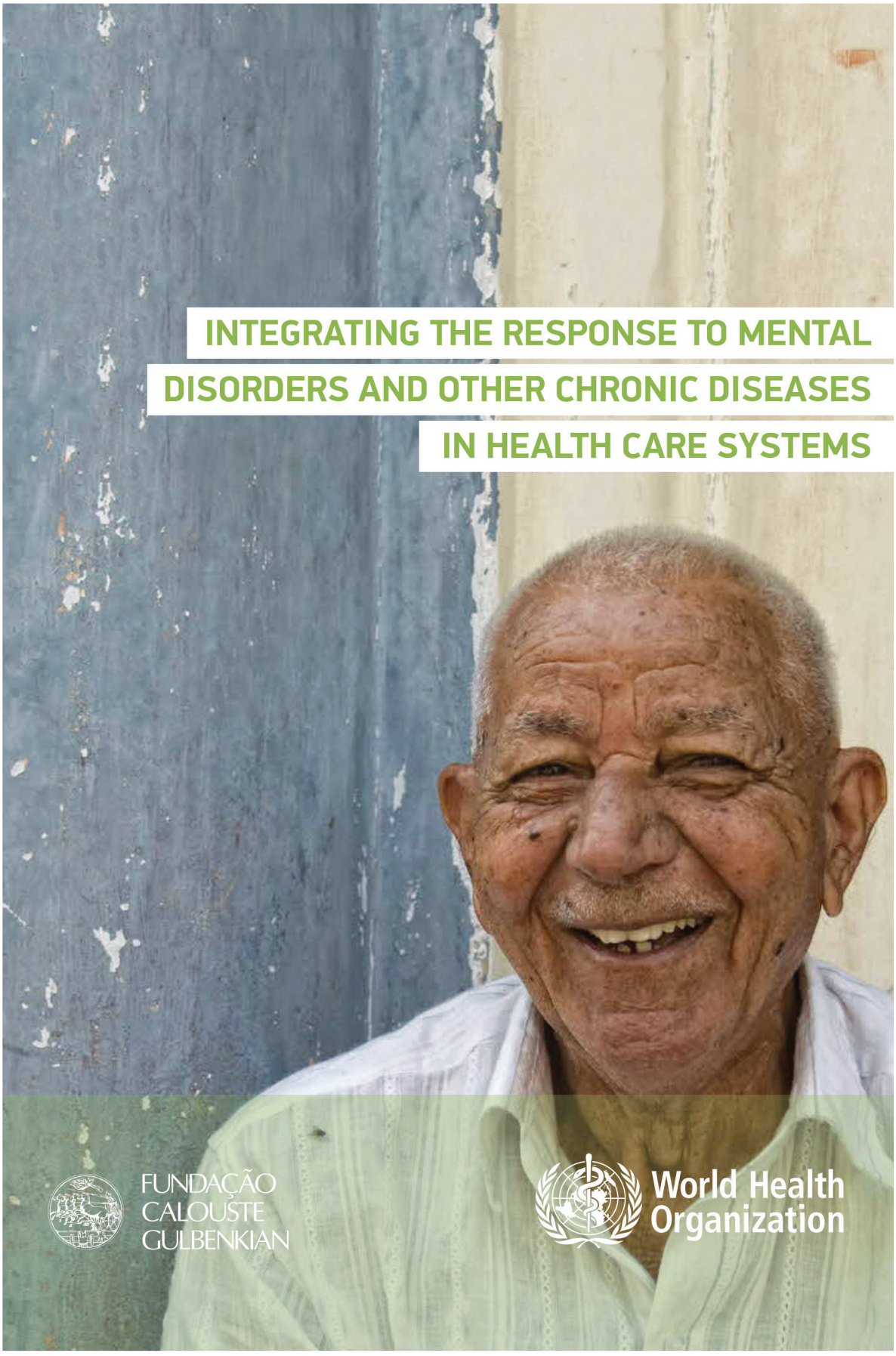
INTEGRATING THE RESPONSE TO MENTAL DISORDERS AND OTHER CHRONIC DISEASES IN HEALTH CARE SYSTEMS



FUNDAÇÃO CALOUSTE GULBENKIAN

World Health Organization

WHO Library Cataloguing-in-Publication Data:

Integrating the response to mental disorders and other chronic diseases in health care systems.

