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# Future of Family Medicine Faculty Development in Sub-Saharan Africa

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**BACKGROUND AND OBJECTIVES:** High-quality family medicine education is needed in sub-Saharan Africa to facilitate the future growth of primary care health systems. Current faculty educators recognize the value of dedicated teacher training and ongoing faculty development. However, they are constrained by inadequate faculty development program availability and institutional support.

**METHODS:** A cross-sectional study design was used to conduct a qualitative needs assessment comprised of 37 in-depth, semi-structured interviews of individual faculty trainers from postgraduate family medicine training programs in eight sub-Saharan African countries. Data were analyzed according to qualitative description.

**RESULTS:** Informants described desired qualities for a family medicine educator in sub-Saharan Africa: (1) pedagogical expertise in topics and perspectives unique to family medicine, (2) engagement in self-directed, lifelong learning, and (3) exemplary character and behavior that inspires others. Informant recommendations to guide the development of faculty development programs include: (1) sustainability, partnership, and responsiveness to the needs of the institution, (2) intentional faculty development must begin early and be supported with high-quality mentorship, (3) presumptions of teaching competence based on clinical training must be overcome, and (4) evaluation and feedback are critical components of faculty development...

**CONCLUSIONS:** High-quality faculty development in family medicine is critically important to the primary care workforce in sub-Saharan Africa. Our study describes specific needs and recommendations for family medicine faculty development in sub-Saharan Africa. Next steps include piloting and evaluating innovative models of faculty development that respond to specific institutional or regional needs.

(Fam Med 2017;49(3):203-210.)

igh-quality family medicine education is needed in sub-Saharan Africa to facilitate the future growth of primary care workforce and health systems. The World Health Assembly (WHO) resolved in 2009 that primary health care (PHC) systems should include family physicians, and there is now a robust body of literature about the global development of family medicine. 4

However, important African WHO milestones have not adequately described the unique role of family physicians in African primary health care.<sup>5-7</sup> In 2013, Moosa et al reported a lack of understanding of

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family medicine by stakeholders in sub-Saharan Africa with a resulting lack of advocacy, policy, and action to support the necessary infrastructure and resources necessary to provide optimal faculty development programs.8 However, in a subsequent study of stakeholders, Moosa et al demonstrated that family medicine was seen as foundational to the supervision, standard setting, and organization of primary health care teams. Barriers persist to training more family medicine physicians such as the notable lack of professors in family medicine, particularly in rural sites.9 International support has been welcomed and seen as valuable for meeting international standards, but there are concerns regarding foreign "agendas" or dependency.8,9

In some countries, faculty development (FD) has been a central pillar of family medicine since its inception and has developed from an initial focus on teaching to include research, administration, career management, and organizational leadership. 10-13 Leslie et al have described in detail the importance and content of FD in countries where the specialty is wellestablished.14 Two reviews have also highlighted the diversity of FD program content and the importance of flexibility and adaptability to a wide variety of contexts. 10,13 But, only a small body of literature is available addressing the needs of FD in Singapore, India, China, Nepal, Iran, Saudi Arabia, and Egypt. 15-21

Support for the creation of robust local FD programs in sub-Saharan Africa is, therefore, critically important, relevant, and timely.

Our companion article, Larson P, et al. Current Status of Family Medicine Faculty Development in sub-Saharan Africa<sup>22</sup> described what family medicine faculty in sub-Saharan Africa identify as the current status of faculty development within their contexts. As we described in that article, informants consistently recognize the value of dedicated teacher

training and ongoing FD but are constrained by inadequate program availability or institutional support.

This article reports results of a qualitative study designed to identify FD needs and recommended approaches for family medicine FD in sub-Saharan Africa.

#### **Methods**

We have previously described detailed study methods available in Larson P. et al. Current Status of Family Medicine Faculty Development in sub-Saharan Africa.<sup>22</sup> We refer readers to that article for a detailed discussion and here will provide a summary.

### Study Design

We completed a qualitative needs assessment utilizing semi-structured interviews of individual physician instructors. We sought to describe the primary themes as close to the original data as possible with sufficient interpretation to promote understanding, and therefore, followed a qualitative description approach to data analysis.23,24

# Ethical Approval

The University of Pittsburgh Institutional Review Board conducted a facilitated review and determined ethical oversight was not required for this needs assessment. Ethical approval was granted by Moi University Institutional Research and Ethics Committee, Kenya (IREC/2014/167), the University of Ghana Ethical and Protocol Review Committee (MS-Et/M.5-P4.10), and Addis Ababa University Family Medicine Program in Addis Ababa, Ethiopia (3/17/2015).

