A comparison of policies and guidelines related to multimorbidity in UK, Australia and Sri Lanka

Authors

1. Dr. Nadeeka K. Chandraratne MBBS, MSc, MDS, MD

   International Fellow, Community and Health Research Unit, University of Lincoln and Senior Registrar in Community Medicine, Ministry of Health, Sri Lanka.

2. Dr K.G. R.V. Pathirathna, MBBS, MSc, MD

   International Fellow, Community and Health Research Unit, University of Lincoln and Senior Registrar in Medical Administration, Ministry of Health, Sri Lanka.

3. Dr Christopher Harrison B Psych (Hons), MSocHlth, PhD

   Research fellow, Menzies Centre for Health Policy, Sydney School of Public Health, Australia.

4. Prof. A. Niroshan Siriwardena MBBS, MMedSci, PhD, FRCGP

   Professor of Primary and Prehospital Health Care, Community and Health Research Unit, University of Lincoln, UK.

Corresponding Author: Dr. Nadeeka K. Chandraratne (e-mail: nadkamil@yahoo.com; nChandraratne@lincoln.ac.uk)

The authors declare no conflicts of interests.

A comparison of policies and guidelines related to multimorbidity in UK, Australia and Sri Lanka

Abstract

Background and Objectives

Increased rates of multimorbidity, evident in developed and developing countries, should be addressed by health policy. We aimed to compare policies and guidelines related to multimorbidity in primary health care in countries with different health systems to identify initiatives, gaps and opportunities for further improvement.

Methods

We conducted a content analysis of UK, Australian and Sri Lankan policy documents and guidelines, published between 2006 and 2017, in electronic databases, references and government repositories, tabulating data extracted for content, implementation plans, gaps and opportunities for development.

Results

Overall 38 of 56 identified documents explicitly or implicitly addressed multimorbidity or its prevention. The UK had four policy documents and guidelines specifically on multimorbidity. Australia and Sri Lanka lacked specific policies but policies did address chronic conditions and non-communicable diseases.

Discussion

Important differences exist in how national policies sought to address multimorbidity. Policy implementation, how this affects quality of care and outcomes, and the role of primary care should be examined.

Introduction

Life expectancy has improved dramatically over recent decades, not only in high income countries, such as Australia and the United Kingdom (UK) but also in middle and lower income countries like Sri Lanka; citizens in Australia and the UK have a life expectancy of 82.8 years and 81.4 years respectively whereas in Sri Lanka this is 74.9 years.[1] Increases in life expectancy, together with health care and societal changes[2] has led to a greater number of people with or at risk of long-term conditions, such as diabetes, mental health conditions, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and cancer.

People living with a long-term condition often have other chronic conditions: multimorbidity, often defined as the occurrence of two or more chronic diseases within the same person, is now the norm in older people, but is also common in younger adults.[3] Multimorbidity has been rising in prevalence over recent years,[4] and the rapid increase in the number of people living with chronic illness and multimorbidity, in high, middle or lower income countries, has resulted in pressure on health systems worldwide.[5]

Multimorbidity is associated with functional impairment,[6] reduced quality of life,[7] increased mortality, polypharmacy resulting in higher rates of adverse drug events, greater workload[8] and greater use of unplanned healthcare.[9] People with multimorbidity frequently receive care from both primary care and multiple specialists, who may not communicate effectively with each other,[10] leading to disorganised and fragmented care,[11] and adding to patient-experienced illness burden.[12]

A systematic review attempting to determine the epidemiology of multimorbidity in primary care estimated the prevalence to range from 12.9% in those aged 18 years and above to 95.1% in a population aged 65 years and older.[5] The prevalence of multimorbidity in the Australian population is reported to be 25.7%.[13] Sixteen per cent of patients had more than one chronic condition in a retrospective cohort study carried out in England involving a people aged 18 years or over attending general practice.[14] A large study in Scotland found that more than 40% of the population at any age had at least one long-term condition and almost 25% of the entire population had more than one long-term condition.[3] Despite efforts to standardise terminology,[15] comparisons are hampered by differences in definition of multimorbidity[16] Although estimates of prevalence in South Asia range from 4.5% to 83%,[17] no data were available from Sri Lanka, but NCDs are estimated to account for 75% of total deaths in the country, lower than Australia (91%) and the UK (88%).[18]

Despite the prevalence of multimorbidity increasing with age, the absolute number of people with multimorbidity is higher in people younger than 65 years due to the age distribution of the population, particularly in areas with socioeconomic deprivation contributing to health inequalities.[3] Barnett and colleagues (2012) reported that those living in the most deprived areas suffered greater multimorbidity, which developed 10 to 15 years earlier than in the least deprived decile of the population.[3]

The World Health Organization (WHO)[19] has highlighted the importance of a systems approach to multimorbidity and the challenges it poses for safe primary care, with a recommendation that awareness should be raised among policy-makers and health care providers that multimorbidity is the norm and not the exception among people with long-term

conditions. Furthermore, the WHO concluded that policies were required which tackled the social determinants of multimorbidity.[19]