1.Mental Disorders. 2.Mental Health Services. 3.Chronic Disease. 4.Delivery of Health Care, Integrated. I.World Health Organization.

ISBN 978 92 4 150679 3 (NLM classification: WM 101)

Printed by the WHO document Production Services, Geneva, Switzerland

Suggested citation: World Health Organization and Calouste Gulbenkian Foundation. Integrating the response to mental disorders and other chronic diseases in health care systems. Geneva, World Health Organization, 2014.

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INTEGRATING THE RESPONSE TO MENTAL DISORDERS AND OTHER CHRONIC DISEASES IN HEALTH CARE SYSTEMS

This publication is part of a broader series of thematic papers, co-produced by the World Health Organization and the Calouste Gulbenkian Foundation's Global Mental Health Platform. The series consists of four publications and covers the following topics.

- Innovation in deinstitutionalization: a WHO expert survey;
- Integrating the response to mental disorders and other chronic diseases in health care systems;
- Social determinants of mental health;
- Promoting Rights and Community Living of Children with Psychosocial Disabilities (forthcoming).

INTEGRATING THE RESPONSE TO MENTAL DISORDERS AND OTHER CHRONIC DISEASES IN HEALTH CARE SYSTEMS

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FOREWORD

The Gulbenkian Mental Health Platform and the World Health Organization have collaborated to generate a series of thematic papers on pressing mental health issues of our time. Topics were identified by the Platform's advisory and steering committees, and prioritized based on the issue's potential significance in making a substantial improvement in the global mental health situation. It is perhaps not surprising, therefore, that the topics of the thematic papers are highly consistent with the four key objectives of WHO's Mental Health Action Plan 2013-2020.

Thematic papers in this series address the following important topics: population-based strategies that can be implemented through health and non-health sectors to promote mental health and prevent mental disorders; health-system based strategies to organize and deliver integrated care for mental disorders and other chronic health conditions; and innovative methodologies for shifting from institutional to community-based mental health care. Draft versions of each paper were reviewed by a distinguished group of mental health experts at an International Forum on Innovation in Mental Health, held in October 2013, after which the papers were further revised. An additional thematic paper is currently in production, and will cover strategies to stop human rights violations of children with mental disorders.

The topic of this thematic paper, *Integrating the response to mental disorders and other chronic diseases in health care systems*, was selected because of the fundamental connections between mental disorders and other chronic health conditions, and the implications for mental health care that is integrated with general health care. The paper reviews evidence that demonstrates commonalities among mental disorders and other chronic diseases in terms of their duration and course, as well as many of their underlying causes and consequences. It also describes how these conditions frequently co-occur, leading to synergistic levels of disability and complex health-care management. Finally, the paper reviews models and programmes that have been proposed and/or tested for integrating the response of mental disorders with other chronic diseases.

Integration confers important benefits to both patients and health systems. It improves accessibility, reduces fragmentation, and better meets people's needs and expectations. Yet integration entails not simply 'scaling up', but rather transforming the way that health care is delivered. Changes are needed from micro-level patient interactions to macro-level policy and financing for integration to take hold and flourish.

We trust that you will find this paper both thought provoking and useful, and we encourage you to read the accompanying thematic papers from this series, too.

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ACKNOWLEDGEMENTS

Dan Chisholm (WHO Department of Mental Health and Substance Abuse) coordinated this thematic paper under the overall direction of Shekhar Saxena (WHO Department of Mental Health and Substance Abuse).

Dan Chisholm and JoAnne Epping-Jordan (Seattle, USA) co-wrote this paper.

JoAnne Epping-Jordan (Seattle, USA) served as editorial manager of the overall series of thematic papers.

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All thematic papers were produced under the overall guidance of the Gulbenkian Global Mental Health Platform's Advisory and Steering Committees (below).

Advisory Committee: Paulo Ernani Gadelha Vieira (Fiocruz, Brazil); Marian Jacobs (University of Cape Town, South Africa); Arthur Kleinman (Harvard University, USA); Sir Michael Marmot (University College London, United Kingdom); Mirta Roses Periago(-Former Director, Pan American Health Organization); P. Satishchandra (National Institute of Mental Health & Neurosciences (NIMHANS), India); Tazeen H. Jafar (The Aga Khan University, Pakistan); and Observer to the Advisory Committee, Shekhar Saxena (WHO Department of Mental Health and Substance Abuse).

