

Preventive medicine as a specialty to support public health endeavours

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There is a worldwide need for the transformation of primary healthcare to accommodate ageing, population growth, the rising burden of non-communicable diseases and technological advances. In this article, we discuss the role of preventive medicine as a medical specialty in the transformation of public healthcare systems. A paradigm is proposed within which different modes of medical practice support each other in accordance with their shared objective of disease prevention. The reinstatement of preventive medicine as a specialty, functioning in synergy with public health and incorporating other modalities of practice, will be of considerable benefit to healthcare in southern Africa.

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In 2019, the World Health Organization (WHO)^[1] declared the need for the transformation of primary healthcare to accommodate ageing, population growth, the rising burden of non-communicable diseases and technological advances. Health systems are encouraged to move toward a proactive approach focused on disease prevention and the promotion of health. The proposed transformation underlines the need for preventive medicine, as described by Hensrud^[2] 20 years ago.

In South Africa (SA), a proposed national health insurance (NHI) has as one of its aims the transformation of the 'delivery of healthcare services by focusing on health promotion, disease prevention and empowered communities.'^[3] The SA Ministry of Health drafted a Bill seeking to establish the National Public Health Institute of SA (NAPHISA) in 2017 to co-ordinate disease and injury surveillance and provide specialised public health services, interventions, training and research directed towards major health challenges affecting the population. The successful implementation of initiatives such as the NHI and NAPHISA is largely dependent on adequate and appropriately qualified human resources for healthcare. Public health specialists are core to building responsive and appropriate health systems.^[4]

Clinical preventive medicine as a specialty incorporates the sciences of public health, integrating social, economic and behavioural science within daily practice. It has the potential to contribute to the transformation of the current healthcare system by promoting health for individuals and their communities, and improving the functioning of those without risk of identifiable disease states.^[5]

Health promotion involving disease surveillance, population-based interventions, screening and vaccinations often falls under

the remit of public health and family physicians. These fields of clinical practice are by no means distinct from each other. Professionals with expert skills in prevention can support SA's endeavours to improve the delivery of primary healthcare services through a preventive rather than hospicentric approach.

In this article, we discuss the role that preventive medicine can play in achieving the transformation needed in public healthcare systems, while taking into account its shared objectives with public health. We propose a paradigm within which different modes of medical practice support each other in disease prevention. We explore the reintroduction of preventive medicine as a specialty in SA, and its potential to support public health with the provision of clinical services.

Public health and preventive medicine as collaborative specialties

The goal of prevention in medicine is to promote health and wellbeing, and prevent disease, disability and death.

In some countries, preventive medicine and public health specialties are separately defined, or allow non-medical graduates to join the faculty, such as in the UK. Other countries may combine these specialties under one faculty, as in Canada or Australia, or offer each subject as a subspecialty, as in the USA.^[6] Primary care is a specialty in the UK. In many medical schools, the faculties of primary care, family medicine, public health and preventive medicine combine in an effort to streamline their collaborations in achieving common goals.

Public health medicine has existed as a specialty in SA since 1976, initially under the name community health. Public health medicine is a branch of clinical medicine that focuses on population

health. This occurs through non-clinical interventions, and clinical functions that require medical training and an understanding of the clinical context.

Preventive medicine encompasses primary, secondary and tertiary prevention on an individual or community level. This construct has expanded to quaternary prevention, with a focus on reducing overmedicalisation, protecting patients from unnecessary or excessive invasive interventions, and the alteration of societal (i.e. environmental, economic, social, behavioural, cultural) structures that affect disease risk.^[5] Preventive medicine is interdisciplinary and patient-centred, focusing on the whole patient and community and the many factors influencing their health.

In the USA, preventive medicine is recognised by the American Board of Medical Specialties, encompassing three specialty areas, i.e. aerospace medicine, occupational medicine and public health and general preventive medicine.

A paradigm for the role of preventive medicine in healthcare

Preventive medicine requires medical training, and draws from other specialties and treatment modalities, as presented in Fig. 1.

Preventive medicine as a specialty will require an understanding of public health and primary care, as core disciplines. These medical disciplines will need to function in partnership, encompassing both clinical and non-clinical services. In SA, public health has a non-clinical arm, including health policies, health economics,

health systems leadership and academic positions.^[4] There is a great need to provide an evidence-based approach to support the clinical function of public health medicine to complement the non-clinical functions. These include occupational health, environmental medicine, disaster medicine and infectious diseases. Primary care in SA includes general practice, family and sexual health medicine, travel clinics and preventive services such as health education, mass campaigns, screening tests and vaccinations through the Road to Health programme.

Community health workers are being enlisted to deliver primary care services, in order to advance the transformation of delivery of national healthcare services. They are being trained in new skills to screen for chronic and infectious diseases, including screening during a pandemic, and to consult with specialists and general practitioners via telehealth platforms.