Both UK and Australia are high income countries, well known for their strong primary health care systems, whereas Sri Lanka, a low middle-income country, is noted for its good health indicators. Sri Lanka has, despite economic, political and social problems and thirty years of a bitter civil war ending in 2009, consistently maintained overall exemplary health indicators with a life expectancy at birth of 75 years, a maternal mortality ratio of 30 per 100,000 live births and an infant mortality rate of 8.5 per 1,000 live births (WHO, 2016) which are thought to be achieved through a strong primary health system. The primary health care systems in both UK and Sri Lanka are available free at the point of delivery through a national health system. In Australia, all citizens are covered by a universal health insurance scheme. Under this scheme, the majority of GP services (around 87%) are provided free to the patient at the point of delivery. In the UK, general practitioners (GPs) are the key primary health care provider, delivering curative and preventive services for their registered populations and functioning as gatekeepers to secondary care. In Australia, while patients are free to see any GP they wish, GPs provide the bulk of health care and act as gatekeepers to Government subsidised secondary care. In Sri Lanka, GPs do not have a gatekeeper function, with patients free to access any GP or specialist of their choice. In Sri Lanka, doctors functioning as GPs outside the state system and private owned hospitals, also provide primary health care, adding considerably to private health expenditure in Sri Lanka. Another distinct feature of Sri Lankan primary health care is the role of Medical Officer of Health (MOH) who is expected to deliver preventive health care services to a designated population.

Despite considerable differences in health care structure and financing, all three countries face the challenge of multimorbidity, and an understanding of how each country is addressing this challenge is needed. An analysis of the national health policies which govern the practices in each country will provide an insight on countries' steps towards addressing multimorbidity and how they would be developed further to improve outcomes.

The WHO (2016) has highlighted the importance of policies referring to multimorbidity for safer health systems.[19] A recent European policy analysis proposed that care for people with multimorbidity could be considerably improved with more integration and patient centredness, by aligning policy, regulatory and financial environments supporting integrated care for people with multimorbidity, and through development of multidisciplinary guidelines for multimorbidity. [23] A summary report of the roundtable meeting held in October 2015 hosted by the Academy of Medical Sciences entitled, 'Multiple morbidity as a global health challenge', concluded that based on the universal nature of the threat, it was advisable not to consider countries separately but to share common lessons across all settings.[24] The current study comparing policies relating to multimorbidity in UK, Australia and Sri Lanka is a first step to sharing experiences and learning from each other. These three countries were selected for this study because they provided examples, familiar to the authors, which emphasise primary care despite their differences in healthcare financing, systems and national income.
We aimed in this study to compare policies related to multimorbidity in primary health care in UK, Australia and Sri Lanka in order to identify policy initiatives, gaps and opportunities for further improvement.

Methods

We conducted a content analysis of policy documents and guidelines issued by government and other key policymakers from United Kingdom, Australia and Sri Lanka during the twelve years spanning 2006 and 2017. The time period was selected to ensure that relevant current policies were included. The research team were academic clinicians from these three countries: two general practitioners, one community health specialist and a specialist in health service management.

Key search terms agreed included: multimorbidity, multi-morbidity, complex multimorbidity, comorbidity, syndromes, chronic disease, chronic conditions, long-term conditions, non-communicable diseases, policy, programs, and health plans. The two electronic databases PubMed and Google scholar were searched using these key terms. Reference lists of key articles accessed were also searched. As most of the policy documents were published on government websites, as a final step, key documents and policy repositories available in the relevant countries, known to the investigators were also accessed.

The policy documents and guidelines were examined for their relevance to multimorbidity in primary care including health promotion, preventive, curative and rehabilitative interventions. Policies covering the following areas, whether explicitly or implicitly, were considered: specific guidelines /policy on multimorbidity; policies / guidelines which consider multiple chronic conditions; policies /guidelines for specific chronic conditions (including diabetes, mental illness, cancer, HIV/AIDS, drug dependence); policies on medicines /drugs; policies / guidelines on risk factors for chronic conditions (including alcohol, tobacco, obesity, nutrition); public health / health promotion; health care delivery and structure; health care quality and

safety; and health information. Where a specific guideline/policy was available for multimorbidity, policies that considered multiple chronic conditions in the same country were excluded to prevent duplication.

"The initial selection of policies was carried out by NC and RP and further reviewed by NS and CH. The two major criteria for validation were relevance of the policy to multimorbidity and whether it was a national policy document."

The initial selection of policies were carried out by NC and RP and further reviewed by NS and CH. During the validation of the relevance of the policy to multimorbidity, the acceptability of the document as a policy document in the national context were assessed. Secondly, we examined how these policies were translated into practice. Thirdly, we examined policy gaps for each country in relation to each other and the wider literature, to identify implications for further development. The data were initially extracted to a data extraction format comprising policy name, how policy was put into practice, policy gaps and opportunities for development.

Results

The search retrieved 16 documents from the UK, 22 from Australia and 18 from Sri Lanka. Of these, 13 documents from UK, 12 from Australia and 13 from Sri Lanka were scrutinized by the research team as they related to multimorbidity. These documents ranged from 2 to over 100 pages, providing national level policies relating directly or indirectly to care from multimorbidity or its prevention from the three countries under study. The number of

documents which fulfilled the criteria of inclusion for each country is presented in Table 1. A detailed description of the findings of the policy documents and guidelines can be accessed in the supplementary material.