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EXECUTIVE SUMMARY

KEY MESSAGES

- **Mental disorders share common features with other chronic communicable and non-communicable diseases, including heart disease, stroke, diabetes, and HIV/AIDS:**
  - **They share many underlying causes and overarching consequences;**
  - **They are highly interdependent and tend to co-occur;**
  - **They are best managed using integrated approaches.**
- **The challenge for countries is not simply to scale up existing health services, but also to transform health systems by implementing evidence-based approaches for integrated, effective, and efficient care for mental disorders and other chronic diseases.**
- **Action is needed within and beyond the health sector for integration to take hold.**

BACKGROUND AND CONTEXT

Countries around the world are facing the challenge of ageing populations, the rapid rise of noncommunicable diseases (NCDs), continuing threats of HIV/AIDS and other infectious conditions, and increasingly strong calls to address the social determinants of health and to move towards universal health coverage. The health and social consequences of mental disorders are also increasingly recognized around the world as major threats to health and development. Few countries will be able to respond effectively to the future health and economic burden of these conditions by trying to scale up existing health-care approaches. Potential solutions arise from recognizing and acting upon the commonalities between mental disorders and other chronic diseases, not only in terms of their shared determinants and consequences, but also in terms of common health-care strategies for their prevention and management.

METHODS

Staff members of the WHO Department of Mental Health and Substance Abuse worked closely with an advisory panel of international experts to: 1) review and describe links between mental disorders and other chronic diseases; 2) highlight models of integrated care and prevention; and 3) identify key actions by different actors for taking action. The resultant paper was presented at the Gulbenkian Global Mental Health Platform's International Forum on Innovation in Mental Health, where numerous additional comments were received from mental health experts.

MAIN FINDINGS

Many mental disorders, major NCDs, and certain communicable conditions such as HIV/AIDS and tuberculosis share common features. First, they are chronic, in that they persist over time and require ongoing monitoring and management, frequently over the life course. Second, they share common determinants, in that they arise from a combination of genetic and biological factors, psychosocial and behavioural factors, and social and environmental factors. Likewise, substantial commonalities exist in their consequences. All lead to significant levels of disability, which in turn diminish socioeconomic opportunities. Finally, mental disorders and other chronic diseases are highly interdependent and tend to co-occur.

Various models and programmes have been proposed and/or tested for integrating the response of mental disorders with other chronic diseases. These approaches improve accessibility, reduce fragmentation, prevent duplication of infrastructure and services, and better meet people's needs and expectations. Importantly, they involve not simply scaling up existing health-care systems, but rather strengthening and transforming these systems to provide more integrated, effective, and efficient care. Experiences with integration highlight several potential pitfalls and lessons learnt:

- Truly integrated care involves more than co-locating health workers with diverse specialties into the same building;
- Primary health workers need training, supervision, and support within a broader system of care;
- Health workers at all levels need access to timely, useful data about individual patients and their overall defined population in the form of integrated clinical information systems;
- Successful integration requires attention to vested interests and potential resistance from health workers;
- Models and programmes must be adapted to local contexts;
- Integration takes time and typically involves a series of developments spanning several years.

PRINCIPLES AND ACTIONS

Based on a review of past and present efforts, the paper describes three governing principles for an integrated response to mental disorders and other chronic diseases in health systems.

- **A genuinely public health approach** is needed. This includes a focus on disease prevention and health promotion over the life course, as well as the provision of accessible, comprehensive, and coordinated services to those with identified needs.
- A **systems approach** is key and involves good governance, appropriate resourcing, and timely information, as well as the actual delivery of health services or technologies.
- A **whole-of government, multisectoral approach** is required. Tackling the health, social, and economic consequences of mental disorders and other chronic diseases is not something that the health sector can or should do alone.

A number of practical steps were identified that convert each of these overarching principles into a set of concrete actions or practices. These are shown in the table below.

