventative and curative care." *Id.* Furthermore, WHO's ability to affect national health decisions "is limited by a World Order dominated by independent nations." Allyn L. Taylor, *International Public Health Law*, 86 Am. Soc'y Int'l L. Proc. 574, 574 (1992).

74. Fidler, *supra* note 1, at 829.
A. Surveillance

The concept of global surveillance implies the coordination of existing national public health networks to monitor and respond to infectious disease outbreaks. Surveillance is critical to the successful defense against EIDs because early warnings facilitate their containment. For this protection strategy to work, national public health infrastructures must be in place and capable of performing surveillance functions. Despite the extreme importance of early detection, the U.S. Centers for Disease Control and Prevention (CDC) claims surveillance is inadequate and fragmented.

One of the reasons the current system of surveillance is incomplete is because it fails to incorporate indigenous people into the effort to detect and report diseases, or at least their symptoms, in a timely manner. Traditional healers are important to the time-sensitive surveillance effort because they are usually among the first people to discover new or recurring diseases. Utilizing traditional healing systems as a basis for national infrastructure development naturally facilitates the use of traditional healers in local surveillance, thereby improving global health surveillance.

Science is essential to effective surveillance. Nonetheless, traditional healers do not have to be trained as physicians or epidemiologists, for example, to enhance public health surveillance. With the aid of pictorial reference guides and checklists, traditional healers can be taught why, when, and how to report unusual symptoms such as rashes, fevers, and lesions.

Both the private and public sectors can improve surveillance efforts by appreciating traditional healers as a useful source of information. Private businesses whose employees have contact with remote communities, such as

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75. "Surveillance is the 'systematic collection, analysis and public health response to the occurrence of infectious disease conditions in our communities [and] encompasses both the report and investigation of cases and the submission of clinical specimens when needed for testing at a . . . public health laboratory.' Id. at 822-23 (quoting Dr. Michael Osterholm).
76. Groce & Reeve, supra note 52, at 351.
77. See id.
78. Fidler, supra note 1, at 823. Scientific, public health, and political reasons all demonstrate that the importance of surveillance cannot be overemphasized. Id. at 824.
79. The CDC is the leading public health agency in the United States. Id. at 781.
80. Groce & Reeve, supra note 52, at 351.
81. The system of surveillance should be replaced with a policy of symptom reporting to make the project of monitoring for EIDs a more effective endeavor. See Fidler, supra note 1, at 852.
82. Groce & Reeve, supra note 52, at 351-52.
83. Id. at 352.
pharmaceutical researchers, can serve as a conduit for traditional healers to report EIDs to the outside world. Thus, training traditional healers to report unusual symptoms to visiting outsiders protects both individual visitors and the world by enabling early disease containment. Furthermore, establishing communication between government officials and traditional healers is one step toward creating and/or fortifying national public health care infrastructures that are capable of keeping careful watch for EIDs.

Urban, rather than rural, settings are perhaps most conducive to strengthening the lines of communication between traditional and modern societies. Traditional healers practice in many urban ethnic and minority communities; therefore, they can be effective players in early disease detection efforts. Timely reports of unusual symptoms by urban traditional healers are particularly critical to the surveillance effort because their urban patients inevitably have greater contact with a large number of people, thereby increasing the opportunity to quickly spread disease. Given the particularly serious threat posed by EIDs in urban settings, it is fortunate that urban healers have a variety of ways to report symptoms to local officials. The challenge is, however, making urban healers aware of the correct parties to call or visit. This challenge illustrates the importance of establishing lines of communication between healers of all cultures.

Miami, Florida, is one Western example of where members of urban ethnic groups such as Bahamians, Cubans, Haitians, and Puerto Ricans hold fast to traditional healing practices. Oftentimes, like such healers in rural settings, traditional healers in these urban minicommunities are the first to encounter patients with unusual disease symptoms. For example, to avoid local, mainstream emergency rooms, some of Miami's Cuban immigrants have established their own health care system with clinics that are always open. Another example of the important role traditional healing plays in urban settings is some Puerto Rican immigrants' rejection of conventional Western health care and reliance on herbs and folk remedies. Miami is one of many cities with active traditional health care providers. This example illustrates why WHO

84. Id. at 351. In the United States, locating urban healers may sometimes be difficult because it is against the law to practice medicine without a license; therefore, illegal practitioners will avoid government officials.
86. Id.
87. Id.
must promote the incorporation and coordination of as many healers as possible into the world's surveillance effort; clearly, a Western scientifically-based approach alone is inadequate.

