AUTHORS:
Robert Mash[1]
Jenny Nash[2]

AFFILIATIONS:
[1]Division of Family Medicine and Primary Care, Stellenbosch University, Cape Town, South Africa
[2]Eastern Cape Department of Health, Amathole District Clinical Specialist Team, East London, South Africa

CORRESPONDENCE TO:
Robert Mash

EMAIL:
rm@sun.ac.za

HOW TO CITE:
Mash R, Nash J. District health service delivery and the contribution of family physicians. S Afr J Sci. 2024;120(11/12), Art. #18712. https://doi.org/10.17159/sajs.2024/18712

ARTICLE INCLUDES:
☐ Peer review
☐ Supplementary material

KEYWORDS:
primary health care, district hospitals, district health system, health reforms, family physicians

PUBLISHED:
30 August 2024

District health service delivery and the contribution of family physicians

Significance:

Most health care in South Africa takes place in the district health system. In the public sector, this includes primary health care and district hospitals. Although there have been improvements in health and health care, there are still inequities, many instances of poor quality, and weakness regarding community engagement and multisectoral action. Service delivery is currently challenged by budget cuts and loss of resources. Ongoing reforms are needed to improve performance and accommodate the introduction of national health insurance. The deployment of family physicians is an overlooked reform that can improve the model of care, quality, and resilience.

In this Commentary, we look at the current state of district health service delivery in South Africa and comment on the potential contribution of family physicians to improving delivery as part of future health reforms.

Understanding district health service delivery

Primary health care (PHC) is at the heart of district health services, with support from district hospitals. Governments around the world re-committed themselves in the 2018 Astana Declaration to strengthening PHC.[1] They stated that

> *strengthening PHC is the most inclusive, effective and efficient approach to enhance people's physical and mental health, as well as social well-being, and that PHC is a cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals.*

Following this statement, the World Health Organization (WHO) published an operational plan that defined the key components of PHC as integrated primary care services with essential public health functions, empowerment of people and communities, and multisectoral policy and action.[2] The operational plan was supported by a new conceptual and measurement framework for the health system through a PHC lens.[3] This framework defined the essential processes of service delivery as being the model of care, systems for improving the quality of care, and resilient health facilities and services. These processes determine the access, availability, and quality of service delivery. Ultimately, service delivery should enable universal health coverage (UHC), improved health status and health equity.

The term 'model of care' refers to the design, selection and planning of services.[3] What services should be offered in the community, in primary care facilities and at district hospitals? It also includes the organisation of services and how they are managed. In addition, it includes attention to community-based services, community linkages and engagement, and not just facility-based services.

Systems for improving quality of care should be organised in a systematic manner across all the services, measure the core functions of primary care, and monitor patient safety.[3] Sometimes this is referred to as clinical governance. Performance management systems should not just measure performance, but should also enable critical reflection, planning and implementation of interventions to improve quality and safety.[4] These processes should be cyclical and continuous to improve and maintain quality.

'Resilience of facilities and services' refers to their ability to prepare for, respond to and recover from shocks and challenges.[5] In recent times we have witnessed the need for resilience of district health services in the face of the COVID-19 pandemic[6], extreme climate events[7] and now cuts in the health budget[8].

What does district health service delivery look like?

In South Africa, at least 80% of the population is dependent on public sector services. In primary care the key service providers are nurses and nurse practitioners, sometimes supported by doctors. Services are provided by small clinics, often in rural areas, community day centres (open during office hours) and community health centres (open 24 hours). The community health centres often have a large multidisciplinary team that may include midwives, social workers, health promoters, dieticians, allied health professionals, dentists and pharmacists. Sometimes, community health centres have a midwife obstetric unit where people can deliver babies and an emergency centre open 24 hours a day. Often, additional services are provided as outreach on a periodic basis, for example, from psychologists, therapists or hospital-based specialists.

The public sector has also been employing ward-based PHC outreach teams that consist of community health workers and nurse coordinators.[9] These teams are allocated a delineated geographic area (often a municipal ward) and each community health worker has specific households for which they are responsible. Often, these teams extend the reach of the primary care facility into the community. They can follow up with patients or help link people back into care. Ideally, they should help the services shift the model of care from a focus on the patients in the facility to a focus on the health needs of the whole community served by that facility. This model of community-orientated primary care helps to provide more health promotion and to prevent or detect diseases earlier.[10] The approach can also identify and address the health needs of the community and some of the underlying social and environmental determinants. For example, the need for early childhood development centres or dealing with illegal dumping of hazardous waste. Community participation and stakeholder collaboration are essential ingredients.

