Perspective

Gaps and challenges to integrating diabetes care in Myanmar

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ABSTRACT

In common with other low-income countries, diabetes is a growing challenge for Myanmar. Gaps and challenges exist in political commitment, policy development, the health system, treatment-seeking behaviour and the role of traditional medicine. National policies aimed at prevention – such as to promote healthy food, create a healthy environment conducive to increased physical activity, restrict marketing of unhealthy food, and initiate mass awareness-raising programmes – need to be strengthened. Moreover, existing initiatives for prevention of noncommunicable-disease (NCD) are channelled vertically rather than being horizontally integrated. Primary health care is traditionally orientated more towards prevention of infectious diseases and staff often lack training in prevention and control of NCDs. Capacity-building activities have been modest to date, and retaining trained health workers in diabetes-oriented activities is a challenge. The World Health Organization *Package of Essential Noncommunicable (PEN) disease interventions for primary health care in low-resource settings* has been piloted in Yangon Region and country-wide expansion awaits ministerial approval. Recently, the Myanmar Diabetes Care Model was proposed by the Myanmar Diabetes Association, with the aims of both bridging the gap in diabetes care between rural and urban areas and strengthening care at the secondary and tertiary levels. However, implementation will require policy development for essential drugs and equipment, capacity-strengthening of health-care workers, and an appropriate referral and health-information system.

Key words: capacity-building, diabetes, management, Myanmar, policy, prevention

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BACKGROUND

Diabetes is a personal and social calamity and imposes unacceptably high burdens on individuals, their families and national economies. Diabetes poses an immense global challenge by the steady rise in its prevalence.[1] Building on the United Nations summit of 2011,[2] global leaders have now signed up to an historic commitment to reduce premature deaths from diabetes and other noncommunicable diseases (NCDs) by 25% by 2025. They have also agreed a Global Action Plan designed to achieve a range of measurable targets for diabetes and NCDs. The Global Action Plan provides Member States, international partners and the World Health Organization (WHO) with a road map and menu of policy options which, when implemented collectively between 2013 and 2020, will contribute to progress on nine voluntary global targets. A specific target on diabetes includes a halt in the rise of diabetes and obesity.[3]

In common with other low-income countries, Myanmar is currently facing the double burden of communicable diseases and NCDs. The International Diabetes Federation has recently estimated the national prevalence of diabetes as 6.5% and there are 2 172 900 adults (aged 20–79 years) with diabetes in Myanmar.[4] A national survey on the prevalence of diabetes and risk factors for NCDs in 2014 reported the national prevalence of diabetes and risk factors for NCDs in Myanmar (see Table 1).[5] According to the Global Burden of Disease 2010 report,[6] the five risk factors that account for the most disability-adjusted life-years lost in Myanmar were dietary risks, tobacco smoking, household air pollution from solid fuels, high blood pressure and high fasting plasma glucose.

Many guidelines on diabetes care have been developed. Published national guidelines tend to come from relatively resource-rich countries and may be of limited practical use in less well-resourced countries.[7] For example, the American Diabetes Association recommends a patient-centred approach, which should include a comprehensive plan to reduce cardiovascular risk by addressing blood pressure and lipid control, smoking cessation, weight management and changes to lifestyle, which include adequate physical activity.[7] Systems

Table 1. The prevalence of diabetes and risk factors for noncommunicable diseases in Myanmar[5]

