

Reflections on family medicine and primary healthcare in sub-Saharan Africa

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Primary healthcare (PHC) can be seen as a set of values and principles that guide the health system in its policy, leadership and governance, commitment to universal health coverage and primary care.¹ Governance, economics and the primary care workforce are the key structural determinants of effective primary care systems.²

The African continent has 25% of the global disease burden, but only 3% of the world's health workers and less than 1% of the world's health expenditure.³ The burden of disease in Africa has historically been dominated by acute and infectious diseases such as malaria, diarrhoeal diseases, lower respiratory tract infections, tuberculosis and measles. Over the last 25 years, however, chronic communicable and non-communicable diseases, such as HIV/AIDS, ischaemic heart disease, stroke and diabetes have become major contributors to the burden of disease.⁴ Additional contributors include newer threats such as Ebola and global warming, conflicts and displacement of persons, issues of gender and poverty with high rates of interpersonal violence, disadvantage for women in education and earnings and continued high risks during pregnancy and childbirth.

Government in Africa is often characterised by flawed democracies and authoritarian regimes, which may not prioritise healthcare.⁵ Few countries meet the target of 15% of general government expenditure on healthcare that was agreed in the Abuja Declaration of 2001.⁶ In low-income countries, there are fewer resources to go around, and those resources available are often concentrated in prestigious central referral hospitals. Most countries meet the WHO criteria for having a critical shortage of health workers, defined as fewer than 2.28 doctors, nurses and midwives per 1000 population.⁷ Health systems in many countries, such as Malawi, rely on mission hospitals, non-government organisations and external donors to fund and provide

services.⁸ These agencies often drive vertical disease-orientated programmes, skew central planning and priorities and by offering higher salaries to health workers create an internal 'brain drain', where health workers move out of the public sector.⁹ Stories are told of patients wishing they had HIV rather than diabetes because of this inequity by disease and fragmentation of the health system. Out-of-pocket expenses to access healthcare may not only act as a barrier to care but also lead to catastrophic health expenditure for families. In Zimbabwe, for example, it is reported that 7.6% of households suffered catastrophic health expenditure in 2001¹⁰ and in rural areas people may even 'pay-in-kind' for health services with chickens or goats. Some countries, however, such as Ghana, have introduced a national health insurance scheme with a focus on universal health coverage and community-orientated primary care (COPC).¹¹

COPC has been defined as a 'continuous process by which PHC is provided to a defined community on the basis of its assessed health needs, by the planned integration of primary care practice and public health'.¹² Although many countries in Africa use community health workers, not many have fully integrated them into their health services along with a commitment to COPC. Brazil has been lauded as a successful example of COPC,¹³ and South Africa is hoping to emulate their model.¹⁴ In the Brazilian model, a PHC team that includes community health workers, nurses and a family doctor is responsible for a designated population and works at the community and household levels with a focus on health promotion and disease prevention, as well as offering facility-based primary care.¹³

In many countries, the health workers who form the main primary care workforce have limited training.¹ In Malawi, for example, medical assistants have 2 years of training to



Figure 1 Conceptual framework for the primary healthcare team in Ethiopia.

be the main primary care provider,¹⁵ while in Rwanda, the nurses have historically been trained at the high school level.¹⁶ In other countries, such as Nigeria, Ghana and Ethiopia, clinical officers or nurses may be the main primary care provider, but again their training varies.¹⁷ Primary care providers typically have a limited range of resources, medications and clinical skills and work in poorly maintained infrastructure that is often rural or remote. In addition, governance systems are weak with a lack of supportive supervision and managerial leadership.^{1 16 18} Not surprisingly, primary care providers may feel unsupported, demoralised or suffer from burnout. Primary care in Africa is rarely equipped to be the foundation of the healthcare system and is often bypassed by patients seeking hospital services.