# Instrument Development

Table 1 provides a list of 17 questions asked of each informant. Eleven questions were revised (Table 1:R) following initial data collection to reduce redundancy and improve focus of data.

# Sample Selection and Informant Recruitment

Investigators with country-specific expertise in the development of family medicine in sub-Saharan Africa were asked to identify English-speaking, current physician instructors from established or developing postgraduate training programs and departments of family medicine. Selected individuals were directly engaged in the instruction of sub-Saharan African trainees in the principles of family medicine.

### Data Collection

Interviews were conducted by regional teams utilizing a standardized interview field guide (available at http://resourcelibrary.stfm.org/ viewdocument/family-medicine-faculty-development-1) and informational script regarding the purpose, method, and anonymity of the study. Interviews were completed between November 2014 and July 2015 at regional locations convenient to both interviewers and informants, including Nairobi, Kenya, Accra, Ghana, and Addis Ababa, Ethiopia.

All interviews were digitally recorded and transcribed verbatim according to established professional standards.

## Data Analysis

We developed a codebook (available at http://resourcelibrary.stfm.org/ viewdocument/family-medicine-faculty-development-1) through initial review of all transcripts from the east Africa data set. All transcripts were then systematically coded using Atlas.ti (Atlas.ti GmbH, www.atlasti. com). The data identified for each code were reviewed for themes and subthemes that described the content as closely as possible. All investigators reviewed identified themes and subthemes to promote agreement with the final analysis.

#### Results

A total of 37 interviews were conducted. Table 2 shows the countries

Table 1: Initial and Revised (R) Questions Asked of Informants

	Open-Ended Questions Asked of Each Informant
1	Please briefly describe your past medical training and current professional responsibilities.
1R	Please briefly tell me about your current professional responsibilities.
2	Please describe the current state and availability of family medicine postgraduate training at your institution.
2R	Please describe the current state of family medicine training at your institution.
3	Please describe the current number and the medical education of each of the faculty at your institution who are teaching in family medicine postgraduate programs.
3R	Please tell me about any formal teacher training you have completed.
4	Please describe the current state and availability of faculty development training for family medicine postgraduate programs in your context.
4R	Please describe the current state and content of any formal teacher training available in your context.
5	If faculty development training is available, who supports it financially?
6	What specific educational criteria are considered in hiring new faculty at your institution? Do these criteria relate specifically to teaching skills?
6R	What specific formal teacher training is required for employment as faculty at your institution? What specific teaching experience is required for employment as faculty at your institution?
7	What knowledge about educating should faculty have?
8	What educational skills should faculty have?
9	What attitudes toward education should faculty have?
9R	What attitudes about teaching should faculty have?
10	What would be the most effective way to teach these competencies?
10R	What would be the most effective way to develop these teaching characteristics in faculty?
11	When during an aspiring educator's career path should these competencies be taught?
11R	When during a faculty career path should these teaching characteristics be taught?
12	How would you assess that faculty possess these competencies?
12R	How would you assess that faculty possess these teaching characteristics?
13	In summary, what are the most important characteristics that will enable a faculty member to be successful?
13R	What are the most important characteristics that enable a faculty member to be successful?
14	Please describe any factors that limit further training of faculty for their educational roles.
15	What factors would enable you to overcome these limitations? Please describe any factors that have already enabled you to overcome these limitations.
15R	What factors would or have enabled you to overcome these limitations?
16	Would you provide the name and contact information of any other person or persons who you believe, based on responsibility, education and/or experience, would be able to contribute to this study?
17	Is there anything else you would like to share with me?
	<del>·</del>

represented. Informants were physicians responsible for the direct instruction of postgraduate trainees or medical students in the discipline of family medicine. Informants represented the full spectrum of academic rank and training role, including senior trainees, community-based physicians, program directors, and university department heads.

The findings are organized in seven themes in two domains corresponding to specific needs or general recommendations for the future development of faculty.