At the same time as deploying community health workers, the public sector also created district clinical specialist teams to improve maternal and child health.[9] These district-level teams are meant to consist of a family physician, paediatrician, obstetrician, paediatric nurse, midwife, nurse practitioner and even an anaesthetist. They are responsible for improving the quality of maternal and child health services throughout the district. In many provinces there is a call for these district-level teams to have an expanded role to also engage with non-communicable diseases.

In the public sector there is a close relationship between the PHC platform and the next level of expertise at the district hospital. Small- and medium-sized district hospitals are found throughout the rural areas, and a few are also in our metropoles. Larger district hospitals in metropolitan areas are often organised along the lines of general hospital specialties – medicine, surgery, paediatrics, obstetrics and gynaecology. Most district hospitals, however, are generalist environments with wards for men, women, children, and maternity. There is usually an outpatient department and an emergency centre. Typically, the doctors in the district hospital provide outreach to the primary care platform. In several provinces, clinical associates also work in district hospitals. Sometimes there is a family physician at the district hospital who is a specialist in family medicine and provides support to the team.

The private sector looks after approximately 20% of the population and primary care is provided by general practitioners (GP). These GPs may work in solo or group practices and may work for themselves or for private health organisations. The private sector does not have the equivalent of district hospitals and tends to refer immediately to specialists and sub-specialists at the hospital. The GP practices do not usually have multidisciplinary teams, although other health professionals such as psychologists or physiotherapists may have their own practices in the vicinity.

Current state of district health service delivery in South Africa

The underlying social and environmental determinants of health have been worsening.[11] There is a desire to radically re-design the system with the introduction of national health insurance.[12] Contracting units for primary health care must still be clearly defined, but might centre around sub-districts and district hospitals. There is a consensus that health system re-design should enable a focus on population health and well-being, health promotion and disease prevention.[11]

There are many positive indicators in the South African health sector. The maternal mortality ratio (MMR) has decreased since 2021/2022 to 101/100 000 live births in 2022/2023.[13] Only the Western Cape (with an MMR of 62/100 000 live births) reached the Sustainable Development Goal (SDG) target of MMR <70/100 000 live births. The early neonatal death rate, which provides an indication of the quality of antenatal and intrapartum care, has continued to decrease over the past decade and is now 9.6/1000 live births.[13] There are currently 5 million people living with HIV receiving antiretroviral therapy in primary care, which makes up 34.9% of primary care spending.[13]

The Ideal Clinic and Ideal Hospital programmes are a precursor for the NHI. The programme commenced in 2015/2016, and, at that time, only 322 (9%) of the 3473 clinics in South Africa attained 'ideal clinic' status. This figure improved to 2706 (78%) clinics in 2023/2024, with 97% of clinics in KwaZulu-Natal, Mpumalanga and North West Provinces attaining ideal clinic status.[14] The Ideal Hospital programme commenced in 2018/2019, and of the 391 hospitals at the conception of the programme, only 8 (2%) attained ideal hospital status. In 2023/2024, 62 (16%) hospitals were classified as ideal. However, there are large variations between provinces, with 68% of hospitals in Gauteng achieving ideal hospital status, while none in Mpumalanga and the Northern Cape did.[14]

In September 2020, *The Lancet Global Health* Commission on High Quality Health Systems reported on the quality of health in low- and middle-income countries.[15] It noted that approximately 9 million lives are lost globally due to lack of quality of care, and about 60% of these deaths were amongst people who had managed to access health care. South Africa was one of six countries which hosted national consultations on the quality of health systems.[15] One of the concerns with the Ideal Clinic and Ideal Hospital programmes is that an ideal building infrastructure which contains the required medications, protocols and guidelines does not guarantee quality of care. Healthcare workers are required to implement these guidelines to provide high-quality health care, and communities need to have access to these facilities. In terms of the core functions of primary care, patients rate accessibility as poor.[16] In many communities there is no access to primary care in evenings or weekends and working people are disadvantaged. Appointment systems in areas of high utilisation may only provide access after 4–8 weeks. Many patients with primary care problems attend emergency centres to access care. Continuity of care is also rated poorly and people rarely see the same primary care provider.[16] There is still no electronic medical record and informational continuity is a challenge. Comprehensiveness, coordination, and cultural competence have been rated as stronger aspects of the system.[16]

The WHO sees community participation and empowerment as a central component of PHC.[2] In South Africa, patients have rated community orientation as poor.[16] Formal statutory structures should be supplemented by more informal and inclusive community health forums that can include civil society organisations and community leaders. There is also a need to move beyond engagement as a way of informing communities to a more participatory approach. The community-orientated primary care approach expects communities to participate in prioritising their health needs and planning action.[10]

The third pillar of PHC is multisectoral policy and action.[2] A focus on health and well-being requires health professionals to work with other sectors such as social services, education and police. Our ability to collaborate across sectors to address health issues is limited. Health professionals may lack skills in building effective collaborations with people from other sectors of society or government, may lack motivation and confidence to reach out beyond their focus on service delivery, and may not receive support from their managers or organisational environment. At a local level, the community-orientated primary care approach expects primary care providers to engage with a broad variety of stakeholders who can influence health in the catchment area.[10] Key issues such as violence prevention and mental health need an all-of-government approach.[11]

How can family physicians contribute to district health service delivery?

