Department of Health

Comorbidities

A framework of principles for system-wide action

This document was co-produced by DH, NHS England and PHE in collaboration with national experts through a series of round tables on comorbidities organised by DH. Prepared by Dr Amina Aitsi-Selmi (RAMP team).

Abbreviations

AHSN: Academic Health Service Network

CCG: Clinical Commissioning Group

COPD: Chronic obstructive pulmonary disease

CQC: Care Quality Commission

HEE: Health education England

HWB: Health and Wellbeing Board

JSNA: Joint Strategic Needs Assessment

LA: Local Authority

LETB: Local Education and Training Board

LTC: Long term conditions

NCD: National Clinical Director

NICE: National Institute for Health and Care Excellence

NIHR: National Institute for Health Research

NHSIQ: NHS Improving Quality

PHE: Public Health England

RAMP: Reducing avoidable and premature mortality

RCGP: Royal College of General Practice

RCN: Royal College of Nursing

RCPsych: Royal College of Psychiatrists

VCS: Voluntary and community sector

1.1. This framework sets out the challenges for the wider health and care system in addressing comorbidities and proposes a set of interconnected principles to consider in the design of systems and services to prevent and treat comorbidities. Comorbidities are a helpful focus to bring different parts of the system together to address shared health concerns and prevent fragmentation.

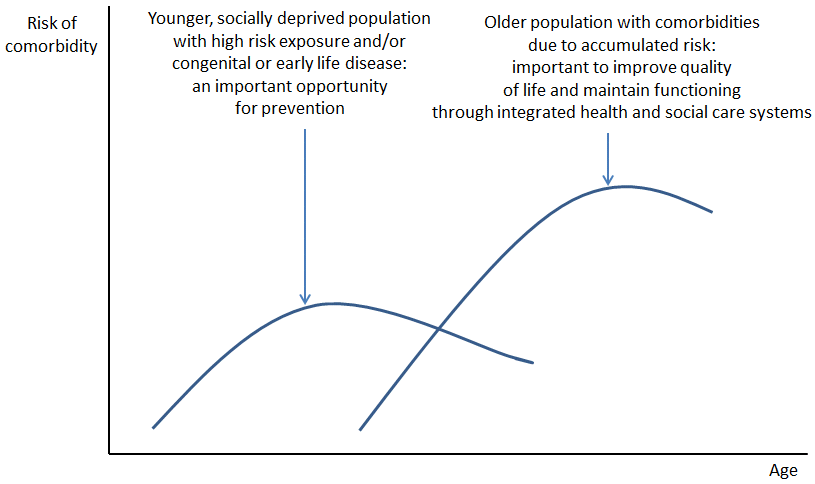
SETTING OUT THE CHALLENGE

1.2. Comorbidity[1] is one of the most important issues facing health systems in the developed world today and the single disease approach is unable to address this problem appropriately.[2,3] Patients with multiple long term conditions (LTCs) are becoming the norm rather than the exception and the number of people with comorbidities is set to increase in England from 1.9 million in 2008 to 2.9 million by 2018.[4] As we strive to personalise care around patients, it is important to identify specific populations for targeted interventions. There are at least two key populations with comorbidities requiring a different emphasis of action: those who have comorbidities mostly due to increased life expectancy and longer exposure to risk factors over time; and those who have comorbidities mostly from more intense exposure to risk factors, particularly smoking, obesity, alcohol and physical inactivity due to challenging personal, occupational and societal factors throughout the lifecourse including persistent and widening inequalities.[5,6] These patients are likely to face complex physical, social and emotional problems and are more likely to have mental health difficulties (see Figure 1). Prevention and action on the wider determinants is essential to improving the life expectancy and wellbeing of this latter, younger group while strategies to maintain everyday functioning and quality of life through coordinated services are particularly important for the first.

1.3. A sustainable health system will need to manage these problems efficiently, avoiding waste from an economic point of view but also in terms of societal and environmental value (the triple bottom line). This requires future demands on healthcare to be reduced through primary and secondary prevention of ill health through synergies such as low carbon transport systems that promote physical activity, improve physical fitness and reduce avoidable morbidity and mortality.

