

Integrating Services for Noncommunicable Diseases Prevention and Control: Use of Primary Health Care Approach

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ABSTRACT

Noncommunicable diseases (NCDs) are now the leading cause of death in the South-East Asia Region, accounting for 55% of all deaths annually. Besides presenting a serious threat to public health, NCDs hamper socioeconomic development in the region. The situation is likely to worsen in the future. Fortunately, cost-effective and high-impact interventions to prevent and control NCDs are, however, available and at individual level, they cost next to nothing. In order to ensure that these interventions are delivered in an efficient and effective manner and have the desired impact especially in light of the prevailing economic difficulties, an integrated approach is necessary. Different approaches to integration can be used although integrating NCD interventions into the health system based on primary health care remain the best model.

Keywords: Integration, noncommunicable diseases, primary health care, South-East Asia region, World health organization

Introduction

There is now compelling evidence that noncommunicable diseases (NCDs) comprising cardiovascular disease, diabetes, cancer, and chronic obstructive lung diseases pose a grave threat to regional and national health and development. They not only cause premature deaths and exacerbate poverty but also threaten national economies.^(1,2)

The burden of NCDs is high in the region and will continue to increase well into the future. In 2008, NCDs were the top killers in the South-East Asia (SEA) Region, causing 7.9 million deaths; the number of deaths is expected to increase by 21% over the next decade.

Attributable largely to a few preventable risk factors, all of which are highly prevalent in the region – tobacco use, unhealthy diet, lack of physical activity and harmful use of alcohol and the skyrocketing health care costs, they pose a major threat to public health and to economic security in the 21st century.

Cost-effective and evidence-based interventions and tools to prevent and control various NCDs are, however, available and are best delivered in an integrated manner through the existing health system. These interventions include the following:

- i. Reducing exposure to risk factors through health promotion and primary prevention;
- ii. Early detection and management; and
- iii. Surveillance to monitor trends in risk factors and diseases.

The delivery of these interventions is feasible but needs a paradigm shift in our approach⁽³⁾ – from addressing each NCD separately or vertically to collectively addressing a cluster of diseases in an integrated manner, from clinical to a public health approach guided by the principles

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of universal access and social justice, and from action expected from the health sector alone to a broad-based, coordinated, and intersectoral “whole of society” response. Implementation of such an approach widely and rapidly, accompanied by high levels of political commitment, can stall and reverse the growing burden of NCDs in the SEA Region.

Why integrate services?

An integrated approach to service delivery is justifiable not only from a cost-effectiveness perspective but also from the equity and social justice angle. It can lead to provision of services that are coherent, uniform, and of quality, and also help enhance the motivation, skill, and competence of health care workers.

In general, a wide range of strategies can be used to deliver health interventions, from single interventions to comprehensive prevention and care services.

In the context of NCDs, four of the most prominent chronic diseases – cardiovascular disease, cancer, chronic obstructive pulmonary disease, and type 2 diabetes – account for 80% of the NCD mortality and are linked by shared, common, and preventable biological risk factors, notably high blood pressure, high blood cholesterol, and overweight, as well as by related major behavioral risk factors: unhealthy diet, physical inactivity, and tobacco use. It is rational and makes perfect sense and therefore the action to prevent these major chronic diseases should focus on controlling these risk factors in an integrated manner.

An integrated approach targeting all major common risk factors is clearly the most cost-effective way to prevent and control the most common NCDs. Such an approach responds not only to the need for scaling up interventions on major common risk factors with the aim of reducing premature mortality and morbidity of chronic NCDs but also the need to integrate primary, secondary, and tertiary prevention, health promotion, and related programs across sectors and different disciplines.

Moreover, in an environment of limited resource availability for health as obtained at present, joint action on the main NCD risk factors prevailing on the population is therefore an efficient, cost-effective, and sustainable way forward. Integration of NCDs can ensure equity by improving access to cost-effective NCD services by the poor in resource-constrained settings. Integrating NCDs as a part of primary health care can assist in managing NCDs at an early stage and therefore is a better investment than diagnosing and managing them at a later stage when it can be expensive. And, on a long-term basis, investing in NCD prevention and control through evidence-based approaches can

contribute to strengthening of the health system.