Table 1 Summary of documents included for each country

Criteria	Number of documents retrieved		
	UK	**Australia**	**Sri Lanka**
Specific guidelines/policy on multimorbidity	1	0	0
Policies/ guidelines which consider multiple chronic conditions	N/A	1	1
Policies/guidelines for specific chronic conditions (including diabetes, mental illness, cancer, HIV/AIDS, drug dependence)	5	6	3
Policies on medicines/drugs	1	1	1
Policies/ guidelines on risk factors for chronic conditions (including alcohol, tobacco, obesity, nutrition)	1	1	3
Public health/ health promotion	4	1	1
Health care delivery and structure	2	3	4
Health care quality and safety	1	2	1
Health information	1	1	2

The UK issued NICE guidelines [NG56]; Multimorbidity: clinical assessment and management which was a specific guideline on multimorbidity while the other two countries lacked specific documents. However, the National Strategic Framework for Chronic Conditions in Australia explicitly states that one of its objectives is to better cater for shared health determinants, risk factors and multimorbidities across a broad range of chronic conditions, implying that the

concept of multimorbidity has been integrated in the national health agenda. The National Policy and Strategic framework for Prevention and Control of Non-Communicable Disease (NCD) (2010) of Sri Lanka addresses cardiovascular disease (including coronary heart disease, cerebrovascular disease and hypertension), diabetes mellitus, chronic respiratory diseases and chronic renal disease implying the importance of addressing multiple conditions in a single policy.

All three countries possessed policies/ guidelines for conditions such as HIV, cancer and mental health. However, conditions such as learning disabilities, chronic pain syndromes, frailty, and sensory impairment were not addressed in most of the policies.

The UK had specific guidelines on multimorbidity with relation to medicines, health care safety and health information (Multimorbidity Quality Standard [QS153] June 2017; RCGP Online services: Multimorbidity Guidance for general practice March 2016; Multimorbidity and polypharmacy. Key therapeutic topic [KTT18] January 2017 (not formal NICE guidance) while the other two countries had addressed multimorbidity in their general guidelines on these aspects to varying degrees.

A promising feature observed in the Australian health system is the significance given to providing better care for marginalized and deprived citizens, initiatives which are expected to reduce health inequalities. The link between multimorbidity and deprivation or poverty[3], although well known, is not well acknowledged in policy and few interventions are designed to address both in the UK policies.

A promising feature of most of Sri Lankan policies is the high priority given to preventive and community based approaches, which recognises that conditions are often clustered[20] and that a primary care focus to multimorbidity is essential.[21] Although Public Health England has recognised the importance of determinants of multimorbidity, for example through 'social determinants of health' (Healthy Lives, Healthy People: Strategy for Public Health in England (White Paper) November 2010) the responsibility for much preventive work is passed to local authorities and service providers with less emphasis on empowerment of individuals, families and communities. In Australia, there was no single policy addressing specific risk factors for multimorbidity. While the existence of health promotion policies for socially disadvantaged groups (e.g. indigenous Australian peoples) is welcomed a national public health policy on multimorbidity is lacking.

The analysis of how the policies are translated into practice revealed that, in the UK, current guidelines do not address the need for GPs to integrate their activities with third sector or non-governmental organisations (NGOs), local communities or families, and although self-management is an important feature of UK health policy, there is less focus on self-management for multimorbidity. In Sri Lanka, most policies focus on infrastructure development with very low priority being given to managing patients with NCDs. Absence of an identified care provider accountable for managing patients with multimorbidity might be considered a gap in health care policy and systems in all three countries. However, as most primary care providers are generalists or expert generalists it enables them to take a tailored, patient-centred care approach for people with multiple conditions.

Discussion

There are important lessons to be learned from all three countries under study. The United Kingdom leads the way in producing clinical guidelines that directly address the problem of multimorbidity. Australia has developed several policies which are directly concerned with the health of socially disadvantaged groups. Barnett et al (2012) highlights the association of multimorbidity with socioeconomic deprivation and the need for personalised, comprehensive continuity of care in socioeconomically deprived areas.[3] Policies in Sri Lanka are more concerned with preventing chronic conditions and on community mobilisation and empowerment; the association between lifestyle factors and development of chronic diseases is well established and health promotion is considered the single most cost-effective intervention in addressing such risk factors, particularly for cardiovascular diseases, diabetes and cancer.[22] A strong preventive healthcare structure, backed by policies giving priority to prevention could explain good health indicator performance, despite the low economic status, of Sri Lanka. However, with the demographic shift and rapidly ageing population Sri Lanka requires specific policies/guidelines addressing multimorbidity.

These policy findings need to be considered within the context of each national health system. For example, the analysis of policies in Sri Lanka implies that there is no integrated care for patients with multimorbidity which appears to be a major vacuum. However, most medical practitioners in Sri Lanka are generalists or expert generalists and referral to tertiary or super-specialists is minimal. Additionally, the private sector GP system operating in Sri Lanka is considered to deliver patient-centred, continuity of care in most settings.[25]

Identifying how practice varies from policy demands a careful study of health care structures and delivery in each country which was beyond the scope of this study, and could be considered

a limitation. We focused on policies implemented or active during the period 2006 to 2017 since these were deemed relevant to the present day. However, other policies in the three countries implemented prior to 2006 may have contributed to current care for people with multimorbidity.

There are gaps in our knowledge of what types of systems or care programs are effective for people with multimorbidity.[26] Most primary care trials seeking to improve outcomes for patients with multimorbidity, using complex interventions to organise care delivery differently either through case management, enhanced multidisciplinary team work or greater patient and functional orientation, have overall shown mixed results with some improvements in prescribing.[27] More research is needed to develop and evaluate interventions for patients with multimorbidity, including in middle and low income countries.