Doctors are rarely seen in primary care, outside of the private sector and are often in short supply, particularly in rural areas. Malawi, for example, has only 284 doctors in the public sector for a population of 17 million. External brain drain also deprives countries of doctors through a variety of ‘push and pull’ factors both within Africa (to countries such as South Africa, Botswana and Namibia) and elsewhere (to countries such as Canada, Australia and the UK).¹⁹

Family physicians are doctors with postgraduate training in family medicine and many countries in Africa are now offering or initiating such training.^{20 21} Ghana, Botswana, Uganda, Kenya and Nigeria have established training programmes, Ethiopia and Malawi have just implemented such training, and Zimbabwe is hoping to do so in the near future. Given the picture of the primary care workforce above, what will be their contribution to the health system? It is clear that family physicians should not be seen as the main primary care providers, but will

be part of a multidisciplinary team where they take on the role of ‘consultant’—seeing the most difficult medical problems, advising and mentoring their colleagues and leading change and service developments. Ethiopia has clearly defined this model (figure 1), and the contribution expected of family physicians is to improve quality of care; improve patient satisfaction and continuity of care; provide comprehensive specialist care at primary hospital level; improve preventive care; develop robust PHC and participate in transformation of the health system.

In many countries, such as Botswana and South Africa, family physicians are deployed at primary and district hospitals, where they require an extended range of procedural skills within a generalist environment, while still providing outreach and support to the primary care platform.²² In Nigeria, however, it appears that family physicians are deployed at all levels of the healthcare system, including tertiary and referral hospitals. Despite this apparent confusion, there is a consensus on the role of family medicine in Africa and evidence of their early impact.^{23 24} Family physicians though remain a scarce resource and there are few academic departments, which mainly focus on training and have little research output. PRIMAFAMED has provided a useful network to develop family medicine,²⁵ although World Organization of Family Doctors has only 161 members from 13 countries (most from Nigeria) and nine academic members for the whole of Africa. The visibility and impact of the discipline is small and may also be attenuated by the high workload demand, lack of status and career structure.

The challenges facing PHC in Africa are well summarised by the McKinsey report in reference to Tanzania: ‘three mutually reinforcing problems make up the most important barriers in all four pathways: access to primary care is at most only one-third of what the region requires, the workforce is only a fraction of the size needed and several operational weaknesses prevent the system from functioning well—lack of money, weak governance, demoralised and undersupported workforce together adding up to poor performance’.²⁶ Despite the enormous challenges, several countries in the region, as outlined in this editorial, are moving towards ways in which PHC can be strengthened, with political commitment to comprehensive PHC and universal health coverage; national health insurance; improving the quality of primary care through a multidisciplinary team that includes a family physician and COPC.

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This editorial arose from a panel presentation and discussion at the fifth World Organisation of Family Doctors (WONCA) Africa conference in Pretoria, 2017. Academic family physicians from Ghana, Malawi, Zimbabwe, Ethiopia and Nigeria described the primary healthcare systems of their respective countries using a standardised template. This template included a country profile, structure of PHC, workforce in PHC, functioning of PHC, benefits of PHC, barriers to PHC, impact on health and lessons learnt. We have aimed to provide a systematic analysis of content and comments to highlight key areas with substantive common findings. Specific countries are mentioned as examples to illustrate the main points. A different group of countries from Africa is invited to present at each regional conference from East, West and Southern Africa. There have been similar events conducted throughout the world in the past five years, for example, in the eastern Mediterranean, Asia-Pacific, South Asia, South America and Europe with the goal of understanding the state of primary healthcare.

