Non-communicable diseases (NCDs) are now the leading causes of mortality, contributing to 74% of all deaths globally.\textsuperscript{1,2} NCDs are responsible for over 17 million premature deaths each year, 86% of these occur in lower and middle income countries.\textsuperscript{2} Similarly, NCDs including stroke, ischemic heart disease, diabetes, chronic obstructive pulmonary disease, and lung cancer are the leading causes of premature deaths in Indonesia. They are responsible for 73% of all deaths in Indonesia, particularly from cardiovascular diseases (35%), cancer (12%), diabetes (6%), and chronic respiratory diseases (6%).\textsuperscript{3} Patients with NCDs also spend substantial financial resources for NCD care despite having insurance coverage, leading to increased risk of financial catastrophe.\textsuperscript{4,5}

Since 2016, the Indonesian Government is striving to improve access and integration for NCD services by implementing four broad strategies: advocacy, partnership and leadership in management of NCDs; prevention and reduction of NCD risk factors; strengthening health services capacity and collaborating with private sectors, professionals and communities; and strengthening NCD surveillance and research.\textsuperscript{6} Indonesia is now expanding their capacity to screen and treat people with NCDs through primary health services and included NCD essential service packages under the National Health Insurance scheme at primary, secondary and tertiary healthcare facilities. Growing prevalence of NCDs within an ageing population in Indonesia will require accessible, comprehensive, and well-integrated primary care in preventing, detecting, and managing NCDs.

An integrated primary health care using a life course approach has been proposed as a key strategy for preventing and controlling NCDs in Indonesia. A life course approach gains popularity recently for controlling NCDs because of our increased understanding about the intersection between social determinants of health, socio-economic factor and consumption patterns, environmental, physical activity, physiology, and disease progression/outcome. There are a growing evidence suggesting associations between NCDs in adulthood and early life factors\textsuperscript{7}, and the life course approach has been recommended by the WHO for NCD prevention.\textsuperscript{8} A
life course approach is an inclusive approach that considers the needs of all age groups and addresses NCD prevention and control in its earliest stages. NCD risk factors may begin before or during pregnancy, and continue during infancy and childhood, underlying the importance of action across these age groups, along with adult and elderly populations.

Additionally, strengthening capabilities of primary care for improving access and coordination of NCD services are essential for improving health outcomes and reducing overall burden from NCDs. Primary care links communities to health services, coordinates comprehensive care for patient with NCDs, facilitates referrals for complex care, and organises various public health functions for addressing NCD risk factors, including social determinants of health. An integrated primary health care can improve sustainability, and provide coordinated care for people, including people with chronic conditions or at risk for developing NCDs. Although an integrated primary care using a life course approach is an encouraging concept, its implementation will be dependent on health system contexts of a nation. We propose a model for implementing this strategy in Indonesia as summarised in Figure 1.

**Figure 1. Integrated primary care using a life course approach for preventing and managing NCDs in Indonesia**

An integrated primary care using a life course approach is a promising model to be adopted and implemented in Indonesia. However, many challenges exist, from complex funding mechanisms, governance structure, lack of multi sectoral coordination, and primary care capability. Primary health care financing in Indonesia is complex, involving multiple sectors at local, provincial, and national government levels. For example, core public health functions are supported by the national government, with additional operational
funding from provincial and local governments. Clinical care and service delivery are supported by local government, internal health centre revenues, and payment from insurance schemes. On the other hand, community empowerment and community-based health programs are funded through the village health budget. This complex funding structure can result in complex governance and accountability mechanisms leading to increased reporting arrangements.

In addition, effective implementation of an integrated primary care will require clear guidelines, integrated health information systems, program theory, competent health workforce including community health workers, and operational procedures. At the very least, effective implementation of integrated primary care requires a clear and operational definition. While integrated primary care is hard to define, but it is clear what an integrated primary care is not. It is not a combination of several tasks implemented at community or primary care settings, for example community health workers provide a package of services for multiple diseases. Moreover, ensuring sustainability of an integrated primary care requires clear and consistent policy directions across government levels and sectors. Such directions will improve integrated planning and facilitate multi-disciplinary collaborations involving general practice, community health, allied health, and social workers.

An integrated primary care using a life course approach for preventing and controlling NCDs in Indonesia is the right policy decision. It strives to be holistic, addressing NCDs with a long-term vision across the critical stages where modifications can be made to minimise risks of developing NCDs. This policy direction is inherently complex mandating multi-sectoral and/or inter-sectoral approaches, as well as multi-disciplinary teams. Additionally, existing evidence suggests the intricate connections between health, social, economic, and environmental across the lifespan. Taking a life course approach also means the governments must extend the NCD prevention and control measures beyond health sector alone. This means that effective implementation of an integrated primary care using a life course approach require long-term strategies to strengthening multi-sectoral partnerships to promote a life course approach across all government sectors and community systems.

REFERENCES


