Regional Reports

Family Medicine's Role in Health Care Systems in Sub-Saharan Africa: Uganda as an Example

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Sub-Saharan Africa is probably the region with the worst health indices in the region. Although health problems in this region are largely preventable through a good primary health care system, efforts to implement such a system have not been so successful and neither have reforms suggested by the World Bank. However, there are new efforts to improve delivery of health care by introducing family medicine in the region through decentralized health care systems. Uganda is at the forefront of these efforts, and ways to integrate family physicians into the health system are still being debated. This paper reviews the potential role of family medicine/general practice in the health care systems of sub-Saharan Africa and in Uganda in particular and offers suggestions based on successes made in other countries.

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There are enhanced efforts to expand the discipline of family medicine/general practice in Uganda and in many other countries in sub-Saharan Africa.[1,2] Departments of family medicine have been opened in the major universities in the region. However, there is ongoing debate among health planners and professionals on whether the discipline of family medicine, promoted as a specialty, can play a significant role in improving health services delivery within the existing health care systems in the region. This article will discuss the potential role of family medicine in sub-Saharan Africa, using Uganda as a model.

Medical Training in Uganda

Although medical training in Uganda dates back to 1924, it was not until 1963 that the first graduates of the then Makerere University College were awarded recognized degrees of medicine.[3] Training for the degree in Uganda, like in many countries in sub-Saharan Africa, follows a system introduced by the former European colonial powers. Following high school, one has to undertake 5 years of undergraduate training in a medical school and, upon passing university examinations, is awarded a bachelor's degree in medicine and surgery (MBChB). This is followed by a minimum of a year of supervised practice (internship) in referral hospital.

After completing this process, the doctor is licensed to practice medicine as a "medical officer" and may be employed by the government in a district hospital or health center. Others are employed by private health facilities or set up their own clinical practice after securing a license. In Uganda, like in many other countries in the region, medical officers make up the largest cadre of doctors and perform much of the clinical duties in hospitals and clinics, including emergency operations like Caesarean deliveries.

One may remain at this level of training indefinitely or may return to medical school for a 3-year postgraduate study in a discipline of their choice (residency) leading to a Master of Medicine degree (equivalent to board certification). An alternative to a 3-year residency is 18 months of postgraduate study that leads to a Master of Public Health degree.

History of the Medical Care System in Uganda

The health care system in Uganda has undergone many changes over the last 50 years. Before the country attained independence from British control in 1962, the main mode of health care for the native population was through "traditional" (non-Western) medical practice. The years immediately following independence

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saw marked improvement in health services for the population. A chain of hospitals was built throughout the country and medical training institutions opened, resulting in more and more native Ugandans being trained in medical disciplines from within the country. The system almost broke down in the 1970s, however, following political and economic decline. Many professional health workers fled the country, and traditional medicine resurfaced as a major means of health care.[4]

Following the Alma Ata conference in 1978, Uganda, like many other developing nations, embraced the concept of primary health care. However, its implementation was not as effective as envisioned, and despite the introduction of various vertical programs, only minimal improvements in delivery of health services were achieved.[5]

As a result, Health Sector Reforms (HSRs), including decentralization of services, were introduced by the World Bank and the International Monetary Fund. These HSRs aimed at addressing the problems that were assumed to be hindering progress in the health sector in developing countries. Decentralization in public administration was designed to transfer the administration of social services from central government to local authorities.[6,7] Centered on the sub-district (county) as the functional unit, it was intended to enable local authorities to exercise greater control over social services within their area, with the aim of better service delivery at the local level.

Each sector of government follows this arrangement as enshrined in the nation's 1995 constitution. For the health sector, the health sub-district is typically based at a level-IV health center or a general hospital (Table 1). Staff at that health center, headed by a medical officer, oversees curative, preventive, and health promotion services in the whole county. Staff at higher-grade health centers supervise those centers directly under them. A district health team, headed by the director of district health services, oversees the operations of all the health services in the district.

According to the Ugandan Ministry of Health, heads of all health units, from health centers IV upwards (Table 1) are to be graduates with public health training. Clinical work in general hospitals and level-IV health centers is by medical officers, whereas referral hospitals have specialists supervising residents, medical officers, and interns.

History of Family Medicine in Uganda

The discipline of family medicine/general practice was first introduced in the region by the late John Ross, MD, a Canadian family physician, at Makerere University in 1989 with a grant from the Canadian government through the Canadian International Development Agency.[8,9] The initial concept was to train primary care physicians to be stationed in rural hospitals in Uganda as part of an effort to support primary health care in the country. Training included a 3-year residency program leading to a Master of Medicine in Community Practice degree, with a theoretical component done at the university medical school in Kampala and a practicum placement at a model rural hospital under supervision of a specialist family physician.

Between 1991 and 1994, 11 students were enrolled into and completed the new course.[10] These pioneer family physicians were deployed to various hospitals within Uganda, mainly as hospital medical directors (medical superintendents).