In our view, family physicians are one of the most underutilised solutions to some of the problems facing district-level service delivery.[17] Family physicians are qualified doctors who have spent a further 4 years of training to become specialists in family medicine. Training programmes are available at all the medical schools in South Africa, but since the speciality was created in 2007 only about 200 doctors have graduated.[18] Training posts are quite limited and human resource policy documents have misunderstood the role of family physicians.[19] Previous policies have seen family physicians as a sub-speciality of internal medicine or as specialists who should work at tertiary hospitals. Family physicians are trained to work independently at district hospitals and within primary care teams. Currently, only a third of the graduates have been retained in the public sector as posts are very limited.[20] In addition, 10% have emigrated and 11% have stopped practising medicine. Most of the family physicians have been employed in the Western Cape where the health system has committed to have family physicians at district hospitals and primary care facilities.[20] The South African Academy of Family Physicians has published a position statement that recommends a mid-term goal of one family physician at every district hospital, community health centre or sub-district (if there is no community health centre).[17] To achieve this modest goal we need at least another 400 family physicians, but at current rates of training it could take more than 20 years.

The contribution of family physicians to district health service delivery has been conceptualised as threefold.[17] Firstly, they contribute as clinicians and consultants to their healthcare teams. Secondly, they contribute through the capacity building and clinical training of those same teams. Lastly, they contribute through leadership of clinical

governance activities to improve the quality of care and patient safety. This contribution can be within community-orientated primary care or the district hospital. We discuss their contribution according to the three service delivery processes outlined by the WHO.

Family physicians and the model of care

Family physicians bring a higher level of expertise closer to the community.[21] In primary care, they can manage patients with complex conditions and multimorbidity who might otherwise need to be referred to secondary or tertiary level hospitals. They can supervise and support nurses and junior doctors within PHC. This improves the availability of comprehensive primary care to the community. Improving the level of confidence and trust in primary care may also reduce the tendency for people to bypass primary care and present themselves at the hospital.

At the district hospital, family physicians close skills gaps and enable the full package of care to be safely offered.[21] For example, they can improve the management of women in labour and reduce the incidence of maternal or neonatal catastrophes. Much of the litigation in the Department of Health is due to adverse maternal or neonatal outcomes. Likewise, they bring surgical and anaesthetic skills to the hospital and can perform operations such as amputations or emergency laparotomies.[22] This can save lives, make services more available and reduce the need for referral. In rural areas, referral to specialist care at distant hospitals is often difficult and delayed.

Family physicians are not trained as managers, but their leadership often strengthens the organisation and management of services.[23] All training programmes include a focus on the 'I-we-it' leadership model. This model looks at personal leadership style, values and development (the 'I'), leading through teams and relationships (the 'we') and engaging health systems and services (the 'it'). Family physicians bring a level of systems thinking and broad understanding because of their postgraduate training and an agency that helps teams to solve problems and perform better.[21] As leaders of the clinical team they can also advocate effectively for improvements such as equipment or service re-design. Many family physicians are employed as clinical managers.

Family physicians are also trained in the principles of community-orientated primary care and can thus assist with implementation[24], for example, improving the integration of facility-based and community-based team members or engaging with local stakeholders from social services. They may enable direct clinical support of community health worker teams or coordination between levels of care or with stakeholders in the community.

Family physicians and systems for improving quality

Family physicians are trained to lead clinical governance activities.[25] Such activities can include the development and implementation of evidence-based guidelines or protocols as well as audit and feedback on the technical quality of care for specific diseases or conditions. They can lead risk reduction strategies by reviewing unexpected mortality or morbidity and investigating patient safety incidents. They may also assist clinical teams to reflect on routinely collected data. For example, data on inappropriate antibiotic prescribing to reduce the chance of developing resistance, or data on laboratory tests to use resources more efficiently.[21] They may also assist with making a community diagnosis and identifying local health needs on the basis of data collected by community health workers. Their postgraduate training also equips them to participate in applied research projects to address research questions that are important for service delivery.[26] Recent questions addressed by a family physician research network include coordination of care with hospital outpatients[27] and exploring factors that influence the retention of medical officers[28]. They can also assist teams to interpret research evidence and decide on whether to change clinical practice.