Needs for FD Programs for Family Medicine Educators in sub-Saharan Africa (Table 3)

Theme 1: Family medicine educators should have pedagogical expertise as well as knowledge and skills unique to family medicine education. Informants stated that clinical training is insufficient for family medicine faculty to become effective educators. Knowledge and skills in education may not be taught or modeled during medical school training. Informants desired to learn teaching skills, such as providing constructive feedback and instruction of adult learners, rather than continue the traditional paternalistic approach they experienced as learners. In addition, informants listed knowledge

**Table 2: Informant Country** 

Country	Number of Informants
Kenya	6
Uganda	2
Rwanda	2
Tanzania	1
Nigeria	5
Ghana	6
Ethiopia	14
Togo	1

and skill in scholarship and research as requirements for academic promotion.

Informants agreed on the importance of being an expert in the field of family medicine. They described the importance of having foundational knowledge in topics related to family medicine, such as population and community health. Other knowledge and skills such as leadership, use of technology, learner assessment, curriculum design, time management, and communication were described as desired competencies.

Theme 2: Family medicine educators must continuously challenge themselves to refine their skills as clinicians and teachers. Informants recommended lifelong learning as a critical practice. They recommended that educators need to continuously update and refine their clinical skills as well as add new professional and teaching skills. Standards for licensing or professional membership should be increased to include aspects of lifelong learning through continuing medical education and/or FD.

Theme 3: Educator character and behavior are important in developing family medicine training programs since faculty are role models who inspire and motivate others.

Informants described the importance of changing any existing stereotypes

of the specialty in sub-Saharan African countries by sowing seeds of enthusiasm among their trainees. They recommended that family medicine faculty be advocates for the specialty. Informants articulated internal motivations to teach such as feelings of joy, passion, and a love of learning and teaching. Informants stated that they continue as teachers because of these motivations, despite barriers of inadequate time and compensation. Informants admired attitudes of humility and respect for others, regardless of title or position.

Recommendations to Guide Creation of FD Programs in the sub-Saharan Africa Region (Table 4)
Theme 4: In order to create a FD program that responds to the needs of the institution and is sustainable, partnerships are needed in the early stage of family medicine program development.

Informants reported that partnerships could take many forms. They described successful models such as Doctors as Educators program from the West Africa College of Physicians and the East Africa Health Professions Educators Association that are led by national or regional bodies that have the resources to provide continuity and expertise. Informants reported that experienced physicians in the field of education could help build a strong foundation for current faculty and develop a training program through organizations like WONCA and STFM. Other informants suggested that local faculty should travel to countries where the specialty of family medicine is more established to participate in FD or to observe senior family medicine faculty. However, regional programs were valued as these were more likely to be sustainable.

# Theme 5: FD should begin early in the clinician's career. Mentoring relationships are important in medical education and FD.

Informants suggested that FD concepts should be introduced in medical school. Others preferred the years in postgraduate training or when one becomes a new faculty member as the ideal time to begin FD.

Informants suggested early training should include certificate or fellowship programs in order to formalize FD and add prestige to academic medicine. One informant suggested utilizing training platforms based on Internet technology, including social media, to complete online training.

Informants described the importance of being a mentor as well as an educator in order to impact the learner in areas such as skills and attitudes. Informants felt very strongly that teaching was a relationship and that role modeling also facilitates succession planning for leadership positions within the departments.

Theme 6: Rejection of the "presumption of competence" belief is required by individuals and institutional or professional licensing bodies. There should be respect for teaching as an important skill set distinct from clinical acumen.

Informants expressed the need for academic institutions to give priority to academic medicine. They recommended that medical schools should prioritize the development of their clinicians as educators and facilitate this aspect of their professional development. Institutional support could include a medical education

Table 3: Needs for FD Programs for Family Medicine Educators in Sub-Saharan Africa