While improving public health surveillance in Western urban areas is significant, initially focusing on improving surveillance efforts by urban and rural healers in developing nations is perhaps more important to protecting the health of the world's population. Surveillance of the health of developing nations' citizens is of universal importance because human migration is believed to be the "main source of epidemics throughout recorded history." For example, a person emigrating from a developing nation to the United States has the potential of carrying with her/him an infectious disease that s/he contracted prior to immigration. People everywhere can benefit from adequate surveillance of developing nations' public health. Westerners can protect themselves by monitoring immigration, while citizens of developing nations will be better protected by early containment efforts resulting from early disease detection.

To avoid hurting their national economies by discouraging commerce, some national leaders do not want to inform the world that their citizens are suffering from EIDs. Thus, not everyone is in favor of effective global surveillance. However, the increased ability for private citizens to communicate with the world via the Internet renders governmental attempts to hush the emergence of infectious disease a virtually futile effort—even in developing nations. Because cyberspace presents opportunities for anyone to report symptoms or the emergence of infectious disease, the days of governmental protectionism appear to be a surveillance problem of the past.

88. Fidler, supra note 1, at 795 (quoting Mary E. Wilson, Travel and the Emergence of Infectious Diseases, 1 EMERGING INFECTIOUS DISEASES 39, 39 (1995)).

89. For example, the increased incidence of tuberculosis, a potentially fatal disease, in the United States is deemed to be primarily caused by infected immigrants. Julia A. Martin, Note, Proposition 187, Tuberculosis, and the Immigration Epidemic?, 7 STAN. L. & POL'Y REV. 89, 90 (1996).

90. While a global surveillance system can serve to warn countries that they may wish to disallow entrance to some immigrants, diseases carried by illegal aliens remain unchecked. See id. Creating an incentive for urban traditional healers in Western countries to report the symptoms that plague their compatriots, thereby risking their deportation, may be problematic.

B. Prevention and Control

The purpose of a global health surveillance system is to provide public health officials with information to prevent and control the spread of infectious diseases. However, because national public health infrastructures are weak, difficulties may arise in using available surveillance information to prevent and control EIDs. Therefore, the Institute of Medicine claims that the coordination of "individuals, government agencies, and private organizations" is necessary to successfully address the global challenges presented by EIDs. Arguably, this coordination of prevention and control efforts should also include traditional healers.

Western notions of prevention and control are part of the global promotion of PHC started by the United Nations Children’s Fund (UNICEF) and WHO in 1977. Viewed as a practical and economical approach to health care for poor countries, PHC programs empowered local citizens to provide health care services to their neighbors. PHC's ultimate goal is to improve community health by addressing one or more of eight PHC roles established in the "Health for All" declaration. These PHC functions include: (1) providing health education; (2) promoting nutrition; (3) providing safe water and sanitation; (4) providing maternal and child health care, including family planning; (5) preventing and controlling disease; (6) preventing and controlling endemic disease; (7) treating common diseases and providing first aid; and (8) providing essential drugs, such as aspirin.

Globally-focused organizations claim that prevention and control is the most important step in containing EIDs, therefore, addressing any of the eight PHC goals is helpful in improving world health. Incorporating traditional healers into the administration of these eight moderate steps is a feasible goal, particularly where traditional healing systems are used as the basic framework for public health infrastructures.

PHC successfully shifted the conventional Western health care system

92. Fidler, supra note 1, at 827.
93. Id.
95. Id.
97. Id. at 5, 26-27. Regarding point (8), the distribution of pharmaceuticals by traditional healers should be very limited because of the threat of antimicrobial resistance resulting from improper use.
toward becoming more inclusive. A group of WHO's researchers studied seventeen projects, in a variety of countries, that included traditional healers as PHC providers. These researchers drew three important conclusions from their studies. They found including traditional healers in community health care delivery beneficial because: (1) traditional healers were available and willing to learn how to perform a wide array of PHC tasks; (2) the use of traditional healers to administer PHC services was a cost-effective way to provide health care to poor communities; and (3) the health status of the communities was improved when traditional healers rendered PHC services.

These results make sense for a variety of reasons. Preventive and remedial health services are best provided when the care giver and patient know each other. Traditional healers almost always practice in their own communities; therefore, they personally know many of the people for whom they render services. Furthermore, traditional healers can communicate effectively with indigenous patients because of their common cultural and linguistic heritage.

