

Better health and wellbeing for a billion more people: integrating non-communicable diseases in primary care

Cherian Varghese and colleagues describe a model to improve equitable access to good quality health services for non-communicable diseases within primary healthcare

The Alma-Ata declaration of 1978 made the case for comprehensive primary healthcare for all countries. However, the era of the millennium development goals saw an unprecedented increase in financial support for disease specific initiatives (eg, HIV/AIDS, malaria, and tuberculosis) rather than for broader population health or cross cutting programmes, such as improvements in disease prevention, primary care services, and the health workforce.¹

We examine the evidence supporting the management of non-communicable diseases (NCDs) in primary care and existing models of care, with a focus on the NCDs that cause the most premature mortality (cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes), and propose an approach for the management of NCDs in settings with limited resources.

Role of primary care in controlling non-communicable diseases

Primary care is more than a first point of care; it is the core process of a health system. It is accessible to all patients and can undertake the management of early stages of NCDs by providing first contact, continuity, and integration of care. Primary care becomes an effective way to manage NCDs

KEY MESSAGES

- The increasing burden of NCDs is overwhelming health systems resulting in high costs to governments and individuals
- Integrating NCDs in primary care is a cost effective, affordable, and equitable model of care that can reduce morbidity and mortality from NCDs
- More evidence on NCD management in primary care and greater advocacy for integration of NCDs in primary care are needed

when it moves from delivering an episode of care to providing an integrated approach that includes prevention, diagnosis, treatment, and palliative care for all conditions and over time.²

In well developed health systems most of the care for NCDs is managed by primary care; however, most primary care facilities in poorer settings are not equipped to detect and treat NCDs. Surveys by the World Health Organization on country capacity report that only 6% of low income countries compared with 85% of high income countries have the necessary equipment generally available (that is, available in 50% or more public health sector facilities) to take six essential primary care measurements—height, weight, blood glucose, blood pressure, total cholesterol, and urine albumin.³

What the evidence shows

We reviewed evidence on the effect of integrating and prioritising the management of NCDs in primary care on mortality, quality of care, and cost effectiveness.

Mortality reduction

Evidence from New Zealand, Mexico, countries of the Organisation for Economic Cooperation and Development countries, and England and Wales shows that reduction in cause specific premature mortality from asthma and bronchitis or emphysema, cancer, and cardiovascular disease is attributed to treatment and improvements in primary care.⁴⁻⁷

Priorities in poor settings

A systematic review of primary care models for NCD interventions in sub-Saharan Africa concluded that screening patients when they attend health services is suitable in poor settings, rather than more costly population screening programmes. It also identified the most important needs for NCD management in primary care, including essential diagnostic tools and medications, standardised procedures, and referral

support.⁸ Every consultation can be used as an opportunity to promote healthy lifestyles and detect conditions early or before symptoms appear. The WHO package of essential non-communicable disease interventions (WHO-PEN) for primary healthcare, which has been adapted in about 30 countries, is a set of cost effective and action oriented interventions feasible in all settings.⁹ The essential packages on cardiovascular, respiratory, and related disorders, and cancer of the Disease Control Priorities Network are another set of interventions that can be used for integration in primary care.¹⁰

Quality of care

Improvement in the quality of primary care services in Brazil, especially in poor and vulnerable communities, led to a reduction in hospital admissions.¹¹ Interventions to improve quality of care range from policies and regulations, mixed payment methods (eg, capitation with a set fee per patient and incentives for performance designed to motivate and encourage care providers), improved capacity of health information systems, and improvements in the capacity and quality of management within primary care facilities. Primary care increases access to healthcare services, improves health outcomes and quality of life for patients with NCDs, and decreases hospital admissions.¹²

Cost effectiveness

A well functioning primary care system, which includes ambulatory primary care delivered through local hospitals, is cost effective and can manage up to 90% of healthcare demand in low and middle income countries.¹⁰ Task shifting, which uses trained non-physician healthcare workers to do tasks traditionally done by doctors according to the local context, accompanied by appropriate health system support is a cost effective strategy.¹³ The economic cost of drug therapy and counselling for people at high risk of cardiovascular diseases is 0.29 international dollar per million population a year for low and

middle income countries (international dollar is a hypothetical unit of currency with the same purchasing power as US\$ in the United States at a given point in time).¹⁴ Ethiopia reported that hypertension management alone is an effective intervention to prevent poverty.¹⁵