Principles and actions for an integrated response to mental disorders and other chronic diseases

OVERARCHING APPROACH	KEY PRINCIPLES OR FUNCTIONS	PRACTICAL STEPS THAT CAN BE TAKEN
Public health approach	Life course approach	(Re)design policies and plans to address the health and social needs of people at all stages of life, including infancy, childhood, adolescence, adulthood, and old age.
	Healthy living / behaviours	Promote mental and physical health and well-being through public awareness campaigns and targeted programmes.
	Person-centred, holistic care	Involve patients in the planning of their care; provide self-management support; promote and adopt a recovery approach to care and rehabilitation.
	Coordinated care	Provide training in chronic disease management and prevention; strengthen clinical and health management information systems; develop integrated care pathways.
	Continuity of care / follow-up	Develop or enhance case management mechanisms.
Systems approach	Governance and leadership	Ensure health policies, plans, and laws are updated to be consistent with international human rights standards and conventions.
	Financing	Identify and plan for future resource needs; extend financial protection to the poor, the sick, and the vulnerable; ensure mental health parity.
	Human resources	Train and retain non-specialist health workers to provide essential health care and support for mental disorders and other chronic diseases.
	Essential medicines	Ensure the availability of essential medicines at all levels of the health system (and allow trained, non-specialist providers to prescribe them).
	Information	Establish and embed health indicators for mental disorders and other chronic diseases within national health information and surveillance systems.
Whole-of-government approach	Stakeholder engagement	Support and involve organizations of people with mental disorders and/or other chronic conditions.
	Multisectoral collaboration	Establish a multisectoral working group to identify synergies and opportunities for integrated care and support.

CONCLUSION

Strong links exist between mental disorders and other chronic diseases, not only with respect to their causes and consequences, but also in terms of their prevention and management. Inevitably, redesigning health systems and services towards integrated care poses serious challenges to existing infrastructure, budgets, and health workers. But providing seamless, integrated care that caters to the overall health needs of the person is not just a laudable goal; it is also the most appropriate, feasible, and efficient way of preventing and managing mental disorders and other chronic diseases.

BACKGROUND AND CONTEXT

GLOBAL PUBLIC HEALTH CHALLENGES

The landscape of global public health has been transformed in a relatively short time frame. Life expectancy has improved dramatically in most parts of the world over the last few decades, reflecting the relative success of public health programmes in lowering the incidence and case fatality of infectious diseases and life-threatening maternal and child health conditions. Between 1970 and 2010, life expectancy at birth rose from 56.4 to 67.5 years for men, and from 61.2 to 73.3 years for women.[1] Second, economic development and growth has helped raise living standards for many millions of people, even whole countries, thereby giving them opportunities to consume new goods and services (some of which are actually or potentially detrimental to health, such as tobacco and alcohol, processed foods, and travel by motorized vehicles). Third, technological innovation and market globalization has ensured the rapid spread and uptake of unhealthy commodities and increasingly sedentary lifestyles.

One clear result of this transition has been an alarmingly rapid increase in the incidence and public health burden of noncommunicable diseases (NCDs), which caused an estimated 36 million deaths, or 63% of the 57 million deaths that occurred globally in 2008 (due mainly to cardiovascular diseases, cancers, and chronic respiratory diseases).[2] NCDs also place a grave economic burden on countries. In 2010, the global cost of cardiovascular diseases was estimated at US$ 863 billion; this figure is estimated to rise to more than one trillion dollars by 2030 – an increase of 22%. For cancer, the 13.3 million new cases of cancer in 2010 were estimated to cost US$ 290 billion, and are expected to reach US$ 458 billion in the year 2030. Diabetes cost the global economy nearly US$ 500 billion in 2010, and is projected to rise to at least US$ 745 billion in 2030, with developing countries assuming a much greater share of the economic losses.[3]

At the same time, hundreds of millions of people worldwide are affected by mental disorders. Latest published figures from the Global Burden of Disease 2010 study estimate that 400 million people suffer from depression (including dysthymia), and a further 272 million from anxiety disorders; 59 million suffer from bipolar disorder and 24 million from schizophrenia; 140 million people are affected by alcohol and drug use disorders; and 80 million children have behavioural disorders (conduct disorder or attention deficit hyperactivity disorder).[4] In 2010, these mental and substance use disorders accounted for 7.4% of the global burden of disease, defined as premature death combined with years lived with disability. When taking into account only the disability component of the burden of disease, they accounted for around one quarter of all years lived with disability.[4]

Despite recent global commitment to addressing noncommunicable conditions[5] and mental disorders[6], national and international responses have been generally slow, inadequate, and fragmented. More than fifteen years has passed since the initial Global Burden of Disease study drew pointed attention to the extent of disability and premature death attributable to noncommunicable diseases and mental disorders; yet today, less than 1% of all development assistance for health is directed towards the prevention and control of NCDs, and less than 3% of health budgets of low- and middle-income countries is allocated to mental health.[7] [8]

