

Addressing NCD Co-Morbidities: Shared Opportunities for Action



Introduction

Noncommunicable diseases (NCDs) are now widely recognised as a major challenge to health and sustainable human development in the 21st century. NCDs are the leading cause of death and disability worldwide, responsible for 68% of global mortality¹. This figure projected to reach 74% by 2030¹, exacting a heavy and growing toll on the health and economic security of all countries. Increasingly, it is low- and middle-income countries (LMICs) and the poorest and most vulnerable populations which are hardest hit by these largely preventable diseases.

The primary focus of the global NCD response has been on the four major diseases – namely cardiovascular disease (CVD), cancer, diabetes, and chronic respiratory diseases – and four risk factors – **tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol** – identified by the World Health Organization (WHO) and the UN as those responsible for the greatest burden. There is, however, a range of diseases and conditions - including mental and neurological disorders, autoimmune disorders such as psoriasis, bone and joint conditions such as osteoporosis and arthritis, and renal, oral, eye and ear diseases that are linked to the four most prominent NCDs.

Driven by similar risk factors, together with demographic changes including rapid urbanisation and ageing populations, these diseases are closely interconnected. Often, two or more NCDs manifest in the same individual, referred to as 'NCD co-morbidities'. NCD co-morbidities can occur because diseases share the same risk factors, with tobacco use being a risk for cancer, CVD and dementia²; or because

some diseases predispose individuals to developing others, as in the case of diabetes, which is a risk factor for CVD, stroke, osteoporosis³, kidney failure and depression⁴. As a result, these conditions can benefit from a comprehensive and integrated response.

Health systems also increasingly have to manage patients living with infectious diseases such as HIV/AIDS and tuberculosis (TB) alongside NCDs. This issue is particularly acute in LMICs facing a double burden of disease. With effective antiretroviral treatment, people living with HIV are living longer and develop NCDs associated with ageing. Furthermore, some antiretroviral drugs may also increase risk to people living with HIV of developing certain NCDs, for example through insulin resistance⁵, leading to increased risk of diabetes and CVD; while HIV infection itself increases the risk of CVD⁶, and some cancers⁷. Diabetes is a known risk factor for active TB and reactivation of latent TB⁸. It has also been observed that vulnerable populations affected by NCDs are more likely to develop seasonal influenza⁹.

The Compounded Challenge of NCD Co-Morbidities

NCD co-morbidities impose years of disability and compounded financial burden on those affected, their families, health systems, and national economies. While the prevalence of co-morbidities varies, it increases substantially with age in all countries, with higher rates in urban than rural areas¹⁰, and disproportionately affecting those who are poorest. Social-economic inequalities are exacerbated for people living with co-morbidities, with the most drastic implications for those living in developing countries enduring a double burden of NCDs and chronic infectious diseases. NCD co-morbidities are associated with greater healthcare utilisation and financial burden including, in most cases, higher out-of-pocket expenditures - often more than double

for NCD co-morbidities than for a single NCD¹⁰. Globally, health systems are ill-equipped to respond to the challenges posed by NCD co-morbidities. In the first instance, health systems have evolved to address acute issues, rather than to provide the continuous care required for chronic conditions, including NCDs. Furthermore, many health systems are configured to treat singular diseases in a siloed, vertical approach, which is inappropriate and ineffective for people living with NCD co-morbidities. Given the complexities involved in clinical management decisions, developing clinical practice guidelines on managing co-morbidities for primary care practitioners is vital.

Interconnected Diseases, Common Solutions

Since the UN Political Declaration on NCDs in 2011, governments have adopted a series of bold political commitments to guide the response and an ambitious global goal of achieving a 25% reduction in premature NCD mortality by 2025. However, progress to date has been insufficient and uneven. Of 174 countries featured in the 2015 WHO Progress Monitor on NCDs, only 29% have guidelines for the management of major NCDs, which is an essential first step towards provision of effective care. Even once this is achieved, there is an urgent need to move away from single-disease approaches, and to reorient health systems to integrate care packages across multiple chronic conditions, through a holistic person centred approach. Stronger health systems underpinned by primary health care (PHC) are crucial to effectively manage NCDs. PHC is often the first gateway to health services for people with NCDs and plays a central coordinating role in the prevention, diagnosis and long-term management of chronic diseases.