Another way in which family physicians can improve quality is through clinical teaching and training.[25] Having a family physician in the team can enhance healthcare workers' confidence and motivation as they know someone is there to support them should they need help.[22] Family physicians are trained in a set of educational skills to provide constructive feedback to other members of the team and facilitate learning.[29] They can help develop an organisational culture of learning[30] that cascades down so that everyone is helping others learn and develop.[28] Family physicians also enable more formal clinical training by taking responsibility for registrars, interns, and medical and clinical associate students. All interns must now spend 6 months in family medicine and primary care, and most medical schools are moving towards greater exposure of medical students to PHC.

Family physicians and resilience of facilities and services

Currently, the public health sector in South Africa is facing massive budget cuts.[8] This translates into fewer healthcare workers, closure of beds, reductions in access to elective surgery, loss of locum staff, and erosion of staff morale. Many doctors who recently completed community service are struggling to find employment in the public sector. These cuts are a challenge to the resilience of the district-level health services to continue to offer care.

The most cost-effective part of the health system is PHC. For example, investment in community health workers can both improve health status and save money.[31] Family physicians are a cost-effective intervention as they strengthen district-level service delivery including PHC, reduce litigation, and enable more efficient use of resources.[17] Although they require the creation of specialist-level posts, the return on investment should more than justify the commitment.

Conclusions

South Africa has made huge strides in improving many health indicators, particularly by providing antiretroviral therapy in PHC. However, the increasing pressures from non-communicable diseases, trauma-related conditions, maternal and child health challenges, and a constrained fiscus, necessitate a new approach. Further quality improvement of PHC services and district hospitals is needed, as well as community engagement and multisectoral action. Family physicians can make an important contribution to strengthening the model of care, systems for improved quality, and the resilience of district-level service delivery.

Declarations

R.M. is the immediate past president of the South African Academy of Family Physicians. J.N. is the current secretary of the South African Academy of Family Physicians. We have no competing interests to declare. AI was not used in the preparation of this article. Both authors read and approved the final manuscript.

References

1. World Health Organization (WHO). Astana Declaration on primary health care 2018 [webpage on the Internet]. c2018 [cited 2018 Dec 18]. Available from: https://www.who.int/primary-health/conference-phc/declaration
2. World Health Organization (WHO). Operational framework for primary health care: Transforming vision into action. Geneva: WHO; 2020.
3. World Health Organization (WHO). Primary health care measurement framework and indicators: Monitoring health systems through a primary health care lens [webpage on the Internet]. c2022 [cited 2022 Mar 13]. Available from: https://www.who.int/publications/i/item/9789240044210
4. Munar W, Snilstveit B, Aranda LE, Biswas N, Baffour T, Stevenson J. Evidence gap map of performance measurement and management in primary healthcare systems in low-income and middle-income countries. BMJ Glob Health. 2019; 4(suppl8), e001451. https://doi.org/10.1136/bmjgh-2019-001451
5. World Health Organization (WHO). Operational framework for building climate resilient health systems. Geneva: WHO; 2015.
6. Ray S, Mash R. Innovation in primary health care responses to COVID-19 in sub-Saharan Africa. Prim Health Care Res Dev. 2021;22, e44. https://doi.org/10.1017/S1463423621000451
7. Naidoo K, Manyangadze T, Lokotola CL. Primary care disaster management for extreme weather events, South Africa. Afr J Prim Health Care Fam Med. 2022;14(1), Art. #3778. https://doi.org/10.4102/phcfm.v14i1.3778
8. Mash B. World Health Day: SA's public health sector facing crisis amid budget cuts [webpage on the Internet]. c2024 [cited 2024 Apr 07]. Available from: https://mg.co.za/thought-leader/opinion/2024-04-07-world-health-day-sas-public-health-sector-facing-crisis-amid-budget-cuts

9. Matsoso M, Fryatt R, Andrews G. The South African health reforms, 2009-2014: Moving towards universal coverage. Pretoria: Juta; 2015.

10. Mash B, Ray S, Essuman A, Burgueño E. Community-orientated primary care: A scoping review of different models, and their effectiveness and feasibility in sub-Saharan Africa. BMJ Glob Health. 2019;4(suppl8), e001489. https://doi.org/10.1136/bmjgh-2019-001489

11. South African Department of Health. Draft DHS strategy (2024–2030) executive summary booklet: Powering the health system from below. Pretoria: National Department of Health; 2024.