Theme	Subthemes	Representative Quotes
• Family medicine educators should have pedagogical expertise as well as knowledge and skills unique to family medicine education	Family medicine educators need to have knowledge in curriculum design and development, assessment and evaluation, and reinforcement of self-learning skills.     Family medicine educators should have basic knowledge in acute care, chronic diseases management, and population health.     An educator needs to be an excellent leader, manager, and have good interpersonal communication skills.     Effective faculty should have skills in the use of technology, not only for clinical practice, but also for teaching.	"So the faculty shall [have] experience or knowledge in curriculum design, assessing the student, mentoring them in clinical practice and how to teach those [students] just being a specialist doesn't mean you can teach something."     "Yeah, the faculty needs, would require to have adequate foundations about the areas that relate to the need training for the students which is [are] the clinical areas in emergency medicine, chronic disease care, and the community orientation which is community oriented primary care, research in family medicine and primary health care…"     "Because you should have a skill of actually creating a learning environment. You should have a skill, I should have better communication skills so that you can actually transfer knowledge from yourself to the learner."     "Now we are in new concept of teaching may be, this traditional teaching where does to have a class and sit and teach but now there is technology involving a lot of skills so we need to have this technology skills to use these e-learning…"
• Family medicine educators must continuously challenge themselves to refine their skills as clinicians and teachers.	• An educator should have the ability to be a self-learner and stay up to date with current research in the medical field.	• "We should never ever think that we have reached, what the top[?], that we cannot self-improve. I think the attitude should be I can always learn, there is always something I can learn and I can learn from anyone including my students."
• Educator character and behavior are important in developing family medicine training programs since faculty are role models who inspire and motivate others.	A family medicine educator needs to have a commitment and confidence in the specialty.     Faculty should demonstrate passion, commitment, and dedication.     Faculty should demonstrate humility, adaptability, and flexibility.	"The most important characteristic, one is that faculty member understands family medicine. Yes, do they understand what family medicine is? The second thing is that do they hold [to] those values, they could understand but do they hold those values about to practice [of] family medicine strongly, do they appear like they are really people who advocate for that transition to happen."      "But the attitude would be that surely people should love what they are doing. You know when you are doing what you are with passion and commitment then you become perfect."      "Should have a kind of adopt an attitude that everybody must be taught and that nobody is perfect. And that includes even the teacher."

department in the university. There should be financial support for FD programs and allocation of time to pursue FD opportunities as well as research. The time demand of clinical responsibilities was discussed as an obstacle to developing leaders within their institutions and for participating in FD programs.

Theme 7: Faculty evaluation and feedback are important in creating competent departmental faculty.

Informants suggested using learners to evaluate faculty members. In addition to the assessment scores of learners as a proxy for good teaching, learners could provide direct feedback. Periodic peer review through direct observation and immediate feedback were also recommended.

### **Discussion**

This study sought to explore the perspectives of sub-Saharan African family medicine educators regarding their own needs and recommendations for FD. These educators

described specific content needs for FD programming, including the importance of pedagogical and clinical expertise, especially in areas unique to family medicine. Lifelong learning and educator character and behavior were identified as key values to incorporate into training. These educators also provided general recommendations to guide future program development including the creation of sustainable partnerships that respond to needs of local institutions. Mentorship in medical education was recommended to occur in

Table 4: Recommendations to Guide Creation of FD Programs in the Sub-Saharan Africa Region

Themes	Subthemes	Representative Quotes
• In order to create a FD program that responds to the needs of the institution and that it is sustainable, partnerships are needed in the early stage of family medicine program development.	<ul> <li>Medical education is a new field in sub-Saharan Africa. Thus, assistance from international experts could help build a stronger foundation.</li> <li>Regional programs that allow connecting with other people and shared assets was seen as a sustainable response.</li> </ul>	"Well, I think maybe to ask for support in terms of going about medical education. I think as far [as] most of us are concerned it's a field that is noble, it is new and I think we should appreciate a lot of help in terms of getting to develop ourselves as medical educationist."      "One [of] the things would be sort of in-house courses or going out to watch other people do the job. Probably have mentors among the faculty or sort of you know like have overseas [mentors] or other places where you could go and watch how it is done."
• FD should begin early in the clinician's career. Mentoring relationships are important in medical education and FD.	<ul> <li>Formalize training can be the answer in developing rigorous FD programs that provide recognition to the educators.</li> <li>Mentorship was seen as an important method for informal FD.</li> </ul>	"Ideally, the fellowship shall follow the postgraduate of if you are a graduate as a Family Physician then you can have the fellowship."     "So I think it's for me the most important [requirement] is mentorship. So you have a teacher who not only gives you knowledge but walks with you."
• Rejection of the "presumption of competence" belief is required by individuals and institutional or professional licensing bodies. There should be respect for teaching as an important skill set distinct from clinical acumen.	<ul> <li>Academics institutions should provide financial security to their educators to reduce competing demands.</li> <li>Academic departments should provide the protected time to pursue FD opportunities.</li> </ul>	"There are many things one can do, you can go into private practice, you go to private hospitals, private clinics and instead of being at the university teaching, you are making some money. You can be a farmer, you farm during the teaching hours…"     "Yes as full time faculty we have at least[,] you have a cushion, what we call protected time[,] academic time. And that you will be off in your work week to pursue this academic."
• Faculty evaluation and feedback are important in creating competent departmental faculty.	Both peer-to-peer and student-to-teacher feedback.     Direct observation from more experienced faculty.	"May be one component of their assessment shall be from the students they clear a form, they clear they have been taught by this faculty on this topic, the performances of this and that, they can score the teacher."      "But the way, there needs to be other people other faculty can also look at your teaching and lecturing techniques and your skills and how updated you are and be able to comment and recommend."

parallel to clinical training and not be presumed an outcome of clinical training alone.

