

Raising the Profile of Pulmonary Education for Physicians in Low- and Middle-Income Countries

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The burden and pattern of human diseases are changing worldwide, especially in low- and middle-income countries. In addition to the continuing burden of infectious diseases in these countries, there is a surge in the incidence of noncommunicable diseases, including chronic respiratory diseases (1). Clinical diagnoses of chronic respiratory disease, such as chronic obstructive pulmonary disease (COPD), asthma, lung cancer, and interstitial lung diseases, are now commonplace in health facilities in developing countries. Prominent reasons for this trend include underreporting in the past; rapidly changing population demographics, with many more in the resource-poor countries living into the chronic disease age range; and an actual increase in the prevalence and morbidity of respiratory diseases (2).

Whatever the reasons, the reality is that lower- and middle-income countries are now faced with the dual challenge of curtailing the ongoing epidemic of chronic noncommunicable diseases while at the same time aiming to control the entrenched challenges of infectious diseases. This is particularly daunting because many of the health institutions in lower-income countries, especially in sub-Saharan Africa, are not designed or equipped to manage chronic diseases (3).

Traditionally, the approach to addressing population health issues in many developing countries has focused on the provision of support for local community health workers who engage infectious

disease surveillance and control. This strategy has been reasonably effective in the control of tuberculosis and some childhood respiratory diseases. Clearly, new strategies are needed to diagnose and manage chronic respiratory diseases. In particular, it is imperative to support the provision of facilities for a higher level of care and the training of healthcare professionals, including doctors, who have the necessary clinical skills (4).

The East African Training Initiative is an important effort to address this gap in capacity and personnel and to prepare the East African subregion to train the requisite cadre of pulmonary physicians needed to provide care and to meet the increasing challenges of pulmonary diseases (5). Potentially, this program can become a model for similar advanced training programs in other countries and regions. The strength of the East African Training Initiative program lies in the fact that it represents a joint commitment and collaboration of both international and local partners to develop a training program for pulmonary physicians. Additional attributes are embedded research and public health components aimed at developing capacity for respiratory disease-focused research. The architects of the program have wisely identified research capacity as a key ingredient in maintaining a culture of excellence in local medical practice. In addition, the program is founded on the principle of local ownership, shared responsibilities, long-term independence, and a system for

cascading the training program to other hospitals in the country over time.

However, the need to have clear-cut goals and a plan for sustaining the program after the initial enthusiasm has disappeared and the organizers have moved on to other challenges cannot be overemphasized. One key to ensuring sustainability is to engage several partner organizations in the program. In the absence of partners and a solid plan for sustainability, the program may lose steam and fail to attain its overall purpose of building capacity for respiratory care in Ethiopia and the East African subregion.

Another key to sustaining the gains achieved thus far is to seek external certification for the program by a medical accreditation or regulatory body. Perhaps collaboration with some older programs in South Africa, Nigeria, and/or West Africa subregion could be explored (6–8). An appropriate certification of the curriculum by an international or regional regulatory body will increase the program's credibility and the confidence of the fellowship graduates.

The gaps in capacity development vary from region to region and from country to country. Within Africa, for instance, there are vast differences across the regions of the continent in the availability of pulmonary physician training programs and the ability to provide high-quality respiratory care (9). This variation is aggravated by the apparent lack of accepted minimum standards for training and practice of respiratory medicine. The lack of such

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standards weakens the processes of building capacity in these countries and leads to large variability in the quality of care.

There is a need to develop international minimum standards for respiratory care. These standards should be attainable and realistic for low- and middle-income countries, but also sufficiently rigorous to ensure that all pulmonary physicians attain the basic competencies needed to provide respiratory care. Such standards should be comprehensive and should clearly outline the necessary toolkits any pulmonary physician will require to provide good clinical care. Certainly, these minimum standards may pose a challenge in certain parts of the world, but will at least create awareness and equip local groups with the information necessary for advocacy while working with their governments and agencies to attain these standards in training, competency, and facilities.

Another recommendation is that there should ideally be harmonization of the training curriculum in lower- and middle-income countries. This harmonization can be regional, continental, or international. An interesting example is the well-recognized

Harmonized Education in Respiratory Medicine for European Specialists (HERMES), which includes centers across Europe and a unified examination system (10). Such cohesion in training pulmonary physicians is vital to ensure minimum standards regionally or internationally.

This is certainly not an easy task for developing countries. Various methods can be used to facilitate the process. A structured and standardized web-based learning platform is a possible initial strategy that is less expensive to accomplish. However, clinical and hands-on skills are essential competences in any good clinical practice. Alternatively, designated regional centers of excellence could be developed to provide pulmonary physicians in lower- and middle-income countries with the training they need to practice competently while striving to attain acceptable international standards.

This process could be facilitated through competitive short-term pulmonary fellowships aimed at closing specific knowledge gaps for those with preexisting training in pulmonary disease or long-term programs that would offer sufficient hands-on training and instruction for those

without any prior training. The International Society of Nephrology has used this method of building capacity in lower- and middle-income countries over the years, and it has been successful in providing young fellows and faculty the needed clinical exposure in that field of medicine (11). The same idea could be developed for training in pulmonary medicine with the attendant certification and recognition for those who undergo the training.

In conclusion, the East African Training Initiative, if well harmonized with a fully developed curriculum, acceptable minimum standards, and the necessary infrastructure for training fellows, could serve as a blueprint for developing a generation of leaders in pulmonary care in many countries in Africa and other lower- and middle-income countries worldwide. Crucial to its survival is a well-thought-out strategy for continued international partnership, sustainability, and gradual transitioning of the program to local stakeholders. ■

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