It is perhaps not surprising, therefore, that many people with mental disorders and/or other chronic conditions fail to receive appropriate care. Multinational epidemiological surveys indicate that in high-income countries, 50% to 90% of people with NCDs have seen a health-care professional in the past year; these

percentages drop to 44% to 70% in low- and middle-income countries. Treatment rates for mental disorders are even more worrisome: ranging from 13% to 33% in high-income countries, and from 5% to 13% in low- and middle-income countries.[9] Stated differently, a person with a mental disorder in a low- or middle-income country has only a 1 or 2 in 10 chance of receiving treatment.

Within the context of increasingly strong calls to address the social determinants of health[10] and to move towards universal health coverage, few countries will be able to respond effectively to the future health and economic burden that mental disorders and other chronic NCDs will pose simply by pursuing 'business as usual' approaches. Rather, health systems need new approaches that are capable of mounting an effective, integrated, and efficient response to the prevention and management of mental disorders and other chronic conditions.

SYNERGIES AND SOLUTIONS

Across the spectrum of noncommunicable and communicable diseases, all chronic conditions can be characterized by long duration (of at least three months), waxing and waning symptoms, and often-slow progression. They include:

- *Mental, neurological, and substance use disorders* (e.g. depression, schizophrenia, epilepsy, and alcohol dependence);
- *Other chronic NCDs* (e.g. cardiovascular disease, diabetes, cancer, and chronic respiratory disorders, which were singled out for consideration at the UN High-Level Meeting on NCDs in 20115; other conditions span sensory, digestive and musculoskeletal disorders); and
- *Chronic communicable diseases* (e.g. HIV/AIDS, tuberculosis, and viral hepatitis).

Potential sol utions arise from recognizing and acting upon the commonalities among these conditions, not only in terms of their shared determinants and public health characteristics, but also in terms of common strategies for their promotion, prevention, management, and control.

Integrated responses to these chronic conditions make sense for at least three important reasons. First, chronic diseases have common causes and consequences. Second, most people have more than one risk factor and/or chronic disease (e.g., obesity and depression, or diabetes and schizophrenia, or HIV/AIDS, asthma, and anxiety). This is referred to as comorbidity or multimorbidity and represents a growing part of the patient population around the world. Third, most chronic diseases place similar demands on health workers and health systems. An integrated approach to organizing care and managing these conditions can reduce fragmentation and improve efficiency.

METHODS

The paper covers several important issues related to integrated responses for mental disorders and other chronic diseases.

- It begins by assessing potential links between mental disorders and other chronic diseases in terms of their duration and course, their underlying determinants, and their consequences.
- It next reviews models or programmes of prevention and care that have been developed, implemented, and evaluated, with a view to eliciting key dimensions of an effective, integrated platform for chronic disease prevention and management.
- On the basis of this review of evidence, the paper then outlines a core set of governing principles and actions for an integrated response to mental disorders and other chronic diseases in health systems.

To develop this paper, staff members of WHO's Department of Mental Health and Substance Abuse worked closely with an advisory panel of international experts, who collectively have in-depth experience and expertise spanning the fields of health systems and services research, chronic disease management, health policy development, and integrated care implementation. Members of this expert panel are listed in the acknowledgements.