Knowledge of specific local needs is vital in building new FD programs in any region.25 Previous studies in non-African countries have concluded that effective FD training should provide mentorship, leadership development, time management training, 26,27 and improve skills to provide feedback and assess learner knowledge.<sup>27,28</sup> Our informants also described many of these same elements. Informants in our study also indicated the need for technology training. There was consensus that FD for family physicians should be led by trainers who understand the unique approaches of the specialty to

clinical care and family and community systems. Specific topics included in FD are likely to be fluid since successful FD programs need to evolve and adapt to the needs of the various institutions and learners.29

Informants in our study provided recommendations for future program development and highlighted the importance of collaboration. This collaboration could range from one-on-one mentoring, to internal, regional, or international partnerships. Currently available FD programs, such as Doctors as Educators from the West African College of Physicians, could be replicated and expanded to meet the needs of the family medicine faculty across the region. Using local resources has several advantages. It will: (1) avoid dependency on external resources, (2) develop local leaders, (3) help build a community of family medicine educators, and (4) establish collaborations for creating teaching resources.30,31

Previous studies have demonstrated that training in the form of fellowship programs, short courses, and workshops improves teaching abilities<sup>27</sup>, changes attitudes and behaviors toward teaching, and helps establish collegial networks.<sup>32</sup> FD not only creates a sustainable profession of healthcare providers but also improves patient and community outcomes.<sup>25</sup>

Multiple barriers to developing sustainable human resources in primary care must be overcome. Barriers include: the presumption that clinical training is sufficient for the development of teaching and leadership skills, inadequate emphasis on teaching skills for hiring and promotion, lack of funds and protected time for FD, and the lack of continuing education requirements by institutions and governments. Successful FD programs should be based on principles of adult learning and include mentoring, effective feedback, technology, and the unique approach of family medicine clinicians to patients and communities. Expanding existing programs and regional partnerships is necessary to create sustainable and accessible FD for sub-Saharan African family medicine training programs.

Study limitations included English speaking informants only, and the need for interviewers or informants to travel across the region with an associated financial burden. Consequently, not all available faculty, training programs, or countries were included in the study, and countries with established or developing training programs in family medicine were more represented. During analysis, informant validation was not feasible, but substantial agreement was found among interviewers and investigators who have expertise in the countries represented in this study. Initial collection of demographic and academic data of informants was intentionally limited in order to maintain confidentiality in a region where faculty may be readily identified by country and rank or role. Post-analysis review and communication failed to obtain sufficiently accurate designations of academic rank and professional role for 18/37 informants and are therefore described in general terms in the results.

In conclusion, high-quality FD in family medicine is relevant, timely, and critically important to the primary care workforce in sub-Saharan Africa. Our study provides previously unavailable information about the unique content needs for FD of family medicine educators in sub-Saharan Africa including a focus on lifelong learning and character and recommended approaches to program development that incorporate sustainable partnerships and mentorship. Next steps in this line of inquiry include piloting and evaluating innovative models of FD that respond to specific institutional or regional needs and advocating for policy changes that prioritize and support faculty development.

**ACKNOWLEDGEMENTS:** Vital conceptual support and advocacy were provided by the following organizations: STFM Groups on Global Health and Faculty Development, World Organization of Family Doctors Africa Region, Addis-Ababa University Family Medicine Program, and Faculty of Family Medicine, Ghana College of Physicians and Surgeons.

Financial Support: STFM Foundation Group Project Fund 2013-2015.

Presentations: Interval progress presentation of the STFM Groups on Global Health and Faculty Development including development of the interview instrument, the status of international project collaboration, and discussion of preliminary regional results were made at the following conferences: AAFP 2015 Global Health Workshop, Denver, CO; 2015 STFM Annual Spring Conference, Orlando, FL; 2014 STFM Annual Spring Conference, San Antonio, TX; 2013 AAFP Global Health Workshop, Baltimore, MD; and 2013 STFM Annual Spring Conference, Baltimore, MD.

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