Disease/risk factor	Males, prevalence (range), %	Females, prevalence (range), %	Both sexes, prevalence (range), %
Diabetes	9.1 (6.9–11.8)	11.8 (9.6–14.6)	10.5 (8.3–13.1)
Raised blood pressure	24.7 (20.1–29.3)	28.0 (24.8–31.3)	26.4 (23.2–29.5)
Overweight (BMI ≥25 kg/m2)	21.5 (21.2–21.8)	23.2 (22.8–23.5)	22.4 (22.0–22.6)
Obesity (BMI ≥30 kg/m2)	2.6 (1.8–3.5)	8.4 (6.6–10.1)	5.5 (4.2–6.7)
Raised total cholesterol (≥5.0 mmol/L or ≥190 mg/dL	30.9 (26.5–35.4)	42.5 (37.7–47.2)	36.7 (32.2–41.2)
Tobacco use	43.8 (40.8–46.7)	8.4 (6.4–10.3)	26.1 (23.8–28.4)
Current alcohol drinker	38.1 (33.9–42.2)	1.5 (0.7–2.3)	19.8 (16.8–22.8)
Eating <5 servings of fruit and/or vegetables on average per day	85.2 (82.0–88.3)	87.9 (85.8–90.1)	86.6 (84.1–89.0)
Physical inactivity (defined as <150 min of moderate-intensity activity per week, or equivalent)	12.5 (9.7–15.3)	18.8 (15.8–21.9)	15.7 (12.9–18.4)

BMI: body mass index.

for health-care delivery in low- and middle-income countries are generally less well oriented towards dealing with chronic NCDs than with infectious diseases. The approach is often unstructured, lacks systematic follow-up and monitoring of chronic clinical care, and provides little information about morbidity or mortality. Moreover, access to essential supplies is often limited and comes at a relatively high cost.[3]

A primary health-care approach is essential to address NCDs effectively and equitably, and the need to strengthen primary care has been highlighted in the United Nations *Political declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases*.[2] There are compelling reasons to identify gaps and challenges in the delivery of care for diabetes in Myanmar, before the planning and development of an efficient delivery system of care that is feasible and suitable for the country.

GAPS AND CHALLENGES IN POLITICAL COMMITMENT AND POLICY

Although there are provisions for wide-ranging health services in the current National Constitution (2008),[8] in reality, there are substantial gaps between policy objectives and effective implementation and outcomes.[9] The National Health Policy was developed with the initiation and guidance of the National Health Committee in 1993, and has identified, as a prime objective, the goal of "health for all", using a primary health-care approach.[10] However, emphasis on political stability and economic growth in preference to social development has made the health-for-all policy merely a concept.[9] There has been a wide gap between policy and the actual implementation and health outcomes of the country. However, since a new civilian government came to power in March 2011, policy for poverty alleviation and rural development has been accorded a priority in the national developmental agenda.[11]

The government's *Fifth Five-Year Development Plan (2011–2012 to 2015–2016),* had a main goal of people-centred development.[12] Among 13 targets for achievement over the 5-year period, there were only two health-related targets: neonatal mortality rate and maternal mortality rate. Among the prioritized plans for the development of the national health sector, it was mentioned that prevention and control of NCDs will be implemented and there will be a plan for people to adopt a more healthy lifestyle. However, this was just a general statement with no detailed action plan for implementation.

The *National Health Plan 2011–2016* is the first phase of the 20-year National Comprehensive Development Plan – Health Sector and focuses on 11 programme areas.[13] Although prevention and control of NCDs are included, only improvements in cardiopulmonary resuscitation and health education on cardiovascular disease, cancer and chronic respiratory disease in general are specified. Policy developments in promotion of healthy food, improving a healthy environment conducive to physical activities for the public, restricting marketing of unhealthy food, and mass awareness-raising programmes need to be strengthened. The weaknesses in prevention-related policies in these key areas illustrate the magnitude of the challenges faced. Moreover, the planned implementation of activities related to NCDs employs vertical approaches, and horizontal integration remains a significant gap. The funding for these vertical programmes is mainly from the WHO country biennial budget, which is usually shared and distributed among over 40 different programmes. With the limited total budget, funding for each programme is far from sufficient for their activities.

A national policy on NCDs, and a strategic action plan, were developed by the Prevention and Control of Diabetes Project and the University of Medicine 2, Yangon, in which the nine voluntary global targets of the WHO *Global action plan for the prevention and control of noncommunicable diseases 2013–2020*[3] were adopted as national targets. The National Health

Committee endorsed the national policy on NCDs in April 2014. However, there have been few activities to translate the policy and strategic action plan to real implementation.