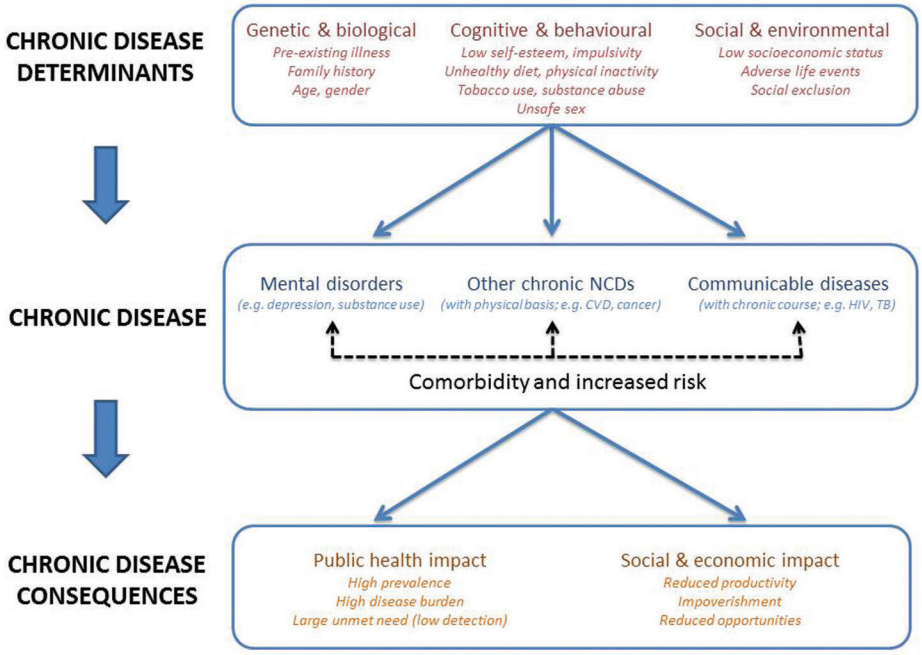
An annotated outline of the paper was developed and reviewed by the expert panel; they also were asked to contribute text on various topics. The different contributions were integrated into a full draft, which then underwent a further round of review, discussion, and revision. The paper was then presented at the Gulbenkian Global Mental Health Platform's International Forum on Innovation in Mental Health, where numerous additional comments were received from mental health experts. The paper was subsequently substantially revised.

MAIN FINDINGS

MENTAL DISORDERS AND OTHER CHRONIC DISEASES

This section describes known links between mental disorders and other chronic diseases in terms of their duration and course (their chronicity), their underlying determinants, and their consequences. These shared relationships are summarized in Figure 1. As depicted by the figure, mental disorders, other NCDs, and communicable conditions share common determinants. In addition, they frequently co-occur: mental disorders can be precursors to other chronic diseases, consequences of them, or the result of interactive effects. Lastly, they have similar consequences in terms of their public health, social, and economic impacts.

Figure 1. Links between mental disorders and other chronic diseases



DETERMINANTS OF MENTAL DISORDERS AND OTHER CHRONIC DISEASES

Determinants are factors that account for the underlying causes of a health condition; their scope extends beyond biomedical or pathophysiological explanations. In the case of HIV/AIDS, for example, the responsible pathogen is HIV, but determinants include risky behaviours (notably unprotected sexual

activity) and a range of social and environmental circumstances (e.g. socioeconomic status, gender). Many determinants have dual valence: a potentially positive or negative bearing on health. For example, the neighbourhood in which ones lives can serve as a protective factor or as an adverse risk factor for a range of chronic diseases.

With respect to mental health specifically, a companion thematic paper in this series provides a comprehensive investigation into the adverse and protective social factors affecting mental health and well-being. Table 1 provides a brief comparison between key risk factors for three prominent chronic conditions: depression, diabetes, and HIV/AIDS. Risk factors are grouped into three categories (genetic and biological; psychosocial and behavioural; social and environmental). These diseases share many commonalities, including inherited risk (a family history of the disease), the influence of behaviour on disease incidence, and the effect of socioeconomic position or deprivation on health status. Many of these risks to health are also interrelated; for example, low socioeconomic status increases the risk of trauma or neglect during childhood, which in turn increases the risk of anxiety and depression in early life and later in life, which can increase the risk of alcohol or substance abuse, and then increase the risk of exposure to HIV or worsen outcomes in people with diabetes.

From this risk factor perspective, the precise biological mechanisms responsible for diseases are less important than the overlapping and consistent influence of behaviour and family characteristics on disease outcomes, both of which are shaped by social factors.