This study shows the importance of sharing and learning from policy differences but further work is needed to examine how policies in different countries are translated into practice and how this affects the quality of health service provision and outcomes. Whether a move towards greater generalism in primary and secondary health care provision will help meet the needs of patients with multimorbidity should also be explored. Perhaps key lessons for these countries are that Sri Lanka needs to focus on policies which emphasise integration and patient centred health care delivery for people with multimorbidity while policies on community based approaches to address determinants of multimorbidity are needed in the UK and Australia.

References

1. WHO. Life expectancy at birth (years), 2000-2015. Geneva: World Health Organization, 2015.
2. van Oostrom SH, Gijsen R, Stirbu I, et al. Time trends in prevalence of chronic diseases and multimorbidity not only due to aging: data from general practices and health surveys. *PLoS One* 2016;11(8):e0160264. doi: 10.1371/journal.pone.0160264
3. Barnett K, Mercer SW, Norbury M, et al. Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *Lancet* 2012;380(9836):37-43. doi: 10.1016/S0140-6736(12)60240-2
4. Uijen AA, van de Lisdonk EH. Multimorbidity in primary care: prevalence and trend over the last 20 years. *Eur J Gen Pract* 2008;14 Suppl 1:28-32. doi: 10.1080/13814780802436093
5. Violan C, Foguet-Boreu Q, Flores-Mateo G, et al. Prevalence, determinants and patterns of multimorbidity in primary care: a systematic review of observational studies. *PLoS One* 2014;9(7):e102149. doi: 10.1371/journal.pone.0102149
6. Kadam UT, Croft PR, North Staffordshire GPCG. Clinical multimorbidity and physical function in older adults: a record and health status linkage study in general practice. *Fam Pract* 2007;24(5):412-9. doi: 10.1093/fampra/cmm049
7. Fortin M, Lapointe L, Hudon C, et al. Multimorbidity and quality of life in primary care: a systematic review. *Health Qual Life Outcomes* 2004;2:51. doi: 10.1186/1477-7525-2-51
8. Buffel du Vaure C, Ravaud P, Baron G, et al. Potential workload in applying clinical practice guidelines for patients with chronic conditions and multimorbidity: a systematic analysis. *BMJ Open* 2016;6(3):e010119. doi: 10.1136/bmjopen-2015-010119

9. Harrison C, Britt H, Miller G, et al. Multimorbidity. *Aust Fam Physician* 2013;42(12):845.

10. Farmer C, Fenu E, O'Flynn N, et al. Clinical assessment and management of multimorbidity: summary of NICE guidance. *BMJ* 2016;354:i4843. doi: 10.1136/bmj.i4843

11. Sinnott C, Mc Hugh S, Browne J, et al. GPs' perspectives on the management of patients with multimorbidity: systematic review and synthesis of qualitative research. *BMJ Open* 2013;3(9):e003610. doi: 10.1136/bmjopen-2013-003610

12. Rosbach M, Andersen JS. Patient-experienced burden of treatment in patients with multimorbidity - A systematic review of qualitative data. *PLoS One* 2017;12(6):e0179916. doi: 10.1371/journal.pone.0179916

13. Harrison C, Henderson J, Miller G, et al. The prevalence of diagnosed chronic conditions and multimorbidity in Australia: A method for estimating population prevalence from general practice patient encounter data. *PLoS One* 2017;12(3):e0172935. doi: 10.1371/journal.pone.0172935

14. Salisbury C, Johnson L, Purdy S, et al. Epidemiology and impact of multimorbidity in primary care: a retrospective cohort study. *Br J Gen Pract* 2011;61(582):e12-21. doi: 10.3399/bjgp11X548929

15. Le Reste JY, Nabbe P, Rivet C, et al. The European general practice research network presents the translations of its comprehensive definition of multimorbidity in family medicine in ten European languages. *PLoS One* 2015;10(1):e0115796. doi: 10.1371/journal.pone.0115796

16. Willadsen TG, Bebe A, Koster-Rasmussen R, et al. The role of diseases, risk factors and symptoms in the definition of multimorbidity - a systematic review. *Scand J Prim Health Care* 2016;34(2):112-21. doi: 10.3109/02813432.2016.1153242

17. Pati S, Swain S, Hussain MA, et al. Prevalence and outcomes of multimorbidity in South Asia: a systematic review. *BMJ Open* 2015;5(10):e007235. doi: 10.1136/bmjopen-2014-007235

18. WHO. Noncommunicable diseases country profiles 2014. Geneva, 2014.

19. WHO. Multimorbidity: Technical Series on Safer Primary Care. Geneva, 2016.

20. Mino-Leon D, Reyes-Morales H, Doubova SV, et al. Multimorbidity patterns in older adults: an approach to the complex interrelationships among chronic diseases. *Arch Med Res* 2017;48(1):121-27. doi: 10.1016/j.arcmed.2017.03.001

21. Starfield B. Global health, equity, and primary care. *J Am Board Fam Med* 2007;20(6):511-3. doi: 10.3122/jabfm.2007.06.070176

22. Puska P, Vartiainen E, Nissinen A, et al. Background, Principles, Implementation, and General Experiences of the North Karelia Project. *Glob Heart* 2016;11(2):173-8. doi: 10.1016/j.gheart.2016.04.010

23. Rijken M, Struckmann V, Van der Heide I, et al. How to improve care for people with multimorbidity in Europe? Policy Brief 23. WHO Euro. ISSN 1997-8073. Policy Brief 23. Geneva, 2017.