Table 1

Organization of Uganda's Health Care System

Health Center Level		*Population Served*	*Services Offered*	*Staffing*
I	Village health team	Village (~1,000)	Limit service by providers without formal medical training. Referral.	Nine–ten people selected from village members by village chief. Half are women.
II	Health Center II	Parish (~5,000)	Ambulatory services that are the first interface between communities and formal health system.	Enrolled nurse (equivalent to licensed practical nurse).
III	Health Center III	Sub-county (~20,000)	Preventive, curative, and health-promoting services. Support and supervision of level II and III health centers.	Medical officer, registered nurse, enrolled nurse, nursing aide, laboratory technician.
IV	Health Center IV or General hospital	County (~100,000–500,000)	Same as health center III plus emergency services such as Cesarean delivery and blood transfusion.	Same as health center III plus two general medical officers and anesthetic officer.
V	Regional referral hospital	Region (~2,000,000)	Referral center for district general hospitals.	In addition to general medical officers and nurses, also includes one specialist in each major discipline.
VI	National referral hospital	Nation (~28,000,000)	Referral center for regional hospitals.	Multiple specialists and subspecialists.

After Dr Ross returned to his native Canada in 1994, the course almost collapsed, and only one student was enrolled between 1994 and 1999. This was due largely to lack of funding, resistance from other specialists, and unstable leadership. It was not until there was change in the top leadership of the faculty of medicine that efforts to reactivate the discipline were energized, and more students were enrolled in 1999. Between 1999 and 2003, 18 students enrolled into the Makerere program,[10] and a few others enlisted into a similar program sponsored by the German government at the other medical school in the country, the Mbarara University of Science and Technology.

Significant internal reorganization of the specialty has been accomplished recently, including establishment of an expert panel to oversee the development of the discipline within Uganda and the region, recruitment of local academic staff, and renaming the specialty to a more internationally recognizable "family and community medicine."

Unfortunately, despite expressed interest in graduates by the government, and actual sponsorship covering tuition, the Ministry of Health has of yet been unable to formalize the specific roles family physicians are required to play within the health care system. This has resulted in lack of understanding of the usefulness of family physicians within the system not only by other health professionals and the general public but also by medical students. Thus, enrollment and retention into the course remains unappealing to prospective students largely due to an unclear career path.

Thoughts on How Family Physicians Can Be Useful in Such a Health Care System

The World Organization of Family Doctors (Wonca) describes the tasks that a family physician/general practitioner performs in general.[11] However, these tasks are determined to a large extent by the differences in the specific health care system and society in which the family physician/general practitioner is working. Various cultural, religious, political, and socioeconomic differences in societies lead to variations in job descriptions of family physicians/general practitioners, even though core competences may be similar around the world.[12]

Unlike in Western countries where family physicians are normally the point of first clinical contact within the health care system (primary care provider) and have been termed by some as "gatekeeper,"[13] in Uganda, like in many areas of the world with low doctor-patient ratios, traditional healers, nurse's aides, nurses, and non-residency-trained doctors all offer primary care. Despite limited clinical expertise, medical officers, nurses, and other allied health personnel, working closely with community members, have been found to perform relatively well in promotion of health care in Africa.[14] However, this team of primary health care providers not only needs further training to enhance skills but also more organization and leadership. The range of clinical and managerial challenges encountered by the health workers in rural Africa requires someone "clinically competent" and able to provide "comprehensive care" to all patients "irrespective of age, sex, or diagnosis," as described by Wonca.

It has been shown that health systems based on effective primary care with highly trained generalist physicians practicing in the community provide both more cost-effective and more clinically effective care than those with less primary care orientation.[15] Although, in the developed world, family physicians offer much of the primary care to patients, definitions of primary care differ in various parts of the world, just as they must differ in sub-Saharan African countries.[16-18] Stakeholders in sub-Saharan Africa should describe what the unique roles that family physicians/general practitioners should play, given the distinct health care system and health worker deficiencies in the region.

Creation of clear roles for family physicians/general practitioners in sub-Saharan Africa will not only make the discipline more accepted by the public and other stakeholders but also make the specialty more attractive for prospective students as well as prevent the feeling of being in "a void" for graduates of the course, uncertain of where they belong in the system.[19]

Just as the definition of family physicians/general practitioners will differ in sub-Saharan Africa from that in other regions, the curricula of the discipline at the emerging medical school departments in the region will also differ and should also reflect the special roles the graduates are likely to play—clinical expertise with increased emphasis on health management and basic health care research necessary for the role of a team leader capable of recognizing community health needs, developing interventions, and assessing outcomes.[20] As is the case in South Africa,[21] family medicine should be introduced to undergraduate students earlier in their career, since this has been found to contribute to choice of the discipline as a career path.[22]

Priority needs to be on expanding the role of family physicians in sub-Saharan Africa health care systems, not only as primary care providers but also as personnel playing a role in leading a well-planned comprehensive community-oriented primary care (as introduced by Kark in South Africa decades ago[23]). This is going to require support of emerging programs by already-established systems in the West and, in addition, a supportive environment from within.[24]

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