Researchers also found, however, various constraints related to using traditional healers as PHC givers. First, no governmental policies regarding the incorporation of traditional healers into PHC strategies existed. Furthermore, no dialogue between traditional healers and government health staff occurred, thereby increasing the likelihood of cultural misunderstandings. Nonetheless, increasingly including traditional healers in building public health infrastructure systems can eliminate these constraints on PHC service.

The lack of funding is a further problem associated with the incorporation of traditional healers into PHC programs. Yet, traditional healers are currently responsible to and paid by their patients. Thus, local payment systems for traditional healing services already exist. This means if wealthy nations offer

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98. There are critics who claim the PHC initiative is a failure; yet, it cannot possibly be successful until all significant players are empowered. Seaman, supra note 94, at 12.
100. Id. at 25-28.
103. See generally id. at 25, 31.
104. Id. at 28. Therefore, an argument of this Note is that WHO should revive its call for increased incorporation of traditional healing into PHC systems.
105. Id. One may speculate that with an increased role for traditional healers in PHC systems, a dialogue between government health officials and traditional healers will be necessary and, therefore, naturally occur.
106. Id. at 31.
107. Contributors could also include private industries that have contact with indigenous people, such as pharmaceutical companies.
financial support to enable the initial establishment of national public health infrastructures and/or PHC systems, developing nations will have the ability to maintain them because established local economic practices already compensate PHC providers for recurrent costs, such as their salaries.

Another criticism of the inclusion of TM is that traditional cultural beliefs and practices can be detrimental to a patient's health.\textsuperscript{108} However, by determining the greatest needs of health care recipients from each community, Western healers can address problematic cultural practices and help traditional methods evolve into safer, more effective treatments. For example, in Zambia, an effort exists to contain the spread of AIDS by empowering traditional healers to educate citizens on prevention.\textsuperscript{109} This effort includes stopping rituals that spread HIV, such as tattooing and circumcision.\textsuperscript{110} Additionally, traditional midwives, teaching and employing basic modern health care practices, are effective PHC providers.\textsuperscript{111} A final example of the importance of utilizing traditional healers as PHC givers relates to treating diarrhoea. Teaching traditional healers about simple rehydration techniques can end harmful traditional practices, such as purges and enemas, that can lead to increased dehydration and sometimes death.\textsuperscript{112}

These examples illustrate the fact that educating traditional healers about basic Western health care practices can improve disease prevention and control efforts. Because cultural beliefs evolve, there is room for scientifically advanced health care methods to be introduced to traditional healing systems by empowering community healers to administer PHC services. In order for this to occur, however, WHO must revisit, improve, and once again advocate the inclusion of traditional healers in the PHC system.

\begin{itemize}
\item \textsuperscript{108} Velimirovic, supra note 38, at 53.
\item \textsuperscript{109} Reid, supra note 59.
\item \textsuperscript{110} Velimirovic, supra note 38, at 70.
\item \textsuperscript{111} Traditional midwives are estimated to be responsible for over 90\% of all births in some countries. WHO, supra note 43, at 3. Undoubtedly, there is room to educate midwives about pre- and postnatal care. For example, midwives can be trained to use clean dressings, instead of cow dung, on the umbilical stump. See generally id. at 10, 26.
\item \textsuperscript{112} See id. at 27.
\end{itemize}
III. RESEARCH AND DEVELOPMENT

The last of the four main objectives in the global strategy to fight EIDs entails the increase and improvement of research and development. However, a major hindrance in improving global health through research and development is the lack of money. Nonetheless, private money, particularly from the pharmaceutical industry, provides hope for progress resulting from research and development. Similar to the roles of traditional healers in surveillance and prevention and control in the public sector, traditional healers can contribute to the improvement of research and development efforts by the West’s private sector.

For example, traditional healers can save pharmaceutical companies precious time by sharing their knowledge regarding local medicinal plants. Rather than conducting random, arbitrary research, Western science can benefit by beginning the search for curative elements with plants that have survived traditional healers’ test of time. Today, the efficient discovery of medicinal plants is crucial. Over one-half of the world’s plant species are located in the world’s tropical rainforests, yet tracts the size of South Carolina are being annually destroyed. Demonstrating the usefulness of indigenous knowledge to Western pharmaceutical research, Professor Norman R. Farnsworth calculates that seventy-five percent of the pharmaceuticals extracted from plants were discovered through information provided by native inhabitants.