24. Sciences TAoM. Multiple morbidities as a global health challenge: Summary of a roundtable meeting held on 7 October 2015 hosted by the Academy of Medical Sciences. London, 2015.

25. Govindaraj R, Navaratne K, Cavagnero E, et al. Health care in Sri Lanka: What can the private health sector offer? Health, Nutrition, and Population (HNP) Discussion Paper. New Delhi, 2014.

26. Hopman P, de Bruin SR, Forjaz MJ, et al. Effectiveness of comprehensive care programs for patients with multiple chronic conditions or frailty: A systematic literature review. *Health Policy* 2016;120(7):818-32. doi: 10.1016/j.healthpol.2016.04.002

27. Smith SM, Wallace E, O'Dowd T, et al. Interventions for improving outcomes in patients with multimorbidity in primary care and community settings. *Cochrane Database Syst Rev* 2016;3:CD006560. doi: 10.1002/14651858.CD006560.pub3

Table 1: Key policies related to multimorbidity in UK, Australia and Sri Lanka

Thematic area	United Kingdom	Australia	Sri Lanka
Specific guidelines/policy on multimorbidity	**NICE guidelines [NG56]; Multimorbidity: clinical assessment and management: September 2016** ➢ Identification of multimorbidity and people who could benefit from a multimorbidity approach. ➢ Assessment of sequelae of multimorbidity such as frailty in primary care, community care and hospital outpatient settings. ➢ Approach to care that takes account of multimorbidity; Individualized care plan taking into account quality of life (QOL), polypharmacy and drug interactions.		
Policies/ guidelines which consider multiple chronic conditions		**The National Strategic Framework for Chronic Conditions (Australian Health Ministers' Advisory Council, 2017, National Strategic Framework for Chronic Conditions. Australian Government. Canberra.)** ➢ Based on national vision that "all Australians live healthier lives through effective prevention and management of chronic conditions." ➢ The Framework will better cater for shared health determinants, risk factors and multimorbidities across a broad range of chronic conditions. ➢ The Framework is primarily health focused, it recognizes that the health sector must take a leadership role, where appropriate, to foster advocacy, engagement and partnering with external sectors to achieve its vision. Relevant external sectors may include environment, housing, education, employment, transport and social services. ➢ Guidance for intra- and inter-sectoral integration and coordination. ➢ Policy guidance focuses on holistic approach for chronic disease rather than individual disease.	**National Policy and Strategic framework for Prevention and Control of Non-Communicable Diseases (NCDs) 2010** ➢ Addresses cardiovascular disease (including coronary heart disease, cerebrovascular disease and hypertension), diabetes mellitus, chronic respiratory diseases and chronic renal disease. ➢ Focuses on preventing chronic non-communicable diseases (NCDs) associated with shared modifiable risk factors, providing acute and integrated long-term care for people with NCDs, and maximizing quality of life. ➢ Divisional secretariat area is expected to have a network of services that will ensure coverage of: health promotion activities, risk factor assessment, individual focused communication for risk modification, early diagnosis, treatment emphasizing continuity of care, including palliative care, basic emergency care, appropriate referral and back referral system that efficiently links with secondary care. ➢ Primary care facilities to be made accessible and be equipped with core set of technologies and generic drugs to manage major NCDs, risk factors and common medical emergencies

		➢ This includes, pharmacy and medicine price reforms; the Healthier Medicare Initiative, particularly Health Care Homes — Reform of Primary Health Care System; the establishment of Primary Health Networks; the redevelopment of the My Health Record; landmark mental health reforms; reforms to improve aged care services; and the National Medical Training Advisory Network project. These reforms are supported through Schedule 2 of the Heads of Agreement between the Commonwealth and the States and Territories on Public Hospital Funding (April 2016).	based on the WHO core package of interventions and evidence-based protocols. ➢ Involvement of all first contact health care givers in both the allopathic and non-allopathic health systems (government and private sectors) as an integral part of the primary care delivery system for NCD prevention. ➢ Individuals and communities will be empowered to take responsibility to improve health seeking behaviour and to adopt health life styles. ➢ Communities for health promotion through settings approach. ➢ A community-based surveillance system to monitor trends in risk factors will be established. ➢ Strengthen national health information system including diseases and risk factor surveillance. ➢ The NCD prevention and control unit of the Ministry of Healthcare and Nutrition to serve as the operational and overall coordination body in implementing the National NCD policy under the National Steering Committee for Non-Communicable Diseases and National Health Council. ➢ The planning and coordination unit of PDHS office and the NCD cell of RDHS office to serve as the focal points at the provincial and district levels.
Policies/ guidelines for specific chronic conditions			
Diabetes	**National strategy and policy to prevent type 2 diabetes** Aims to: ➢ Create an integrated strategy for NCDs linked to diet, physical activity and being overweight or obese. ➢ Convey healthier lifestyle messages to the whole population. ➢ Work with caterers, food manufacturers, food retailers and others to encourage people to eat more healthily – and monitoring and assessing the population's diet. ➢ Encourage people to be more physically active (includes organizations with a remit for town	**AU National Diabetes Strategy 2016-2020** ➢ This Strategy's vision is to strengthen all sectors develop, implement and evaluation an integrated and coordinated approach reduce the social, human and economic impact of diabetes in Australia. ➢ Concerning areas in policy leadership and governance, workforce, information and research capacity, financing and infrastructure and partnerships.	