In order to address NCD co-morbidities, concerted efforts are needed not only for treatment of chronic diseases but also to reduce population risk factors for NCDs. This can be achieved through intersectoral health promotion and other primary and secondary prevention. This must be done throughout the lifecourse, including through integration with the reproductive maternal newborn child and adolescent health (RMNCAH) agenda, since many opportunities for NCD prevention exist in early life. The impact of investing in reduction of exposure to common risk factors to relieve

the burden of NCD co-morbidities is significant - up to 80% of heart disease, stroke, and type 2 diabetes, and over a third of the most common cancers could be prevented by eliminating exposure to their shared risk factors¹¹.

In countries bearing a double burden of infectious diseases and NCDs, there is an especially strong case to integrate care – enabling people living with NCDs, HIV and TB to access the care they need. Health services need to be reorganised to address populations’ needs holistically and effectively, and to make best use of resources, especially in settings where these are most limited. In some countries, evidence shows that offering comprehensive care to patients suffering from both stroke and HIV in the same place is feasible and can achieve success, with retention of patients in care in HIV, diabetes and hypertension in Cambodia remaining at 70-90% after three years¹².

Within the broader context of universal health coverage (UHC), investment for health and adequate health insurance for all should be at the core of policies to promote better access to health services across populations and reduce out-of-pocket expenditures.



Osteoporosis, NCD Co-Morbidities, and Fracture Risk



Like many other NCDs, risk factors for osteoporosis include tobacco use, alcohol use, unhealthy diet (specifically a lack of calcium or vitamin D), and age. Certain medications, including those used to treat some cancers, can also increase risk of developing osteoporosis¹³. Cancer is a major risk factor for bone loss and fractures. This is due both to direct effects of cancer cells on the skeleton and of cancer therapies on bone cells¹⁴. People living with type 1 diabetes have lower bone mineral density (BMD) and higher risk of fractures. Evidence is accumulating that patients with complications of type 2 are also at increased risk of certain types of osteoporotic fractures.

Globally, one third of women and one fifth of men over the age of 50 will suffer an osteoporotic fracture^{15, 16, 17}. There are more than 8.9 million fractures annually. A fracture occurs every three seconds¹⁸. In women, osteoporosis accounts for more days in hospital than other diseases including breast cancer, myocardial infarction, and diabetes¹⁹. Approximately half of all people who have had one osteoporotic fracture will have another, with the risk of additional fractures increasing with each new broken bone²⁰. A prior fracture is associated with an 86% increased risk of any fracture^{21,22}.

Despite the global threat posed by fragility fractures, and the availability of safe and cost-effective therapies that could reduce the number of fractures, gaps in care are preventing millions of at-risk individuals from being diagnosed and treated worldwide.

The world's population is ageing, which means that the burden of fractures will increase dramatically, placing severe strains on the capacity and finances of healthcare systems worldwide. Highly effective osteoporosis treatments substantially reduce fracture risk, but are often not routinely offered to fragility fracture sufferers. In some countries, up to 80% of fracture patients are not diagnosed or treated for osteoporosis²³.

A practical and effective solution to tackling the increasing burden of fractures is the implementation of Fracture Liaison Services (FLS) and Orthogeriatric Service models of care. These services, which identify and manage the patients at highest risk of future fracture, have been successfully developed and are increasingly included in clinical guidelines. However, their implementation must be expanded globally.

IOF's Capture the Fracture® (CtF) is a global programme to facilitate the implementation of coordinated, multi-disciplinary models of care for secondary fracture prevention.

IOF
CAPTURE *the*
FRACTURE

The IOF Capture the Fracture® focuses on the following three areas:

Setting standards



A Best Practice Framework (BPF), currently available in nine major languages, serving as an international benchmark for FLS by defining essential and aspirational elements of FLS service delivery. The BPF serves as the measurement tool for IOF to award 'Capture the Fracture® Best Practice Recognition' in celebration of successful FLS worldwide. There are currently over 180 FLS in the IOF network, and over 300 members following the CtF programme, in particular.

Facilitating change



Mentorship programmes have been set up to facilitate the transfer of knowledge and skills by connecting experienced FLS champions with any institutions willing to establish a new FLS

Implementation guides and toolkits available on the CtF website – www.capturethefracture.org – with a comprehensive suite of resources to support healthcare professionals and administrators to establish a new FLS or improve an existing FLS.

Creating awareness



An on-going series of webinars provides an opportunity to learn from experts across the globe who have established high-performing FLS, and contributed to development of guidelines and policy on secondary fracture prevention, providing potential FLS with country specific advice in local languages.

Dissemination of articles about the CtF programme and BPF within relevant scientific publications

Presence at national international conferences as part of on-going awareness and advocacy efforts.



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