Policy makers and developmental partners are also advocating for an integration of interventions in order to achieve health outcomes. While an integrated approach brings advantages, it also challenges and hence careful planning is required to maximize synergies and minimize political conflicts. This aspect should be considered while developing and implementing a national integrated strategic action plan and comprehensive policy frameworks for chronic disease prevention and control.

One of the guiding principles included in the World Health Assembly resolution 2008 and the Regional Committee resolution in 2007 is to establish new or strengthen existing national strategies and plans on NCD prevention and control as an integral part of national policy and broad developmental framework.^(4,5) The global strategy and plan of action emphasizes an integrated approach as follows⁽⁶⁾ “Four of the most prominent NCDs – cardiovascular disease, cancer, chronic obstructive pulmonary disease, and diabetes – are linked by common preventable risk factors related to lifestyle. These factors are tobacco use, unhealthy diet and physical inactivity. Action to prevent these diseases should therefore focus on controlling the risk factors in an integrated manner.”

Approaches to integration

Historically, two apparently conflicting approaches – vertical and integrated – have been debated from the point of view of their application for program implementation and in particular to determine which approach is preferable for obtaining health outcomes. The horizontal approach seeks to address health problems by providing a range of services in a comprehensive manner through general health services, while the vertical approach uses a focused attention on a specific problem with application of additional resources for scaling up specific interventions, with overall intention of achieving specific objectives within a time-frame. These approaches must be considered as not mutually exclusive and complementary to each other, and there is much merit to consider combining the strengths of each in the context of the health system. For example, while at the central or state level a vertical approach is needed in order to plan, coordinate, mobilize, and facilitate action on NCDs, at the district level or the operational level on the other hand, the services by nature have to be integrated as the same individuals are responsible for delivering different types of health programs.

Among many approaches to integration at community level to deliver health services cost-effectively and efficiently, following are some examples:

1. Integrating interventions that address all four

common NCDs together (e.g., by controlling use of tobacco, alcohol, unhealthy diet, and by promoting physical activity or shared risk factors);

2. Integrating NCD control interventions with other existing programmes (e.g., tuberculosis, HIV, maternal and child health, school health). There is evidence of a close link between tuberculosis and diabetes because those with diabetes have – two to three times the risk of developing tuberculosis (TB). Collaboration in screening for diabetes in TB clinics and for TB in diabetes clinics could enhance case finding. Similarly, there is evidence to show that women with gestational diabetes have a greater risk of poor outcome of pregnancy. Control of gestational diabetes in the MCH programmes therefore can help. Similarly, integrating NCD long-term or palliative care with HIV care program is a win-win situation since both cater to long-term care and support as a part of the program;
3. Integrating at a health system level (e.g., integrating NCD services into primary health care, integrating NCD drug procurement with overall procurement and supply management system, or integrating surveillance or training of health care workers).

Integration and primary health care approach

In 2010, World Health Organization (WHO) initiated an innovative and action-oriented response called Package of Essential Noncommunicable Disease Interventions or WHO PEN⁽⁷⁾ which uses the primary health care (PHC) approach for NCD prevention and control, applicable especially for low-resource settings. It envisages delivering a prioritized set of cost-effective interventions of acceptable quality. It reinforces health system strengthening by contributing to building blocks of the health system. It is the minimum standard for NCD and promoted as an important first step for integration of NCD into PHC.

This model has been tried out in Sri Lanka and Bhutan on a pilot basis. The review of these projects carried out recently showed that community-level health promotion, disease prevention, early diagnosis, and treatment and referral services for NCDs can be delivered through the PHC system. In Bhutan, it has resulted in capacity building of health workers and brought the diagnosis and management of NCDs closer to the community, despite various constraints. Based on the success of the pilot project in these districts, it is expected that the approach will be rolled out in a phased manner to other districts, gradually leading to a full-fledged national NCD program. Increased emphasis, however, is needed on health promotion leading to primary prevention and on building multisectoral consensus on the prevention and control of NCDs in Bhutan.

