

Virtual Mentor

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History of medicine

Medical volunteerism in Africa: an historical sketch

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The current outpouring of international support for medical relief work in Africa, due in large measure to the HIV/AIDS crisis, exemplifies altruism and embodies medicine's core values. These volunteer efforts proceed along several fronts: endeavors on the part of indigenous Africans to build national public health systems, volunteering by students from overseas, ongoing medical missionary activities of churches and world religions, purely humanitarian services provided by modern medical missionaries like Doctors Without Borders and the initiatives of other organizations set up to deal with specific crises. This article sketches the history of volunteerism in Africa from the early religious and colonial medical programs through current humanitarian programs, assessing the role of student volunteerism along the way.

History of missions

There were about a dozen medical missionaries worldwide in 1850. In Africa, this was the time of David Livingstone, the Scottish explorer and missionary [1], and Cardinal Charles Lavigerie, a brilliant Catholic mission strategist, who in the 1860s sent African medical students to study Western medicine at the University of Malta [2]. Even the earliest missionaries found that having the capability to meet the medical needs of indigenous populations opened up new towns and villages "to the messengers of the gospel" [3].

Missions to Africa gradually adopted a more professional outlook on medicine, providing more than the rudimentary services delivered by earlier religious missionaries. Albert Cook, for example, who worked in Uganda with Church Mission Society pastors beginning in 1896, founded Mengo Hospital and is credited with bringing scientific medicine to Uganda [4, 5].

The most famous medical missionary, undoubtedly, was Albert Schweitzer. After receiving his MD from the University of Strasbourg in 1913, Schweitzer established a hospital at Lambarene in French Equatorial Africa (Gabon), and spent most of his life there as a doctor, surgeon and administrator in the hospital. For Schweitzer, Africa was the place where the people were most in need of medical help. Lutheran faith influenced his mission of healing and "reverence for life" [6].

Student involvement was important to the missionary field. The Student Volunteer Movement of the 1880s-1950s, for example, was an historical precedent for today's student interest in global service. It fed recruits into the missions of Africa, Asia and South America. By 1910, there were more than 10,000 religious missionaries in the field in Africa—6,000 Protestant and 4,000 Catholic [7]. Roughly 10 percent of these were truly medical missionaries.

By 1925, missionary fervor was peaking. The World Missionary Atlas notes more than 1,000 missionary-physicians from America and Europe that year, 139 of whom worked in Africa [1]. Mission hospitals were often staffed by one doctor and his assistants—a practice that regularly led to burn-out. More enlightened missionary groups try to overstaff clinics and hospitals to prevent that from happening.

Medical missions can have a long-lasting presence in an area. For example, a Freetown, Sierra Leone medical mission can trace its evolution from the 1800s when members of the Evangelical Association arrived. The present Kissy UMC Eye Hospital in Freetown is a specialty clinic built by American Methodist volunteers, and is staffed by about 20 local medical personnel working with volunteer surgeons from the U.S. who treat cases of glaucoma, cataracts and river blindness (onchocerciasis), among other diseases [8]. The hospital reopened in 2001 after closing during a coup and civil war in 1999.

Dennis P. Burkitt, MD, exemplifies the importance of extending medical research to African populations. His work with Ugandan children resulted in the identification of Burkitt's Lymphoma, an aggressive leukemia-like cancer that Burkitt linked to co-infection with Epstein-Barr virus and malaria—a discovery that proved vital for cancer research. By the 1960s, Burkitt was also able to use chemotherapy to cure his lymphoma patients [9].

While Protestantism and Catholicism took root in Africa, economic development and modern medicine were uneven in their spread. Consequently, many countries have only one medical school and few resources for promoting public health. So the charitable missions of today emphasize medicine more than conversion to Christianity. As one religious scholar says, "European and American Protestant church missions have turned to medical work and community development work, leaving the preaching and evangelism to African Christians" themselves [10].