Examples from countries

Brazil's health system started in 1996 and is based on decentralised universal access with municipalities providing comprehensive and free healthcare. Today, 27 000 family health teams are active in nearly all Brazil's municipalities, each serving up to about 2000 families or 10 000 people, and annual resources for primary healthcare have increased.¹⁶

In Thailand, a primary care system based on community participation started in 1985 through the recruitment of health volunteers and the establishment of health centres and a drug cooperative system. Out-of-pocket payment dropped from 44.5% in 1994 to 12.4% in 2011 because of full implementation of the universal coverage scheme in 2002.¹⁷

It is encouraging to see that Kerala state in India is transforming primary healthcare centres into family health centres with a defined set of services and the necessary support elements.¹⁸

Model for management of NCDs in primary care

The challenge in systems focused on maternal and child health and communicable diseases is to integrate and scale up services for NCDs. We propose a model for NCD management in primary care (box 1) to prevent, detect, and manage NCDs at an earlier stage. This is based on the systematic review of primary care models for NCDs in sub-Saharan Africa by Kane et al.⁸

To adequately respond to the needs of people with NCDs and enable proactive population management, primary care in many settings will need to change to include the following:

- Multidisciplinary teams with diverse competencies (eg, health education, dietary education, medication management, and social care);
- The right to prescribe medicines for trained midlevel non-physician care providers
- Availability of essential diagnostic tools and medications
- Improved health information systems that use unique patient identifiers
- Family and community based models of care (including collaboration with public health officials to tackle local determinants of health)

- Better mechanisms for referral and counter referral.

When relevant, NCD care will need be integrated into existing programmes for tuberculosis, HIV, and maternal health services.

Primary care services should be tailored to a defined catchment population to enable continuity of care and responsiveness to the changing disease burden. The size of the catchment population for primary care can be determined by the disease burden, population density, health workforce model, and available resources. Transforming the current model of care to make primary care the main provider of care for NCDs will require more efficient use of existing resources and, in many cases, additional resources for health services, with an increase in infrastructure, medical products, health workers, health information systems, and managerial capacity directed to primary care. Appropriate policy changes are needed for medical education and professional regulation to strengthen and expand primary care.

Next steps

Evidence on NCDs mostly comes from high income countries. An analysis of 797 Cochrane reviews with 8850 trials reported that only 13 (0.15%) were done in low income countries.¹⁹ More research on relevant populations and interventions is needed to provide better evidence and demonstrable outcomes. Scaling up coverage of evidence based interventions for NCDs in primary care could play a major part in reaching the target of the sustainable development goals to reduce premature mortality from NCDs by one third by 2030 through prevention and treatment.

In addition to achieving cure where possible, the goals of NCD care are to improve functional status, prolong and improve quality of life, and provide palliative care. Countries should invest in primary care, and the models of care in each context need to explicitly tackle the contextual challenges and tailor the care to improve outcomes from NCDs. Strong and sustained advocacy is needed at different management and policy levels to

Box 1: Elements of a model for managing non-communicable disease (NCDs) in primary care

Prevention: modify risk factors and promote health

- Tobacco cessation
- Dietary advice
- Reduction in salt intake
- Reduction in alcohol intake
- Promotion of physical activity
- Body weight control
- Counselling

Screening/case finding

- Targeted screening (using factors such age group, tobacco use, obesity) to detect people with NCDs

Management

Health services

- Decentralised care
- Local clinical guidelines
- Essential diagnostics
- Essential medicines
- Systematic monitoring and evaluation

Human resources

- Adequate staffing
- Continued capacity building
- Competency for NCD services ensured

Decision support

- Adherence to clinical guidelines
- Adherence to medications
- Adherence to follow up
- Effective communication

Quality improvement

- Supportive supervision and mentoring
- Monitoring of quality indicators
- Implementation research

change the perception that hospitals and subspecialised health facilities are the best way to improve healthcare for NCDs. Public education about the benefits of primary care as well as strengthening of the services provided can build people's trust in primary care for the management of NCDs.

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