There are many examples of the significance of indigenous knowledge to the Western quest for remedies. In the seventeenth century, a Jesuit missionary discovered that Indians in Ecuador were using Peruvian tree bark to cure...

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113. Fidler, supra note 1, at 831.
114. Id. at 832.
115. Establishing a quid pro quo system that helps indigenous communities while they are helping pharmaceutical corporations is one way of improving public health systems in developing countries.
117. Coleman, supra note 9. In the world, there are approximately 500,000 higher flowering plant species, of which less than 1% have been fully studied for medicinal purposes. Donald E. Bierer et al., Shaman Pharmaceuticals: Integrating Indigenous Knowledge, Tropical Medicinal Plants, Medicine, Modern Science and Reciprocity into a Novel Drug Discovery Approach (visited Sept. 25, 1998) <http:llwww.netsci.org/Science/Special/f eature11. html>.
118. Professor Farnsworth teaches at the University of Illinois-Chicago where the world’s largest computer database on medicinal plants is located. Coleman, supra note 9, at 8. He has previously served as a consultant to both WHO and the National Institute of Health. Id.
119. The 120 drugs extracted from plants come from only 90 of the estimated 500,000 existing plant species. Id.
fevers. This discovery led to the development of quinine, a drug used today to treat malaria. Furthermore, the Chinese plant *ching hao su* is also used to address malaria. Another example, which has been used for centuries in Indian medicine, is the root of the plant *rauvolfia serpentina*—a remedy prescribed by doctors to treat insanity, epilepsy, and high blood pressure. Gingko, made from the leaves of an ancient Chinese ornamental tree, illustrates a final example of medicinal herbs. In 1989, Gingko was prescribed by over 100,000 physicians worldwide, to over ten million patients, to alleviate dizziness and ringing in the ears and to increase the flow of blood to the brain.

Skeptics of herbal remedies claim that the curative effect of plants depends on culturally-related beliefs about their medicinal qualities. However, Shaman Pharmaceuticals, a for-profit company based in San Francisco, demonstrates that plants used in traditional healing can transcend cultural boundaries with simple cross-cultural cooperation. Shaman Pharmaceuticals uses the history of indigenous medicinal plant use to develop novel drugs to treat human diseases. This company combines the business of isolating bioactive compounds with the ethics of forest conservation and reciprocity with indigenous cultures.

Further, skeptics argue that the "evaluation of traditional herbal remedies is very costly and time-consuming, and it may be superfluous." However, as long as people conduct research, scientifically developing the knowledge of effective traditional remedies—as opposed to randomly selecting from the hundreds of thousands of plant species in the world—remains a preferable approach. For example, Shaman Pharmaceuticals’s ethnobotanists work closely with traditional healers in Asia, Africa, and Latin America to avoid the industry’s commonly accepted, sometimes futile, approach of collecting and

120. *Id.*
122. Crossette, *supra* note 121. The Chinese have used this plant to cure fevers for over 2,000 years.
123. *Id.* India has a 3,000 year history of medicinal use of herbs. Nayar, *supra* note 55.
124. Coleman, *supra* note 9. High-technology drugs are usually isolated chemicals, herbal remedies come from plants. *Id.*
125. *Id.*
128. *Id.* at 1-2.
screening tens of thousands of plants for medicinal elements.\textsuperscript{130}

While using traditional healers' knowledge to save precious research time is a good idea, no universal repayment system exists to require companies to compensate the poor, underdeveloped communities from which they benefit. Repayment requirements set out by WHO are one way in which the above discussed national infrastructures, surveillance, and prevention and control programs could be funded.\textsuperscript{131}

Simultaneous with its incorporation, Shaman Pharmaceuticals founded the Healing Forest Conservancy.\textsuperscript{132} The Conservancy was established because there is no governmental organization "to provide a formal and consistent process to compensate countries and communities for ethnobotanical leads which subsequently are developed into commercial product."\textsuperscript{133} Furthermore, Merck & Co., recognizing the value of working with developing countries, paid one million dollars, plus a royalty fee, to the National Biodiversity Institute (INBio), a branch of the Costa Rican government, in exchange for the right to search for drugs in a limited territory.\textsuperscript{134} Not all pharmaceutical companies have the social conscience of Shaman and Merck & Co.\textsuperscript{135} Therefore, WHO should use its unique position to help countries protect their traditional healers' knowledge by creating a global quid pro quo requirement.

Allowing diverse types of repayment can help companies meet unique community needs. Companies should be able to choose to give money, so that communities can afford to improve health care conditions, or choose to work more directly with indigenous community members to meet individual

\textsuperscript{130} Bierer, \textit{supra} note 117, at 2-3.