Although it is clear that ideally NCD prevention and control programmes must be implemented through the health system based on primary health care,⁽⁸⁾ there are many constraints to be overcome. For example, health services in many countries suffer from serious workforce shortages of those with basic skills and expertise in NCD prevention and control. Many health professionals in member countries have not received training in the management of other major chronic diseases like diabetes and bronchial asthma. Another major constraint encountered is the lack of essential standards of health care for people with chronic diseases. Training is a key ingredient for implementing the global strategy for chronic disease prevention and control. Financing of NCD programs is an overriding constraint in most countries.

In 2009–2010, WHO carried out an assessment of national capacity in the SEA Region for NCD prevention and control. According to this survey, 9 of 11 Member States have NCD policies and programs.⁽⁹⁾ While 10 had ratified the WHO Framework Convention on Tobacco Control, most did not have any legislation for alcohol control or food safety. While at least one NCD risk factor survey was reported to have been completed in 10 countries, population-based cause-specific mortality estimates were available only in five countries. In many countries, NCD prevention does not seem to be highly rated among other priorities in ministries of health. All Member States reported having a separate NCD unit in their ministries of health, most reported deficiencies in their workforce, both in quantitative and qualitative terms, to support NCD prevention and control activities.

It is therefore essential that health systems are built and strengthened in order to respond effectively to the challenge of NCDs. There are many opportunities available to do so in the SEA Region. Many donors such as the Global Fund to fight HIV, TB, and malaria (GF), and GAVI are interested in supporting health system strengthening.

Essential package of NCD services

Against the limited resource scenario, priority has to be given for implementing those interventions that have a low cost but high impact and provide a good return. In the context of NCDs, these are being referred to as “best buys” [Box 1].

In addition, from a program point of view, it is essential that key components of integrated NCD programme are clearly identified and put in place before declaring that NCD services are available in an area. Such a delineation helps to ensure that these minimal essential services are first established in a systematic manner and then demand is created for these services.

Box 1: High-impact, cost-effective interventions for prevention and management of NCDs

Tobacco use	Raise taxes
	Protect people from tobacco smoke
	Warn about the dangers of tobacco
Harmful use of alcohol	Enforce bans on tobacco advertising
	Raise taxes on alcohol
	Restrict access to retailed alcohol
Unhealthy diet and physical inactivity	Enforce bans on alcohol advertising
	Reduce salt intake in food
	Replace trans fats with polyunsaturated fat
Cardiovascular diseases and diabetes	Promote public awareness about diet and physical activity (via mass media)
	Provide counseling and multidrug therapy (including blood sugar control for diabetes mellitus) for people with medium to high risk of developing heart attack and stroke
	Treat myocardial infarction with aspirin
Cancer	Hepatitis B vaccination starting at birth to prevent liver cancer
	Screening and treatment of precancerous lesions to prevent cervical cancer

Source: WHO. *Global status report on NCDs*^[2]

While strategies and interventions are well known, delivering them at the ground level is crucial using primary health care approach to increase coverage and make an impact. Based on the primary health care philosophy, key principles for implementing NCD strategies and interventions should include: (i) universal access, equity, and social protection; (ii) comprehensive and integrated services for scaling up; (iii) use of technology that is affordable, appropriate, and accessible to poor and vulnerable populations; (iv) an intersectoral approach including community participation and engagement; and (v) using existing infrastructure for NCD prevention and control rather than building new structures.