In 2013, the Myanmar Health Sector Coordination Committee (M-HSCC) was established, with the specific objectives of advising the Ministry of Health on strengthening the health sector, providing a space for strategic discussion on health-related issues and acting as a coordination body for the health sector. The Minister for Health chairs the M-HSCC and there are seven technical and strategy groups (TSGs), which are mainly concerned with communicable diseases, reproductive health and disaster preparedness. Significantly, there is no TSG for NCDs.[14]

GAPS AND CHALLENGES TO IMPLEMENTING A CHRONIC CARE MODEL FOR DIABETES

The health system comprises a pluralistic mix of public and private systems in both financing and provision. Public health services in Myanmar are delivered to the communities by rural health centres (RHCs) and sub-RHCs, through the corresponding township, district and region, and state health departments that provide technical assistance and support. Basic health staff (BHS) mainly work at the RHC and sub-RHC. The curriculum for training of BHS mainly emphasizes community and environmental health. Primary health care is traditionally orientated more towards prevention of infectious diseases and BHS usually do not have training in prevention and control of NCDs.[15,16] The Prevention and Control of Diabetes Project has been in operation in Myanmar since 1991, with support from WHO. Prevention and control of diabetes has been included in national health planning since 1996. Activities have been limited mainly to capacity-building of townships' medical officers and BHS on diabetes management and the production of information, education and communication materials on the prevention and control of diabetes. There are over 330 townships in Myanmar but, to date, the Prevention and Control of Diabetes Project has only been able to run workshops for capacity-building on diabetes care in 80 townships. Moreover, frequent rotation of trained medical officers to other duties has greatly impeded implementation of sustainable diabetes services at the township level.

The WHO *Package of Essential Noncommunicable (PEN) disease interventions for primary health care in low-resource settings* comprises cost-effective interventions with high impact, including those for the early detection and management of type 2 diabetes.[17] Implementation of the WHO PEN was piloted in two townships in Yangon Region in 2012. Prevention of cardiovascular disease through the entry point of hypertension and diabetes was found to be feasible and it was recommended that implementation of the PEN project should be extended to the rest of the country. The People's Health Foundation is now planning to implement the WHO PEN in more townships in Yangon Region. The Government of Yangon Region has now committed to implement activities of the PEN project in the rest of the townships of the Yangon Region. Expansion of the WHO PEN to the whole country has been approved by the Ministry of Health. In 2016, the PEN package will be expanded to 10 townships and it will be scaled up to the whole country (330 townships) within 5–10 years..

The Myanmar Diabetes Care Model (MMDCM) was proposed by the Myanmar Diabetes Association, with the aim of bridging the gap in diabetes care between rural and urban areas.[11] Although the activities of the PEN project include strengthening of the health system with a focus on primary health care, improving diabetes care throughout the country also requires strengthening of the health system at the secondary and tertiary levels. The MMDCM aims to improve diabetes care at all three levels, applying the experience of the PEN project and chronic care model of diabetes care in other high-income countries. However, there are large gaps in policy development for essential drugs and equipment, capacity-strengthening of BHS and medical officers from both private and public sectors, development of categories of health workers required specifically for diabetes care (e.g. dietitians, podiatrists and diabetes educators), and an appropriate referral system and health information system.[11]

GAPS AND CHALLENGES IN THE HEALTH-CARE SYSTEM

Total health expenditure in Myanmar, which was 2.0–2.4% of its gross domestic product (GDP) between 2001 and 2011, is the lowest among countries in the WHO South-East Asia and Western Pacific Regions. General government health expenditure (GGHE) as a percentage of general government expenditure (GGE) is low, at 1% between 2003 and 2011. GGHE as a percentage of GDP amounted to 0.2–0.3% over the same period. GGHE as a percentage of GDP and of GGE in 2012–2013 increased significantly to 0.76% and 3.14%, respectively; however, this level of health investment is still low compared to the demand for health care[9,18] There is no separate budget for the prevention and control of diabetes and other NCDs.