\textsuperscript{132} Bierer, \textit{supra} note 117, at 5.

\textsuperscript{133} \textit{Id.} at 4-5. Shaman Pharmaceuticals's quid quo pro policy is to offer communities resources in three stages in exchange for knowledge regarding medicinal plants. Shaman "gives back" in stages because the Food and Drug Administration (FDA) must approve pharmaceuticals before they are allowed to be sold to the public, a time-consuming process. \textit{Id.} In the short-term, Shaman provides clean drinking water systems, airstrips, and organizes community-based public health workshops. \textit{Id.} For medium-term reciprocity, Shaman provides scholarships/fellowships to scientists working in the field of TM. \textit{Id.} Finally, in the long-term, Shaman gives some of its profits from the drugs based on traditional healing information back to those communities. \textit{Id.}


\textsuperscript{135} It is unfortunate that, currently, other drug companies can pirate the knowledge Merck & Co. and/or Shaman Pharmaceuticals gain from their investments in places like Costa Rica once their medicinal plant discoveries become drugs on the market. \textit{See id.}
community needs. For example, a company may elect to train traditional healers in basic sanitation techniques or provide a water purification mechanism. WHO is in the best position to recommend ways in which nations can allow private companies to receive maximum flexibility in meeting reciprocity requirements.

Governments may be reluctant to impose the requirements of reciprocity articulated by WHO because they risk losing revenue to neighboring developing nations that are more lax with respect to reimbursement standards. However, three counter-arguments exist. First, private businesses that unconscionably, unilaterally benefit from indigenous intellectual property create ethical questions and issues that should no longer be ignored. Second, because indigenous knowledge saves private companies research time and, therefore, money, requiring repayment to local communities is not unreasonable. Finally, drug research and development is essential to the survival of these companies. Therefore, again, the requirement of reciprocity should not deter them from tapping the helpful resource of indigenous knowledge.

Research and development is essential in successfully addressing the EID world crisis. Yet, because of the lack of financial resources, the private sector’s pharmaceutical industry is the world’s greatest source of hope for progress. Such companies have recognized the significance of TM in their work; however, efforts should be made to create a better balance between the benefits private sector companies gain from indigenous knowledge and the needs of the traditional healing communities supplying that valuable research and development information. Reciprocity requirements are fair and they have the potential to significantly improve the state of global public health.

IV. WHO’S ROLE

Sovereign nations have jurisdiction over their own health care issues; therefore, WHO has a limited role in establishing national public health infrastructures. Nonetheless, WHO’s responsibility for conducting research and guiding nations creates a role for it to help States decide how to best address local health care issues.136 In the 1970s, WHO appeared to recognize the importance of its role in leading the incorporation of TM into accepted healing infrastructures. However, since then, there appears to have been little leadership from WHO in realizing this proposed incorporation.

136. Velimirovic, supra note 38, at 60.
Today, WHO, once again, needs to offer nations direction in combining the positive aspects of Western and traditional health care systems. A moderate approach of setting realistic goals for mutual incorporation is preferable to the alternative of continuing to ignore the positive aspects of TM while failing to provide indigenous populations with modern medical services. Crossing the chasm between modern and traditional healing practices is not a simple journey, yet it is a necessary step toward providing "Health for All."

WHO's proposal to incorporate traditional healers into the effort to meet the goal of "Health for All" is one of the few that has not met with universal approval. This is probably because the phrase "traditional medicine" encompasses a vast array of healing practices, leading to misconceptions and misunderstandings. With no commonly accepted notion of what traditional medicine entails, some people may think the phrase refers to voodoo dolls and snake oils, while others may relate the phrase to a holistic approach to healing. Thus, because TM encompasses diverse practices, one of WHO's first steps should be to establish a definition of traditional healing. This definition should attempt to encompass the cultural healing practices and systems of various communities. While establishing a single, universal meaning for traditional healing may be difficult, WHO can create boundaries by defining the healing systems that would be most conducive to establishing national health care infrastructures.

Once the meaning of TM is established, WHO should use its constitutional power under Article 23 to guide nations in their work with traditional health care systems. In particular, WHO should be available to nations requesting direction regarding the incorporation of local healers into more formalized national public health infrastructures. WHO can then coordinate national public health infrastructures, creating a united and effective global public health protection system. Furthermore, WHO can guide individual nations in the protection of indigenous intellectual property. Thus, WHO's current challenge is to play a leadership role in establishing guidelines for nations to begin taking part in a globalized health care system.