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REFERENCES

- World Health Organization. *The world health report 2008: primary health care – now more than ever*. Geneva: World Health Organization, 2008.
- Kringos DS, Boerma WG, Hutchinson A, *et al*. The breadth of primary care: a systematic literature review of its core dimensions. *BMC Health Serv Res* 2010;10:65.
- Crisp N. Global health capacity and workforce development: turning the world upside down. *Infect Dis Clin North Am* 2011;25:359–67.
- Agepong IA, Sewankambo N, Binagwaho A, *et al*. The path to longer and healthier lives for all Africans by 2030: the Lancet Commission on the future of health in sub-Saharan Africa. *Lancet* 2018;390:2803–59.
- Economic intelligence unit's democracy index. <https://infographics.economist.com/2017/DemocracyIndex/> (accessed 21 Oct 2017).
- Economist Intelligence Unit. The future of healthcare in Africa. <http://www.hst.org.za/publications/future-healthcare-africa> (accessed 21 Oct 2017).
- Campbell J, tG D, Buchan J, *et al*. *A universal truth: no health without a workforce*. Geneva: World Health Organization, 2013:Pp104.
- Health Policy Project. *Health financing profile: Malawi*. Washington DC, US: Health Policy Project. (accessed 21 Oct 2017).
- Biesma RG, Brugha R, Harmer A, *et al*. The effects of global health initiatives on country health systems: a review of the evidence from HIV/AIDS control. *Health Policy Plan* 2009;24:239–52.
- World Bank. National health accounts 2015: zimbabwe health sector development support project III - AF (P163976). 2017. Washington DC. <http://documents.worldbank.org/curated/en/428821496822976819/pdf/PIDISDS-APR-Print-P163976-06-07-2017-1496822965391.pdf>
- Lagomarsino G, Garabrant A, Adyas A, *et al*. Moving towards universal health coverage: health insurance reforms in nine developing countries in Africa and Asia. *Lancet* 2012;380:933–43.
- Abramson JH. Community-oriented primary care—strategy, approaches, and practice: a review. *Public Health Rev* 1988;16:35–98.
- Victoria CG, Barreto ML, do Carmo Leal M, *et al*. Health conditions and health-policy innovations in Brazil: the way forward. *Lancet* 2011;377:2042–53.
- Matsoso M, Fryatt R, Andrews G. *The South African health reforms 2009–2014: moving towards universal coverage*. Pretoria: Juta and Company, 2015:Pp322.
- Manafa O, McAuliffe E, Maseko F, *et al*. Retention of health workers in Malawi: perspectives of health workers and district management. *Hum Resour Health* 2009;7:65.
- Schrivier M, Cubaka VK, Nyirazinyoye L, *et al*. The relationship between primary healthcare providers and their external supervisors in Rwanda. *Afr J Prim Health Care Fam Med* 2017;9:1508.
- Mullan F, Frehywot S. Non-physician clinicians in 47 sub-Saharan African countries. *Lancet* 2007;370:2158–63.
- Nkomazana O, Mash R, Wojczewski S, *et al*. How to create more supportive supervision for primary healthcare: lessons from Ngamiland district of Botswana: co-operative inquiry group. *Glob Health Action* 2016;9:31263.
- Lehmann U, Dieleman M, Martineau T. Staffing remote rural areas in middle- and low-income countries: a literature review of attraction and retention. *BMC Health Serv Res* 2008;8:19.
- Kidd M. The African family physician: development of family medicine in Africa in the twenty-first century. *The contribution of family medicine to improving health systems: A guidebook from the World Organization of Family Doctors*. 2nd ed. London: Radcliffe publishing Ltd, 2013:247–66.
- Mash RJ, de Villiers MR, Moodley K, *et al*. Guiding the development of family medicine training in Africa through collaboration with the Medical Education Partnership Initiative. *Acad Med* 2014;89:S73–S77.
- Mash R, Ogunbanjo G, Naidoo S, *et al*. The contribution of family physicians to district health services: a national position paper for South Africa. *SA Fam Pract* 2015;57:54–61.
- Mash R, Reid S. Statement of consensus on Family Medicine in Africa. *Afr J Prim Health Care Fam Med* 2010;2:4.
- von Pressentin KB, Mash RJ, Baldwin-Ragaven L, *et al*. The perceived impact of family physicians on the district health system in South Africa: a cross-sectional survey. *BMC Fam Pract* 2018;19:24.
- De Maeseneer J. Twenty years of primafamed network in Africa: looking back at the future. *Afr J Prim Health Care Fam Med* 2017;9:a1603.
- Bryan L, Conway M, Keesmaat T, *et al*. *Strengthening sub-Saharan Africa's health systems: a practical approach*. New York: McKinsey & Co, 2010. (accessed Oct 2017).