[1] Defined in this document as the co-occurrence of two or more long term conditions in a person
[2] Barnett et al. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. Lancet 2012; 380: 37-43
[3] Salisbury C. Multimorbidity: redesigning health care for people who use it. Lancet 2013 Feb;63(607):64-5
[4] Long Term Conditions Compendium of Information: Third Edition, Department of Health, 2012
[5] MacInnes and Spijker. Population Ageing. The timebomb that isn't? BMJ 2013; 347: 20-22
[6] Buck and Frosini. Clustering of unhealthy behaviours over time: Implications for policy and practice. King's Fund, 2012

Figure 1. Illustrative diagram of two key populations at risk of comorbidities across the lifecourse.



1.4. Comorbidities can be defined as: 1) clinically dominant - where one illness trumps another (e.g. an index condition like dementia which can overshadow the diagnosis or treatment of another like heart disease - known as diagnostic overshadowing); 2) synergistic - related in how they arise and are treated (e.g. COPD and heart disease); and 3) coincidental - no obvious relationship and disease management is separate. Whilst further work is needed to characterise the burden of comorbidities including which combinations carry particularly high mortality (killer combinations) and identify effective interventions, we should expect costs to rise and the need for greater capacity across the health service to increase. Costs are usually higher for comorbidities especially when physical illness occurs with mental illness,[7] and it is estimated that comorbidities cost £8-13billion/year in England at present.

1.5. Some lives may be saved in the short term from improved management of comorbidities but the system-wide action that is needed to address comorbidities will take longer to implement and therefore, the benefits in terms of population wellbeing will be seen over a longer period of time.

A FRAMEWORK OF PRINCIPLES FOR A SYSTEM-WIDE APPROACH

1.6. This document proposes a set of design principles that might inform high level discussions on programme and service planning across agencies to support redesigning the health and social care system around whole people and the population's needs and wants. The framework has been designed to bring together the individual and population level perspective to ensure that important principles of public health, healthcare and social care are applied across prevention, early diagnosis and treatment and support the sustainability of publically funded systems.

[7] Brilleman et al. Implications of comorbidity for primary care costs in the UK. BRGP 2013 Apr; 63(609):e274-82

Table 1. Principles of action on comorbidity

	Principle	Actions	Key partners
1	*Promotion of health, wellbeing and prevention*	• Promote health and wellbeing through community-based approaches and by promoting protective factors • Reduce risk of common risk factors (e.g. smoking, obesity, alcohol, poor diet, physical inactivity) – primary prevention • Diagnose and treat long-term conditions effectively to prevent disease complications – secondary prevention	HWB/LA,CCG, PHE, VCS, NCDs
2	*Places and the wider determinants*	• Create healthy environments by working across sectors to take action on the wider determinants of health throughout the lifecourse including education, housing and employment • Ensure resource allocation and service access are proportionate to the level of social deprivation in line with the principle of proportionate universalism as applied to smoking cessation services in some areas	HWB/LA, DH, other government departments, VCS, PHE
3	*Population needs*	• Define the needs and wants of the comorbid population within a geographical area as per JSNA • Identify comorbidity metrics e.g. killer combinations; number of conditions; number of drugs prescribed	HWB/LA, CCG, NHS, PHE, VCS, academic partners, NCDs
4	*Promotion of research and guideline development and use*	• Invest in research on comorbidities (to identify killer combinations; refine the epidemiology and determinants e.g. are there different cohorts of people with comorbidity?; include comorbid patients in clinical trials) • Develop joint guidelines and algorithms for the prevention and management of comorbidities • Embed evaluation and innovation within the development of new service models (e.g. GPs in hospitals; complex patient clinics within general practice) and assess their cost-effectiveness and health impact	NIHR, NICE, academic partners, research charities, royal colleges, professional societies, AHSNs, NCDs
5	*People and patient participation*	• Develop services that promote self-management and shared decision-making in line with the National Voices' definition of person-centred care; and support carers to preserve their own health	NHS, NCDs , VCS, PHE, HWB/LA, Health Watch
6	*Parity of esteem*	• Consider mental illness as a long-term condition on a par with physical illness and treat them as closely linked. Having a serious mental illness and physical illness increases mortality significantly (a killer combination)	VCS, DH, NHS, NCDs, PHE, HWB/LA
7	*Putting coordinated systems in place and payment reform*	• Build care structures around patients that support shared responsibility across system boundaries, including reforming payment systems and incentives (e.g. aligning QOF and hospital tariffs; joint mortality audits across specialities) • Ensure consultation times are long enough; run clinics dedicated to patients with complex needs • Ensure a balance of specialists and generalists in the system; use multidisciplinary approaches • Commission patient record systems that interface between different system boundaries • Train the workforce in patient-centred care and multiple and the prevention and management of chronic diseases • Consider the potential for unintended adverse consequences for patients with comorbidity when redesigning services around specific diseases	NHS, CCG, NHSIQ, , HWB/LA, NCDs, Monitor, CQC HEE, LETBs, VCS