Governmental organizations take up the challenge

In the 20th century, medical humanitarian interventions grew decidedly larger in scope. Illnesses and diseases that had previously been the problem of individual sovereign states became an international concern, threatening the health and national security of everyone. This new, more global perspective on public health naturally required an increase in the involvement of government entities as well as greater cooperation and coordination among nation-states. An early example at such efforts was the League of Nation's Far Eastern Bureau, whose revealing epidemiological

data collected in Africa during the mid 1920s made it possible to coordinate successful international initiatives to promote global public health [11].

Widespread medical humanitarian work in Africa did not gain momentum until the United Nations (UN) (which replaced the League of Nations) created the World Health Organization (WHO) in 1945. One of WHO's first major campaigns attacked yaws, a debilitating and disfiguring condition caused by the bacterium *Treponema pertenue*, that affected millions of children in developing countries, including West Africa. The efforts of WHO to combat yaws were supported by the UN International Children's Emergency Fund, established in 1946 [12]. Aided primarily by penicillin, WHO's public health initiative was able to reduce the global incidence of yaws greatly between 1954 and 1963 [13]. WHO initiated similar disease-specific strategies well into the 1970s, with tuberculosis, malaria and smallpox as its primary targets. One of WHO's greatest achievements was its successful campaign to eradicate smallpox, with the last naturally occurring case in Somalia in 1977 [13].

The Peace Corps was established in 1960 after an inspiring speech given by then Senator John F. Kennedy to students at the University of Michigan, urging them to devote two years to living and working in developing countries. Coordinated by the U.S. Government, the Peace Corps today sends thousands of volunteers (usually young adults) to Africa every year to facilitate health education efforts, to establish support services for orphaned children and HIV/AIDS-infected communities and even to provide direct medical care [14].

When the Foreign Assistance Act was signed into law in 1961, the U.S. Agency for International Development (USAID) was created as part of the act's mandate. Under the auspices of USAID, The Bureau of Global Health supports field health programs, provides relief supplies and needed technologies, and promotes "research and innovation" for addressing specific global health issues such as child, maternal and reproductive health, and diseases like malaria, tuberculosis and HIV/AIDS both in Africa and on other continents [15].

The presence of the International Red Cross and Red Crescent, WHO and other humanitarian groups expanded rapidly in Africa and Asia throughout the 1960s, due largely to the grim after-effects of the newly won independence of many countries in those regions [16].

The era of nongovernmental organizations

Until the 1960s, international humanitarian organizations tended to adopt a "magic bullet" approach to public health, predominantly choosing to mount large campaigns against individual diseases [13]. But, as Stern and Markel note,

by the 1970s postwar optimism had faded and was gradually replaced by an awareness that the eradication of specific diseases would translate into few if any gains in regions that lacked sewage systems, potable water, adequate food, health

clinics, and rudimentary knowledge of illness and treatment, to name but a few crucial positive contributors to a population's general health [17].

Out of dissatisfaction with the narrow, overly bureaucratic, often inefficient and, at times, morally suspect relief work sponsored by larger, international medical humanitarian societies and governmental organizations, many individuals opted to form independent nongovernmental humanitarian organizations (NGOs).

One of the first NGOs was Africare. Founded in 1970 by 17 U.S. volunteers led by William O. Kirker, MD, and Barbara Jean A. Kirker, Africare established itself in West Africa (Maina-Soroa Hospital in Diffa, Niger) during a period of civil unrest, severe drought and famine. With an initial budget of only \$39,550 in 1971, and headquarters in the basement of the house of C. Payne Lucas, director at that time of the Peace Corps Office of Returned Volunteers, Africare focused on combating the adverse health consequences of the drought. Africare "is the oldest and largest African-American organization in the field" [18].