	planning) and monitoring and assessing physical activity levels.		
Mental illness	[2010 to 2015 government policy: mental health service reform Updated 8 May 2015 Does not mention multimorbidity.]	**National Mental Health Strategy** ➢ The National Mental Health Strategy aims to: ➢ Promote the mental health of the Australian community ➢ Where possible, prevent the development of mental disorder ➢ Reduce the impact of mental disorders on individuals, families and the community. ➢ Assure the rights of people with mental illness. ➢ This commitment has been implemented through a series "National mental health plans" which are generally five year plans (2003-08, 2009-14, and 2017-22). ➢ There have also been one off plans – such as the National Action Plan on Mental Health 2006-2011. ➢ This plan provided funding for the Better Access to Mental Health Care Initiative. This initiative provided additional funding of mental health care through new Medicare items for GP care and the creation of GP mental health care plans which allowed GPs to refer patients for Medicare subsidised care from psychologists. More recently there has been the transfer of responsibility for a range of Australian Government mental health and suicide prevention activities to the newly created Australian Government's Primary Health Networks (PHNs) from 1 July 2016. The role of PHNs is to lead mental health planning and integration with states and territory, non-government organization, NDIS providers, private sector, Indigenous, drug and alcohol and other related services and organizations. In addition, 12 PHNs will be established as suicide prevention trial sites which will operate for 3 years and networks. **National mental health commissioner review (2016)**	**[Mental Health Policy of Sri Lanka 2005 (2005-2015)** ➢ Addresses only isolated mental health conditions and no reference to co-existence of other conditions is given.]

		➢ The Commission recommends changes to improve the longer-term sustainability of the mental health system based on three key components: *Person-centred design principles *A new system architecture *Shifting funding to more efficient and effective 'upstream' services and supports	
Cancer	[Improving Outcomes: A Strategy for Cancer January 2011 The document states that the patients are likely to want ''that to be treated as a whole person, not just a set of symptoms"; The strategy does not mention about co-morbidities/ multimorbidity]	The National Cancer Work Plan This is guided by three principles: ➢ To focus on actions requiring national coordination; build on jurisdictional cancer plans and enhance current investments; ➢ Underpinned by best-practice research and evidence-based treatment and supportive care; and ➢ Recognises the tight fiscal environment and the difficulty of funding significant new activity.	**National Policy and Strategic framework for Cancer Prevention and Control April 2015.** ➢ Addresses primary prevention of cancers by addressing risk factors and determinants through improved public awareness and empowerment. ➢ Advocate for early detection of cancers using opportunistic screening by primary care providers and prompt referral of patients. ➢ Propose expansion of rehabilitation, survivorship care and palliative care facilities for cancer patients and support to their caregivers at institutional and community levels. ➢ Acknowledges links with other national programmes and service delivery structures that can facilitate cancer control (NCD policy, health promotion policy and alcohol policy).
HIV/AIDS	No new policy document. The strategy is for 2001	**Seventh National HIV Strategy 2014-2017** ➢ One of five strategies aiming to reduce sexually transmissible infections (STI) and blood borne viruses (BBV), and the morbidity, mortality and personal and social impacts they cause.	**[National HIV – AIDS Policy for Sri Lanka May 2011** ➢ Suggest prevention through multi-sectoral approach. ➢ No reference to co-morbidities.]
Drug dependence	**Clinical Guidelines on Drug Misuse and Dependence July 2017** ➢ Highlights the Identification of physical and psychiatric comorbidities in any type of drug dependence and in various settings.	**National Drug strategy (2010-2015)** ➢ The aim of the National Drug Strategy 2016-2025 is to contribute to ensuring safe, healthy and resilient Australian communities through minimising alcohol, tobacco and other drug-related health, social and economic harms among individuals, families and communities.	

	➢ Addresses the Importance of a treatment and recovery care plan involving a range of clinicians and health care providers, good communication systems with other services and joint working protocols. ➢ Directs the GP to take the lead in caring for individuals with psychosis as comorbidity. Highlights the non-availability of sufficient evidence to recommend dual-focused treatment for management of psychosis and substance use disorder and therefore, recommends patients to be offered specific interventions for each disorder (e.g. substance misuse and psychosis) as outlined in existing guidance. Outlines integrated models and parallel models as treatment delivery models.		
Policies on medicines/drugs	Multimorbidity and polypharmacy. Key therapeutic topic [KTT18] January 2017 (not formal NICE guidance) Recommends using a tailored approach to care that takes account of multimorbidity for people of any age who are prescribed 15 or more regular medicines, and for people of any age who are prescribed 10 to 14 regular medicines or are prescribed fewer than 10 regular medicines but are at particular risk of adverse events.	**[National medicines policy and pharmaceutical benefit scheme 1948 (but evolving since then)** ➢ Objectives are to increase, timely access to the medicines that Australians need, at a cost individual and the community can afford, medicines meeting appropriate standards of quality, safety and efficacy; quality use of medicines; and maintaining a responsible and viable medicines industry. ➢ The Pharmaceutical Benefits Scheme (PBS) is a program of the Australian Government that provides subsidised prescription drugs to residents of Australia, as well as certain foreign visitors covered by a Reciprocal Health Care Agreement.]	**[National Medicinal Drugs Policy for Sri Lanka March 2015** ➢ The main objective is to promote the rational use of medicines by healthcare professionals and consumers. However, no explicit reference is made to treatment of multiple conditions and polypharmacy.]
Policies/ guidelines on risk factors for chronic conditions			
Alcohol/ Tobacco		**National Alcohol Strategy 2016-2021** **National Tobacco Strategy 2012-2018** These are sub-strategies under the National Drug Strategy 2010-2015. ➢ The tobacco strategy explicitly seeks to reduce the risk of conditions such as cancer, cardiovascular disease, chronic obstructive pulmonary disease and other respiratory diseases, peripheral vascular disease and other serious medical conditions.	**Sri Lanka National Policy on Alcohol Control April 2015** ➢ Identifies alcohol as a major risk factor for multiple morbidities. ➢ Mainly focuses on policy directives and preventive strategies through empowerment and community mobilization. ➢ Discusses the importance of a system to coordinate services for alcohol users detected with conditions such as tuberculosis, sexually transmitted diseases and mental disorders. ➢ Introduced the Mawatagama Alcohol Rehabilitation unit as a successful and cost-effective methodology based on the social Ecological Approach to Alcohol-related and Mixed problems and proposes it to be extended island-wide.