RESOURCES: initiatives that incorporate the principles of action on comorbidities

Example of identifying population needs related to comorbidities

Conway Medical Centre risk stratification: The Conway Centre is using its practice level data (disease registers and other recorded metrics) to identify high-risk patients with comorbidities who are frequent service users and run dedicated clinics for them. (http://www.youtube.com/watch?v=he__szFTxrw&feature=youtu.be)

Examples of guidelines and resources that address more than one disease or risk factor at a time

The Lester Cardiometabolic Resource: This is a clinical and commissioning resource for patients with mental and physical illness developed jointly across a number of royal colleges (RCPsych, RCGP, RCN) with third sector partners based on NICE evidence. The resource aims to improve the management of physical illness in people with mental illness and its implementation could save **376** lives per year. NHS England are developing Lester Plus as part of their planning guidance. (http://www.rcpsych.ac.uk/quality/nationalclinicalaudits/schizophrenia/nationalschizophreniaaudit/nasresources.aspx)

NICE Behaviour Change guidelines: This type of guideline moves away from single disease management or single risk factor prevention to a more holistic approach to health. NICE are also developing a programme of work around the measurement and management of comorbidities.

(http://publications.nice.org.uk/behaviour-change-the-principles-for-effective-interventions-ph6)

UK Health Forum integrated information service: This website seeks to group information for the biggest risk factors in one repository.

(http://www.ukhealthforum.org.uk/who-we-are/our-work/research-information-services/)

Example of encouraging people and patient participation and addressing the wider determinants

Making Every Contact Count: This intervention trains public service staff to support people in quitting smoking, reducing excessive drinking, improving diet and losing weight. They give appropriate, timely and relevant advice on health and wellbeing to people they come into contact with as part of their day to day work.

(www.makingeverycontactcount.co.uk/)

Care and Support Guide for patients – National Voices: This is a resource developed to support patients with long term care needs in shaping the care they receive. (www.nationalvoices.org.uk/what-care-and-support-planning)

Examples of service coordination models

The House of Care: This healthcare delivery model helps design services and support personal interactions around patients and promotes the coordination of services to shift the service delivery paradigm toward optimal management of long term conditions while recognising the complexity of the health and social system. (www.health.org.uk/news-and-events/newsletter/introducing-the-house-of-care)

Pulmonary rehabilitation is the most effective intervention for patients with COPD. The multidisciplinary approach involved provides an ideal environment in which comorbidities can be addressed holistically based on symptoms rather than individual diseases. The Royal Brompton clinic is an example. (http://www.rbht.nhs.uk/healthprofessionals/clinical-departments/copd/pulmonary-rehabilitation/). Based on a similar principle applied at population level, PHE are developing a **breathlessness campaign** piloted in Oldham and Rochdale. (http://www.hmr.nhs.uk/index.php/news/325-rochdale-pilots-first-ever-breathlessness-campaign)

Examples of prevention

The **Health Checks** programme aims to prevent a number of long-term conditions through early risk identification. (www.healthcheck.NHS.uk)