Perhaps more well known is Medecins Sans Frontieres (MSF) or Doctors Without Borders, established in the aftermath of the Nigerian civil war amid widespread famine. MSF was founded in 1971 by a small group of young French physicians and journalists led by Bernard Kouchner, MD, after his return from relief work among the Ibo in Biafra. The founders of MSF established their NGO in part because WHO and the International Red Cross failed to address the social, political and structural conditions which impact public health and in part because the Red Cross's policy of neutrality was construed by MSF as unjustifiably complicit toward the dehumanizing tactics used by the Nigerian army. In 1980, 16 senior members of MSF, including Kouchner, broke from MSF to found Medecins du Monde (MDM) or Doctors of the World, which also provides medical relief in needy areas [19].

MSF's and MDM's philosophy—"Illness and injury do not respect borders"—inspired countless other grassroots, medical humanitarian NGOs [20]. In the U.S. today, their members number in the thousands. Some of the larger organizations are International Medical Corps (1984) [21], Health Volunteers Overseas (1986) [22] and Doctors On Call for Service (1994) [23]. Typically, each NGO has its own specific focus, e.g., health education, resource allocation, medical training, direct medical care or a combination thereof.

Response to the AIDS crisis

By far, the most pressing global health crisis of our times is the pandemic of HIV/AIDS [24]. UNAIDS, a large UN initiative on HIV/AIDS, estimates that about 40 million persons worldwide are carriers for HIV, with millions of new infections every year. Most of these people (about 25 million) live in sub-Saharan Africa [25]. At first, there was a paucity of medical relief being funneled to Africa to combat the HIV/AIDS crisis. By the late 1980s and 1990s, however, the world quickly realized that HIV/AIDS did not respect national boundaries and, thus, required proactive measures in areas hardest hit by the epidemic.

International responses have resulted in the formation of the USAID international HIV/AIDS program (1986) [15]; UNAIDS (1995) [26]; the U.S. Global AIDS Program (2000) [27]; and the UN Global Fund to Fight AIDS, Tuberculosis and Malaria (2001) [28], among others. One of the most ambitious new programs is The President's Emergency Plan for AIDS Relief (PEPFAR). Established by the Bush Administration in 2003, PEPFAR "is the largest commitment ever by any nation for an international health initiative dedicated to a single disease—a five-year, \$15 billion, multifaceted approach to combating the disease in more than 120 countries around the world" [27]. Also contributing significantly to the effort are The Bill and Melinda Gates Foundation, the William J. Clinton Foundation and numerous other groups in the private sector [24].

Frequently overlooked by historians is the involvement of medical students in the promotion of global health in general and in the fight against HIV/AIDS in particular. Notably, the American Medical Student Association (AMSA) mobilized students around the topic of international health beginning in 1967 [29]. Medical students also established the International Federation of Medical Students' Associations (IFMSA) in 1951 to facilitate the arranging and scheduling of clinical clerkships in international health. Founded in the Netherlands and now headquartered in the U.K., IFMSA coordinates activities among students and medical schools in Africa and around the world [30]. Along with AMSA and IFMSA, groups like the Foundation for Sustainable Development (1995) [31], Students for International Change (2002) [32] and HIVCorps (2004) [33] also help students who wish to address global health concerns arrange field experiences in Africa. Moreover, there is now a bounty of international service learning programs for young adults and U.S. medical school students that participate in global health electives abroad. The number of U.S. medical students participating in international health electives has risen substantially in the last few years from 22.5 percent in 2004, to 27.2 percent in 2006 [34].

Conclusion

Promoting public health in Africa will require the combined diligence of indigenous, religious, governmental and nongovernmental groups. Unfortunately, bureaucratic barriers often prevent these groups from collaborating. As just one example, in Kenya, Catholic Church-related clinics provide 40 percent of all HIV/AIDS care (by its own estimates, the Catholic church provides about 25 percent of all care worldwide). Yet the Global Fund cannot be easily accessed by local churches or church-related clinics, such as those in rural Nairobi province—the sole providers there [35]. One lesson from history is that closer coordination among groups whose mission calls them to serve the poor of Africa might alleviate current problems in the HIV/AIDS crisis. It is imperative that such unified efforts are encouraged and fostered in the 21st century.

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