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MEDICAL EDUCATION

Sustainable International Partnership Building for Academic Medical Centers: Experiences with the Botswana-UPenn Partnership

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The world faces a global health workforce shortage of almost 4 million professionals, with the most severe gaps in sub-Saharan Africa [1]. Improvements in health, including meeting the health-related Millennium Development Goals, are linked with the density of skilled health workers [2]. In the U.S., the reauthorizing bill for the President's Emergency Plan for AIDS Relief (PEPFAR) requires the U.S. to support training of 140,000 new health workers in PEPFAR focus countries. The participation of U.S. academic medical centers (AMCs) will greatly help to close the workforce gap and expand training of health professionals in low- and middleincome countries.

Many partnerships have developed between AMCs and ministries of health in resource-limited countries. These programs range in depth, longevity, and sustainability. While some U.S. academic medical institutions focus on sending trainees abroad for electives, others have more comprehensive programs encompassing the tripartite mission of patient care, medical education, and research. Examples of robust, long-term partnerships include the University of Indiana-Moi University partnership, the Muhimbili University-UCSF project, and the Botswana-UPenn Partnership (BUP). Our experience with the BUP program has led us to believe it can serve as a useful model for such relationships because it possesses the qualities of successful international collaborations.

Auspicious Beginnings

The University of Pennsylvania (Penn) School of Medicine's involvement in Botswana began in 2001 at the request of ACHAP (African Comprehensive HIV AIDS Partnership), a collaboration involving the Government of Botswana, the Bill and Melinda Gates Foundation, and the Merck Company Foundation. The Government of Botswana had decided to make antiretroviral drugs available to its citizens. Doctors with experience using these drugs were needed to help train the local health care workers. The circumstances that led to the formation of BUP highlight an important principle: partnerships that develop at the invitation of the host country rather than at the request of the AMC are more likely to succeed.

A memorandum of agreement is critical for an ongoing relationship between an AMC and a developing country. Such an agreement establishes the legality of the program and sets parameters for the collaboration. In our experience, developing a memorandum of agreement helps to define the focus of the collaboration, which for BUP has been to help build capacity of health care workers in Botswana to provide care to HIV-infected subjects. Keeping a focus helps increase the chances for success.

It is impossible to guarantee that a partnership will last; it is, however, important for the health of the relationship that it be predictable. Institutions should commit funding for specific time frames, and the details of this funding should be transparent to both partners. Goals, objectives, and activities may thus be planned based on the funding timeline.

Fairness

Multiple studies have shown that rotations abroad have beneficial effects on U.S. trainees, including exposing them to a broader spectrum of disease, familiarizing them with cost-benefit issues and structural determinants of health, and providing hands-on cross-cultural training [3, 4] and there is evidence that international rotations also have long-term impact on the U.S. health system; a larger percentage of medical students who participate in rotations abroad go into careers in primary care or public health [5].

One of the biggest assets of the BUP program for Penn is the opportunity it provides for Penn trainees to participate in medical care in Botswana. Nevertheless, the flow of personnel cannot be one way, and must be viewed as fair by both partners. The Ministry of Health in Botswana is very concerned about brain drain and does not want to send trainees abroad for extended periods of time. The University of Botswana (UB) just formed a new medical school, which enrolled its first class in August 2009 and currently has little interest in sending medical students for electives at Penn, though Penn sends approximately 24 students each year to do electives on the internal medicine wards at the Princess Marina Hospital in Botswana. What, then, constitutes a fair exchange? The principle here is that fair exchanges are fluid and require constant dialogue. Currently, "fair" means offering opportunities for UB undergraduates, nursing students, and faculty to spend semesters abroad or take sabbaticals at Penn. In time, the nature of the student and faculty exchanges may change. Flexibility is crucial.

Focus on the Future

Building sustainable capacity is an important goal of any international collaboration. Our approach, emphasized by PEPFAR, is to provide care in settings where we are working alongside local health care providers. In that way, we are always teaching as we provide care. In locations with too few health care workers, it is often difficult to free up health care personnel to work alongside BUP faculty. The temptation is strong to provide care under all circumstances, but if no local health care workers are involved in that care, we miss a valuable opportunity to build capacity. In our experience, insisting on using every patient encounter as an opportunity to teach has been one of the most difficult aspects of the program to implement, but also one of the most important. Working through these difficulties requires acknowledgement by

local authorities of the importance of capacity building, sometimes at the expense of more immediate returns.

Focus on the Host Country's Priorities

BUP is fortunate to be in Botswana at the time the country is forming its first medical school. Currently, we have 12 doctors living and working full time in Botswana. Some of our doctors were asked to help develop the curriculum for the internal medicine residency training program that started January 2010, while others were invited to serve as attending physician teachers on the medical wards at the Princess Marina Hospital. We are thrilled to participate in these activities, but here too the learning curve is steep for us. If we do too little, we risk disappointing our partners; if we do too much, we risk building resentment. Cultural differences sometimes complicate matters, but communication and mutual trust are keys to success.

The BUP program is centered in the Department of Medicine/Infectious Disease Division of Penn's School of Medicine, yet Botswana's greater needs are primary care and public health. AMCs that want to maximize the benefit to host countries must often shift from tertiary care training to prioritizing primary care and public health interventions [6, 7].

Multi-AMC Collaboration

As more AMCs form partnerships to improve training in low- and middle-income countries, coordination among AMCs becomes important as well. Multiple overlapping relationships may be an excellent model for partnerships, as they enrich technology transfer and provide additional security for the host country if one partner unexpectedly pulls out. (The Friends of Moi collaboration provides an example of how such a multi-AMC collaboration is optimized through frequent, transparent communication and regular planning meetings to outline activities and responsibilies [8].)

Accountability

What is the role of research collaborations in resource-limited countries? The BUP program began with clinical care and education, but as our program matured, we placed greater emphasis on research. This research has a focus that is rather different from that done by many of us at Penn, in that outcomes research is a high priority in Botswana. We want to know if the programs we are helping to implement are actually working because we have learned that a critical step in implementing any new program is to convince key stakeholders in the country of its worth. Without their support, the program will fail. To that end, investigators on research projects should include staff or faculty from the host institutions. One major focus of an AMC should be to transfer research skills and provide technical assistance to host faculty involved in their research [9].

Conclusion

Our increasingly interconnected world calls upon AMCs to meet the original mission of medical colleges: the "pursuit of health in the service of society" [10]. If built on trust, fairness, and sufficient funding, innovative international partnerships like BUP can help realize this goal on a worldwide scale.

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