		➢ 'Australian Guidelines to Reduce Health Risks from Drinking Alcohol' seek to reduce harmful drinking to reduce health risks.	**National Authority on Tobacco and Alcohol Act, No. 27 of 2006** ➢ An act to provide for the establishment of the national authority on tobacco and alcohol for the purpose of identifying the policy on protecting public health ; for the elimination of tobacco and alcohol related harm through the assessment and monitoring of the production, marketing and consumption of tobacco products and alcohol products ; to make provision discouraging persons especially children from smoking or consuming alcohol, by curtailing their access to tobacco products and alcohol products.
Obesity/ Nutrition	**Clinical guidelines on Obesity Prevention CG 43 December 2006, Updated March 2015** ➢ Discusses patient centred plan for management of obesity but does not address issues of comorbidity.		**National Nutrition Policy of Sri Lanka,2010** ➢ Addresses the life course approach for nutritional issues, mainly concerning children, but with policy guidance for nutrition in morbidities and also emphasising multisectoral coordination and implementation.
Public health/ health promotion	**Healthy Lives, Healthy People: Strategy for Public Health in England (White Paper) November 2010** ➢ Life course framework for tackling the wider social determinants of health. ➢ Address the importance of mental health and reduction in child poverty. ➢ Working collaboratively with business and the voluntary sector through the Public Health Responsibility Deal with five networks on food, alcohol, physical activity, health at work and behaviour change. ➢ NHS health checks for screening for NCDs **Healthy Lives, Healthy People: Update and way forward July 2011** ➢ Sets new responsibilities for local authorities on activities identifying risk factors and prevention programmes (e.g. tobacco control, alcohol and drug misuse services, obesity and community nutrition initiatives, increasing levels of physical activity in the local population, assessment and lifestyle interventions as part of the NHS Health Check	**National Women's Health Policy** ➢ The Australian Government has developed National Men's and Women's Health Policies, to ensure that specific health needs of both men and women are addressed. One priority area focuses on prevention of chronic diseases and injury.	**National Health Promotion Policy, 2010** ➢ Proposes strengthening the life-course approach to health promotion by using appropriate interventions, e.g. strategies to address age specific health issues such as nutrition, non-communicable diseases, reproductive health and reducing inequalities. ➢ Discusses the importance of coordinating bodies at central and peripheral levels and the importance of monitoring and evaluation.

	Programme, public mental health services, birth defects, cancer and long-term conditions). **Public Health Outcomes Framework August 2016** ➢ Addresses a series of risk factors including child poverty, smoking, obesity, diet, physical inactivity, prevention programmes such as cancer screening, TB treatment completion, ongoing conditions such as learning disability, sensory impairment such as sight loss and indicators related to quality of life. **The Health and Social Care Act 2012** ➢ Reducing health inequalities by collaborative working between health bodies. ➢ Improving integration of services.		
Health care delivery and structure	**The national health service (general medical services contracts and personal medical services agreements) (amendment regulations 2015 no. 196)** ➢ Government has given a commitment to provide all patients with a named, accountable, GP who will take lead responsibility for co-ordination of all appropriate services required under their contract and ensure they are delivered to each of their patients when required. **Technical requirements for 2017/18 GMS contract changes** Identification of alcohol and obesity as risk conditions for co-morbidity.	**Primary health networks** ➢ Proposes a Primary Health Organizations (PHOs) structure. The principles for the establishment of PHOs should include: •contestable processes for their establishment; •strong skills based regional Boards, each advised by a number of Clinical Councils, responsible for developing and monitoring clinical care pathways, and Community Advisory Committees; •flexibility of structure to reflect the differing characteristics of regions; •engagement with jurisdictions to develop PHO structures most appropriate for each region; •broad and meaningful engagement across the health sector, including public, private, Indigenous, aged care and NGO sectors; and •clear performance expectations. **National aboriginal and Torres strait islander health plan 2013-2023** ➢ Six strategic directions * Building trust through local partnerships * Building the evidence and implementing what works *Ensuring integrated planning and service delivery *Strengthening the Aboriginal workforce *Ensuring culturally safe work environments and health services *Strengthening performance monitoring, management and accountability	**National Strategic Framework for Development of Health Services 2016 - 2025 Ministry of Health - Sri Lanka** This framework aims to: ➢ Establish a NCD Bureau with facilities for research screening and monitoring of NCDs. ➢ Enhance Health Promotion of individuals. ➢ Establish & sustain the Healthy settings approach (healthy village, healthy market , healthy work place , healthy canteen etc.) and strengthen the legal framework ➢ Implement Accident & Emergency Care Policy with special emphasis on Pre Hospital care and Post trauma care/rehabilitation ➢ Establish of National CKDu Authority and implementation of Strategic plan for CKDu prevention and control ➢ Incorporate Vision 2020 programme as a Government unit under DDG (NCD). ➢ Establishment of sub units under DDG (NCD) to perform research , monitor the disease burden and implement national plans for CVD , DM , COPD (in addition to CKDu , A & E , Eye Diseases) ➢ Family Medicine approach through Primary level curative care institutions, accountable for a defined population ➢ Establish a sustainable back referral system. Major behaviour changes towards healthy life styles. ➢ Implementation of Post Trauma component of National Road Safety Policy.