The health-system assessment in 2012 noted that the major constraints to service delivery related to the availability, acceptability and accessibility of services to the people.[19]

Health care in the private sector is gradually increasing in Myanmar. It is estimated that in 2010, 61% of medical doctors were employed in the private sector. The sector is expanding, particularly in cities and towns, although recently village-level general practices have been set up in some locations.[8] However, private-sector health care has expanded rapidly and private service providers have had very limited involvement in public health programmes.

People used to seek treatment from local practitioners of traditional medicine. Poor people, and those who could not afford medicines from reputable suppliers, used to buy medicines at local pharmacies, which are run by unqualified sellers who sell a combination of medicines for symptomatic relief without proper training in pharmacology. These kinds of local pharmacies are quite common in the community, owing to the weak regulatory system for pharmacy and poor law

reinforcement. Because of the common practice of inclusion of steroids in these mixed medicines, people are prone to develop steroid-induced diabetes, or control of diabetes can deteriorate, with the development of diabetes-related complications.

Traditional medical practices, which were in existence even before the introduction of modern medicine into the country, are also thriving in both the public and private sectors because of public acceptance and support and encouragement from the government. People tend to believe in herbal medicine far more than in western medicine and, according to a survey done in a diabetes clinic in Yangon General Hospital, more than 70% of people took traditional medicine before coming to the tertiary centre.[20] Utilization of traditional medicine is promoted, owing to impressive advertisements in media with unchecked and false information claiming a complete cure for diabetes. Although the government encourages the manufacturers of traditional medicines to produce their medicines in scientific ways, there has been significant weakness in research on traditional medicines and the application of principles of evidence-based medicine.[20,21]

MEETING THE CHALLENGES: POLICY IMPLICATIONS

Commitment by the highest authority of administration is crucial for effective implementation of prevention and control of NCDs and improvement of diabetes care in the country. It is essential now, more than ever, to implement the policy of "health for all", as the people are earnestly anticipating the development of their country and hoping to keep pace with neighbouring countries in their national development. Strong leadership of the Ministry of Health is also crucially important, to advocate and lobby policy-makers for investment in prevention and control of NCDs, including an efficient system of care for diabetes. The National Health Policy should be reviewed and revised, to keep it updated and to cover the country's need, based on the real situation of health of the people. It is necessary to integrate the National Policy on NCDs into the National Health Policy and to develop the strategic action plan with national targets aligned with the global and regional voluntary targets. The existing multisectoral coordination mechanism for the National Health Committee and M-HSCC should be reinvigorated, in order to efficiently implement the revised National Health Policy and strategic action plan for the prevention and control of NCDs. Prevention and control of diabetes by efficient and equitable delivery of care should be integrated with that for the other NCDs like cardiovascular disease, cancer and chronic respiratory disease. Strengthening of the health system with emphasis on primary health care should be prioritized among other requirements for improvement of outcomes for population health. The Myanmar Diabetes Care Model, which applied the experience of the WHO PEN intervention, with further improvement and synergy with specialist care in secondary and tertiary care, should be implemented nationwide. While all building blocks of the health systems are strengthened simultaneously, emphasis should be placed on the production of a competent health workforce, focusing on quantity, quality and the required categories of health workforce. Sustainable funding and availability of essential medicines and diagnostic facilities, according to the level of health care, should also be assured. Development of traditional medicine using scientific methods, founded on evidence-based practice, should also be prioritized. Attempts should also be made to establish a surveillance system for NCDs and a diabetes registry. Last, but not least, monitoring and evaluation and research on activities for the prevention and control of NCDs, including diabetes, should be strengthened, and proper utilization of the information gathered should be undertaken.

CONCLUSION

Analysis of the gaps and challenges in diabetes care in Myanmar is expected to assist in the formulation and development of a national policy on NCDs and its implementation. This will lead to improvement in the delivery of care for diabetes and other NCDs in an integrated approach, and closure of the gap between rural and urban health care. It will also be of help for development of a national action plan for prevention and control of NCDs, leading to national targets that are aligned with the global targets. Eventually, it is anticipated that, with the improvement in diabetes care in the country, and reduction of the burden of NCDs, this will satisfy the people's desire for national development and poverty alleviation.

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