Table 1. Risk factors for three chronic diseases

	GENETIC AND BIOLOGICAL FACTORS	PSYCHOSOCIAL AND BEHAVIOURAL FACTORS	SOCIAL AND ENVIRONMENTAL FACTORS
Depression	Family history Female gender Physical illness	Low self-esteem Substance abuse Physical inactivity	Family detachment Childhood adversity Social isolation/exclusion Low socioeconomic status
Diabetes	Family history Increased age High body mass index	Unhealthy diet Physical inactivity Tobacco use	Low socioeconomic status Childhood adversity
HIV/AIDS	Family history (mother to child transmission)	Unsafe sex Injecting drug use	Low socioeconomic status

One risk factor in particular, exposure to childhood adversities, has been related consistently to the presence of a range of chronic conditions in later life. Across numerous countries and studies, the presence of childhood adversity (defined to include physical and sexual abuse, neglect, family violence, and death of a parent, among other stressors) has been related to later-life mental disorders and a range of adult-onset NCDs, including heart disease, diabetes, asthma, cancer, and arthritis.[11 12 13 14] Of note, the greater number of adversities experienced during childhood, the higher the risk of developing mental disorders or chronic physical disorders in adulthood.[11 15 16 17]

CONSEQUENCES OF MENTAL DISORDERS AND OTHER CHRONIC DISEASES

The consequences of chronic disease can be viewed in terms of their public health impact (disease course and disease outcome),and also more broadly in terms of their social and economic consequences. Table 2 displays these different consequences using the same index conditions as Table 1 (depression, diabetes, HIV/AIDS). Again, there is a high degree of overlap between diseases, both in terms of their public health characteristics and their broader societal consequences. All lead to significant levels of illness, disability, and premature death, particularly among more socioeconomically disadvantaged groups. This in turn reduces income, economic productivity, and socioeconomic opportunities for individuals, families, and communities. These diseases also are touched by the spectre of stigma, which along with another shared characteristic – low levels of recognition or detection in the early stages of disease – have a powerful influence on both the demand for care (help-seeking) and its appropriate supply.

Table 2. Consequences of three chronic diseases

	PUBLIC HEALTH CHARACTERISTICS AND CONSEQUENCES	SOCIAL, ECONOMIC AND HUMAN DEVELOPMENT CONSEQUENCES
Depression	Low recognition/detection High incidence, prevalence, and remission High disease burden (disability, suicide) High level of comorbidity	High stigma/low social acceptance High economic losses/impact Observable social gradient Reduced choices and capabilities
Diabetes	Low recognition/detection High prevalence, low remission High disease burden (disability, death) High level of comorbidity	High stigma/low social acceptance High economic losses/impact Significant social gradient Reduced choices and capabilities
HIV/AIDS	Low recognition/detection High prevalence in exposed populations High disease burden (disability, death) High level of comorbidity/co-infection	High stigma/low social acceptance High economic losses/impact Significant social gradient Reduced choices and capabilities

Notwithstanding their similar consequences, important distinctions have been documented between mental disorders and other chronic conditions. Cross-national data have demonstrated that on average, anxiety and/or depressive disorders are associated with higher rates of severe disability[18] and poorer health status[19] compared with a range of other conditions, including angina/heart disease, diabetes, asthma, and arthritis.

The most adverse consequences are found among those who have both a mental disorder and one or more other chronic conditions. They experience levels of disability that are greater than the additive effects of each disorder in isolation. In particular, depression combined with one or more other chronic conditions is associated with the worst health status overall.[19]

FURTHER LINKS BETWEEN MENTAL DISORDERS AND OTHER CHRONIC DISEASES

Mental disorders affect, and are affected by, other chronic diseases. They can be precursors of one another, consequences of them, or the result of interactive effects. Anxiety and depression initiate a cascade of adverse changes in endocrine and immune functioning; thereby creating increased susceptibility to a range of other conditions.[20] This evidence has led some experts to speculate whether common causal physiological pathways, such as those involved with inflammation, underlie some mental disorders and other major NCDs such as cardiovascular diseases. Mental disorders also affect other conditions through compromised health behaviour. For example, depression, anxiety disorders, and schizophrenia are associated with tobacco use, and schizophrenia and depression can reduce adherence to medication therapies.[21]

Research has demonstrated bidirectional links between mental disorders and a range of other chronic diseases, including cardiovascular diseases (see Panel 1 for detail). People with panic disorder have a higher prevalence of asthma, and people with asthma have higher prevalence of panic attacks.[22] Up to 29% of people with hypertension, 22% of people with myocardial infarction, 30% of people with epilepsy, 31% of people with stroke, 27% of people with diabetes and 33% of people with cancer suffer from comorbid depression.[23] Mental disorders also are interwoven with HIV/AIDS. Between 11% and 63% of HIV-positive people in low- and middle-income countries have depression.[24 25] In the United Republic of Tanzania, for example, one study showed that 57% of HIV-positive women experienced depression at least once during the study period of 6 to 8 years, and that depression was associated with a greater likelihood of disease progression and death. [26]