Perhaps, however, the challenge of battling EIDs is too great for WHO alone. Recently, three United Nations agencies—WHO, UNICEF, and the

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137. Id. at 51.
138. Article 23 of WHO's Constitution states: "[T]he Health Assembly shall have authority to make recommendations to members with respect to any matter within the competence of the Organization." WHO CONST. art. 23.
United Nations Development Program—and the World Bank announced a united campaign to combat malaria. This project, entitled “Roll Back Malaria,” will focus on promoting new pharmaceutical research and to provide “health centers with insecticide-impregnated mosquito nets for village beds and . . . pills or suppositories for malaria sufferers.” The success of this “pathfind[ing]” approach remains to be seen.

V. PROBLEMS WITH INCORPORATION

Establishing global guidelines for the use of traditional healing methods is no simple task. There are a variety of problems associated with such an effort. First, for example, identifying TM practitioners to become involved in infrastructure building may be problematic. Where there are no modern health care resources available, individuals become their own physicians. However, cultural systems established for the purpose of healing exist throughout the world. These traditional health care systems may be closely linked to the religion and/or politics of communities; therefore, religious and political leaders may be the best starting point for recruiting healers to take part in creating national and global public health care systems.

Once healers in individual communities are identified, establishing a working relationship between modern and traditional healers may be very difficult. While Westerners may not agree with traditional approaches, traditional healers may have similar problems accepting Western health care practices. Establishing open communication between the healers from different backgrounds is essential to the cooperation between the two universes of healing. However, communication itself can be a challenge because of language barriers.

While deciding who should be part of the creation of national public health infrastructures and establishing a working relationship with them will be difficult, the challenge associated with limited financial resources may be the greatest barrier to overcome. The World Bank, companies in the private sector, and industrialized nations appear to be the most promising sources of funds;

139. Crossette, supra note 121.
140. Id. This novel approach to containing an infectious disease, malaria, may be attributed to the fact that WHO is under new leadership. The former Prime Minister of Norway, Dr. Gro Harlem Bruntland, took over WHO in May, 1998, with a vow to “shake it up and make it more responsive to immediate needs.” Id.
141. Id.
however, obtaining adequate money from even these sources will be difficult. 

Surprisingly, even the grave threat of Third World EIDs devastating wealthier countries via immigration and commerce has not greatly increased the prospect of funding for disease control measures.

While incorporating traditional healing systems into national and, then, global public health systems is theoretically a good idea, the many practical problems, as discussed above, may make this strategy for EID containment an impossibility. Nonetheless, if orchestrating the world's existing health care resources proves to be too much of a burden, the future of global public health looks bleak. In other words, if efforts using existing resources to improve global health cannot or will not be made, larger efforts of establishing novel health care systems in countries without modern resources are even less likely to occur.

CONCLUSION

It has been said that "where medical treatment is quickly effective, dramatic and evident, it will prevail over others." Western medicine may be "quickly effective, dramatic, and evident;" however, even where Western medicine is available, indigenous traditions, rituals, and beliefs surrounding healing cannot simply be erased. Furthermore, in today's world, not all communities believe in, nor have access to, modern medicine. Therefore, traditional healing practices prevail in such places.

Whatever the best available methods of healing are within nations, they should be coordinated to improve the current state of global health, particularly in the area of containing EIDs. This means that existing traditional healing systems should be incorporated into the effort to create national public health infrastructures. Resulting from these State foundations, effective surveillance and prevention and control measures can be taken. Furthermore, with respect to research and development, traditional healers are valuable resources in the private sector's quest for cures. It is not enough for individual nations to fight EIDs alone. EIDs know no borders; therefore, national efforts should be coordinated to create a global public health protection system.

While financial constraints severely hinder the global effort to check the

142. These difficulties stem from the high cost of fighting EIDs. For example, the "Roll Back Malaria" campaign alone is estimated to cost nearly $19 million. Id.

143. Scott, supra note 85, at 111.
spread of EIDs, traditional healing systems of both urban and rural settings and in both developing and developed countries offer hope. They are existing resources waiting to be tapped. Therefore, mutual prejudices must be overcome as modern and traditional healers come together to meet their common goal of attaining “Health for All.” The use of TM is not the only way to meet this goal, nor should it receive a blanket endorsement. However, today’s EID crisis makes it necessary to use all possible resources and strategies.