		Medicare benefits schemes ➢ The Medicare Program ('Medicare') provides access to medical and hospital services for all Australian residents and certain categories of visitors to Australia. The Department of Human Services administers Medicare and the payment of Medicare benefits. The major elements of Medicare are contained in the Health Insurance Act 1973, as amended, and include Free treatment for public patients in public hospitals and The payment of 'benefits', or rebates, for professional services listed in the Medicare Benefits Schedule (MBS).	**Proposed Policy On Restructuring Primary Level Curative Services** ➢ Identifies the issues of Primary care institutions which include: PHC hospital system not being geared to provide curative care services for NCDs, Non-availability of Referral and Back Referral system at PHC hospital and Non-availability of personalized care to the patient. ➢ Proposes strategies: defines catchment area of each PHC hospital, ➢ Introduction of (a) personal medical record book for the patient and to appoint a Medical Officer to each Primary level hospital. **Private Medical Institutions (Registration) Act (2006)** ➢ Provides directives on for the registration, regulation, monitoring and inspection of private medical institutions; and to foster the development of, private medical institutions; and to provide for matters connected therewith or incidental thereto. **National objectives for development physical rehabilitation care** ➢ Recognizes a range of care needs in a range of clinical fields including: mental impairment, mental retardation, physical disabilities, visual disability, hearing impairment, speech-related disability, disabilities in the sexually abused and geriatric disabilities. ➢ Proposes strengthening capability of primary health care staff to diagnose and refer patients in the community/ those attending primary health care facilities for other conditions, in whom the disabilities have not been taken care of.
Health care quality and safety	**Multimorbidity Quality Standard [QS153] June 2017** ➢ Identification. ➢ Assessing values, priorities and goals. ➢ Coordination of care (Person responsible for co-ordination of care). ➢ Reviewing medicines and other treatments.	**The Australian Safety and Quality Framework for Health Care the (Australian Commission on Safety and Quality in Health Care)** ➢ Describes a vision for safe and high-quality care for all Australians, and sets out the actions needed to achieve this vision. The Framework specifies three core principles for safe and high-quality care. These are that care is consumer centred, driven by information, and organized for safety. Health Ministers endorsed the Australian Safety and Quality Framework for Health Care in 2010. **National Health and Medical Research Council (NHMRC)** ➢ The National Health and Medical Research Council (NHMRC) is Australia's leading expert body promoting the development and maintenance of public and individual health standards. ➢ NHMRC brings together within a single national organization the functions of research funding and development of advice	**National Policy on Health Care Quality & Safety March 2015** ➢ Aims to promote evidence-based, ethically accepted clinical practice to ensure the best possible outcomes for patients. However, this does not explicitly address issues related to patients with multiple morbidities.

Health information	**RCGP Online services: Multimorbidity Guidance for general practice March 2016** ➢ Online access to the medical record for patients with multimorbidity.	**My Health Record** ➢ My Health Record is a secure online summary of your health information. You can control what goes into it, and who is allowed to access it. You can choose to share your health information with your doctors, hospitals and other healthcare providers.	**National e-Health Guidelines and Standards [NeGS] Version 1.0 March 2016** ➢ Aims to ensure that future ICT adaptation in the health care sector conforms to a set of uniform guidelines and standards in section of e health Architecture, ICT Governance, Network and Connectivity, Communication Interface, Security, Confidentiality and Privacy, Data Communication Standards. **National Policy on Health Information (2016 draft)** ➢ To ensure 50% of all health institutions generate, disseminate and use timely and quality health information to support organisational management and development. ➢ To make available comprehensive systems for personalized and community based health information management for shared and continuous care of care recipients who receive care at 50% of all Base Hospitals, District General Hospitals, Provincial General Hospitals and Teaching Hospitals. ➢ To ensure optimal data/information sharing and access to, health information in relation to all sharable data in health information systems, while ensuring ethical considerations and confidentiality of care recipients. Page 10 of 12 ➢ To encourage suitable innovations related to health information management and eHealth in all information processes; while ensuring interoperability of information systems. ➢ To ensure security and integrity of all health data/information. ➢ To ensure sustainability of all health information systems.