Integrative medicine is a model of healthcare that promotes health through applying conventional medical approaches with non-pharmacological evidence-based therapies. It is a recognised specialty of the American Board of Physician Specialties in the USA. Integrative medicine appears mainly in the preventive medicine literature as distinct from complementary and alternative medicine, although it draws from practices and providers of the latter. Conventional medicine is effective in treating acute, particularly life-threatening, conditions.^[7] Integrative medicine may produce better outcomes for chronic disease^[7] in terms of symptom relief, functional status, patient satisfaction and cost-effectiveness. It

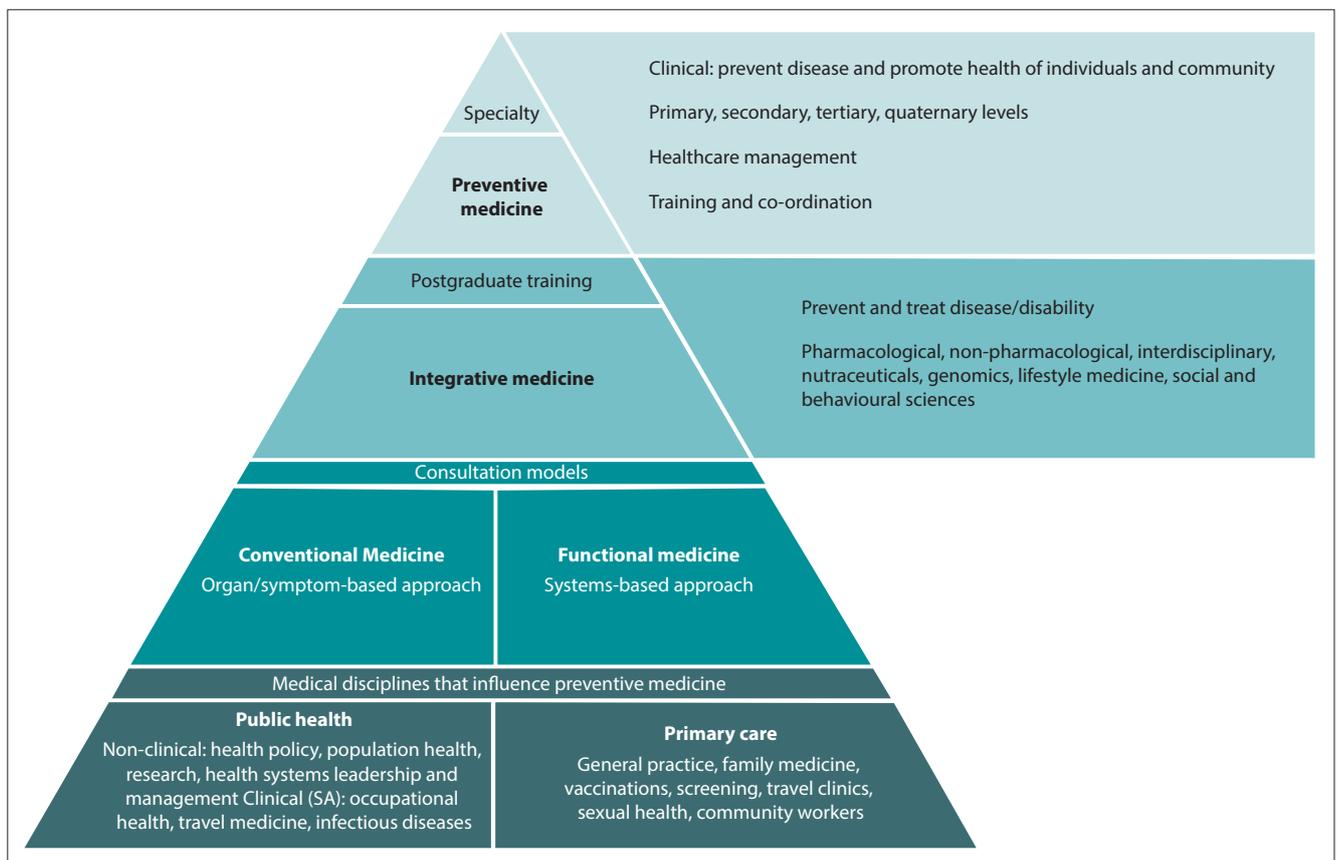


Fig. 1. A paradigm for the cohesive functioning of preventive medicine with different modes of medical practice in South Africa.

meets public demand for non-pharmacological interventions,^[8] and has the potential to assist in the transformation in healthcare.^[5,7]

Functional medicine uses individualised consultations drawing from nutritional science, genomics and epigenetics. It is based on a systems-biology approach to arrive at the root cause of presenting complaints or symptoms. The mode of consultation differs from conventional history-taking, and has shown improved patient-reported quality of life.^[9] Integrative medicine, using systems-based and conventional methods, was successfully incorporated in a USA preventive medicine residency curriculum.^[10]

Preventive medicine specialists require knowledge of some of the principles of public health, including epidemiology, evaluation and management of health services, research and prevention practice in clinical settings. The last requires knowledge and skills in medicine, the social, economic, and behavioural sciences, and integrative medicine tools to improve the health and quality of life of individuals, families and communities, which goes beyond primary care training and consultation structures.

Conclusion

Public health and preventive medicine can together contribute to the transformation of healthcare. Both specialties can provide guidance and clinical tools and work alongside primary care physicians in implementing primary, secondary and tertiary care.

Preventive medicine specialists may provide training to primary care practitioners to improve implementation of public health policies and government health initiatives. Preventive medicine specialists would act as lead implementers of prevention strategies, providing quaternary care, promoting wellbeing and assisting the co-ordination of allied health professionals and community health workers.

The reinstatement of preventive medicine as a specialty, functioning in synergy with public health and incorporating other modalities of practice, will be of considerable benefit to healthcare in southern Africa. w

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