12. Government of South Africa. Act No. 20 of 2023: National health insurance [document on the Internet]. c2024 [cited 2024 May 17]. Available from: https://www.parliament.gov.za/storage/app/media/Acts/2023/Act_20_of_2023_National_Health_Insurance.pdf

13. Ndlovu N, Padarath A, editors. District Health Barometer 2022/23. Cape Town: Health Systems Trust; 2024.

14. South African Department of Health. Ideal Clinic South Africa: Snapshot of progress made [webpage on the Internet]. c2024 [cited 2024 May 17]. Available from: http://www.idealhealthfacility.org.za

15. Kruk M, Pate M. *The Lancet Global Health Commission* on high quality health systems 1 year on: Progress on a global imperative. Lancet Glob Health. 2020;8(1):E30–E32. https://doi.org/10.1016/S2214-109X(19)30485-1

16. Bresick G, von Pressentin KB, Mash R. Evaluating the performance of South African primary care: A cross-sectional descriptive survey. S Afr Fam Pract. 2019;61(3):109–116. https://doi.org/10.1080/20786190.2019.1596666

17. South African Academy of Family Physicians. The contribution of family physicians to district health services in South Africa: A national position paper by the South African Academy of Family Physicians. S Afr Fam Pract. 2022;64(1), Art. #a5473. https://doi.org/10.4102/safp.v64i1.5473

18. Tiwari R, Mash R, Karangwa I, Chikte U. A human resources for health analysis of registered family medicine specialists in South Africa: 2002–19. Fam Pract. 2021;38(2):88–94. https://doi.org/10.1093/fampra/cmaa084

19. South African Department of Health. 2030 Human Resources for health strategy: Investing in the health workforce for universal health coverage. Pretoria: National Department of Health; 2020.

20. Jacobs G, Mash R. The career pathways of new family physicians in South Africa from 2008 to 2022. S Afr Fam Pract. 2024;66(1), Art. #a5904. https://doi.org/10.4102/safp.v66i1.5904

21. Mash R. The contribution of family physicians to African health systems. Afr J Prim Health Care Fam Med. 2022;14(1), Art. #3651. https://doi.org/10.4102/phcfm.v14i1.3651

22. Hendriks H, Adeniji A, Jenkins L, Mash RJ. The contribution of family physicians to surgical capacity at district hospitals in South Africa. Afr J Prim Health Care Fam Med. 2021;13(1), Art. #3193. https://doi.org/10.4102/phcfm.v13i1.3193

23. Mash R, Blitz J, Malan Z, von Pressentin K. Leadership and governance: Learning outcomes and competencies required of the family physician in the district health system. S Afr Fam Pract. 2016;58(6):232–235. https://doi.org/10.1080/20786190.2016.1148338

24. Mash R, Gaede B, Hugo JF. The contribution of family physicians and primary care doctors to community-orientated primary care. S Afr Fam Pract. 2021;63(1), Art. #5281. https://doi.org/10.4102/safp.v63i1.5281

25. von Pressentin K, Mash R. Strengthening the district health system through family physicians. S Afr Health Rev. 2018;(1):33–39.

26. Mash R. Establishing family physician research networks in South Africa. S Afr Fam Pract. 2020;62(1), Art. #5216. https://doi.org/10.4102/safp.v62i1.5216

27. Mash R, Steyn H, Bello M, von Pressentin K, Rossouw L, Hendricks G, et al. The quality of feedback from outpatient departments at referral hospitals to the primary care providers in the Western Cape: A descriptive survey. S Afr Fam Pract. 2019;61(6):252–259. https://doi.org/10.1080/20786190.2019.1676021

28. Mash R, Viljoen W, Swartz S, Abbas M, Wagner L, Steyn H, et al. Factors influencing retention of medical officers in the district health services of the Western Cape, South Africa: An exploratory descriptive qualitative study. S Afr Fam Pract. 2022;64(1), Art. #a5467. https://doi.org/10.4102/safp.v64i1.5467

29. Mash R, Blitz J, Edwards J, Mowle S. Training of workplace-based clinical trainers in family medicine, South Africa: Before-and-after evaluation. Afr J Prim Health Care Fam Med. 2018;10(1), Art. #1589. https://doi.org/10.4102/phcfm.v10i1.1589

30. Mash B, Edwards J. Creating a learning environment in your practice or facility. S Afr Fam Pract. 2020;62(1), Art. #5166. https://doi.org/10.4102/safp.v62i1.5166

31. Daviaud E, Besada D. Saving lives, saving costs: Investment case for community health workers in South Africa. Cape Town: South African Medical Research Council; 2017.