Many communicable diseases, such as TB and HIV, have a chronic course similar to NCDs. Several approaches to leveraging synergies to improve efficiency and health outcomes of communicable and NCDs can be identified. Primary health care provides a common platform where both type of diseases can be effectively addressed through preventive and curative interventions. Successful public health programmes offer useful lessons for implementing and scaling-up NCD interventions. For example, similar to the directly observed treatment, short-course (DOTS) strategy for TB control, a strategic framework is required for scaling-up NCD interventions in a phased manner using the following package of essential programme components:

- Political commitment and ownership by all relevant stakeholders
- Ensuring uninterrupted supply of diagnostics and

essential drugs

- Training of health care workers
- Health education and promotion
- Recording and reporting on indicators as a part of monitoring and evaluation

Before expansion, the package should be tried out on a pilot basis, documented, and based on experience scaled up from district to district. While scaling up these services, the countries must strive toward universal access to these basic services and ensure that they are available and accessible to the poor and the most vulnerable sections of society.

Delivering results with equity and quality

Ultimately, the desired health outcomes can be obtained when a comprehensive package of services are delivered at the community level preferably in an integrated manner which will have a synergistic effect. This is possible when there is political commitment and ownership at various levels and coordination among various sectors through partnerships as a part of the governance model; there is a trained health workforce to implement the program activities; there is a health information system capable of collecting and analyzing risk factors and program performance data; and there is an effective procurement and supply management system to ensure that diagnostics and drugs needed by the programme are available in an uninterrupted manner. Besides such supply-side requirements, community-level health education programs should be put in place to promote and facilitate healthy lifestyle and behavior changes to address a particular problem, and that can create a demand for and use of health services relating to NCD prevention and control. Community participation and engagement including the target population is essential not only in implementation but also at planning stage as well as during program evaluation.

The community-based approach to behavior change in the context of chronic disease prevention depends on the use of communication methods—including media and interpersonal approaches. Interpersonal approaches through the use of community networks including NGOs and community-based organizations is considered more effective in bringing about behavior change.

In addition, the critical need is to ensure that good quality and high-impact prevention and health promotional interventions are implemented and the results are measured over time. However, in many countries, reliable data on risk factors and mortality are scarce and are not integrated into the health information system. Nor is information available to ensure access to the services by the poor and vulnerable population who need these services the most but are least capable of affording

them. It is therefore necessary that national capacity in epidemiological surveillance and research including on social determinants of health is strengthened urgently. Periodic programme evaluation also provides crucial data for further programme strengthening and refinement of the policy and strategy.

NCD surveillance has three key components: monitoring exposure (risk factors and determinants), outcome (morbidity and disease-specific mortality), and health system response and capacity. While monitoring risk factors and mortality requires special surveys, outcome measures in terms of morbidity can be included in the routine reporting system. Monitoring NCDs, however, requires a set of standardized core indicators so that these could be measured on an ongoing basis as a part of the program. Assessing the capacity and response of the health system including policy changes is also a key aspect of program monitoring.

Currently, NCD surveillance in most countries is ad hoc, fragmented, and rarely institutionalized. There are many opportunities to strengthen NCD surveillance and make it sustainable. For example, by integrating morbidity reporting with communicable disease surveillance and integrating risk behavior surveys for all risk factors including tobacco. The Political Declaration of the recent UN High Level Meeting on NCDs urges Member States to integrate NCD surveillance with existing surveys and surveillance systems as follows: "Strengthen, as appropriate, country-level surveillance and monitoring systems, including surveys that are integrated into existing national health information systems and include monitoring exposure to risk factors, outcomes, social and economic determinants of health, and health system responses, recognizing that such systems are critical in appropriately addressing NCDs."⁽¹⁰⁾

Conclusions

NCDs are present and are a real danger and a serious threat to public health and economic development globally and in the region. The situation is likely to worsen in the future. Cost-effective and high-impact interventions to prevent and control NCDs are, however, available. In order to ensure that these interventions

have the desired impact especially in light of the prevailing economic difficulties, an integrated approach is necessary. Different approaches to integration can be used although integrating NCD interventions into the health system based on primary health care seemingly remain the best model that can, in the long run, lead to reduced disease morbidity and mortality in a sustainable and cost-effective manner and also ensure equity and social justice for all.

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