Panel 1. Links between mental disorders and cardiovascular diseases

People suffering from common mental disorders – depression and anxiety disorders – are at heightened risk of other chronic diseases such as hypertension or diabetes. A systematic review of prospective studies revealed that depression roughly doubles the chance of having a new coronary heart disease (CHD) event.[27]

The converse is also true. People with CHD are at increased risk of developing depression, up to three times higher prevalence than observed in the general population.[28 29] Furthermore, people with CHD who are depressed have a much worse prognosis in terms of survival, quality of life, and return to normal everyday life.[30 31 32 33] Estimates vary from study to study, but depression is associated with more or less a doubling of recurrent events and death between one and two years after the initial event. It seems likely that this worsening of prognosis is due to depression rather than to the underlying severity of CHD, as studies that adjusted for CHD disease severity still

demonstrate strong associations between depression and death.

The mechanisms underlying the association between depression and poorer prognosis in people with CHD are not well understood. It is possible that biological mechanisms related to the pathophysiology of CHD are involved: increased sympathetic nervous system activity, hypothalamic- pituitary-adrenal axis changes, vascular endothelial damage, platelet dysfunction, and inflammatory and cytokine responses. Behavioural mechanisms are also likely to play a major role. Depression is associated with tobacco use, sedentary behaviour, dietary changes, and poorer adherence with medication – all of which would result in a worse prognosis.

The practical implication of these associations is that people presenting with chronic conditions often have mental health issues with which they are contending, and conversely, people presenting with mental disorders often have additional chronic conditions. For example, analysis of a national data-set from Scotland[34] revealed that only 23% of patients with depression had this condition only. The remainder (77%) had at least one other condition; 36% of patients with depression had three or more other conditions. Similarly, only 7% of patients with anxiety and 13% of people with schizophrenia or bipolar disorder had these conditions alone; fully 56% of people with anxiety and 46% of people with schizophrenia or bipolar disorder had three or more other conditions with which they were contending.

Yet this comorbidity or multimorbidity often remains undetected. Current mental health services, with the exception of some psychogeriatric services, do not typically consider the detection and management of common co-occurring chronic diseases as part of their remit; nor are these skills typical among mental health professionals. The converse is also true: general health workers often fail to detect comorbid mental disorders. This is due in part to frequently inadequate training of health workers on mental health issues, as well as to reluctance stemming from a lack of incentives and support.

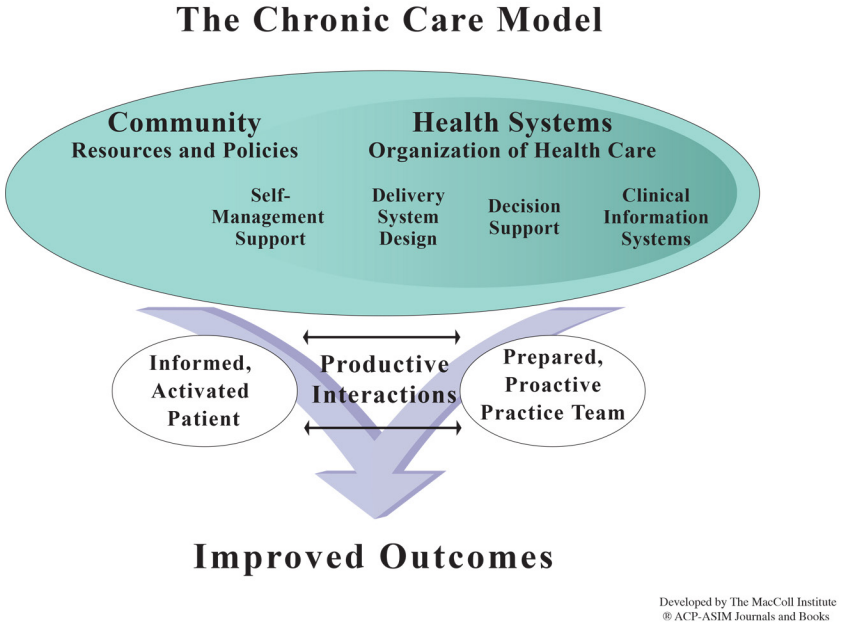
INTEGRATED PREVENTION AND CARE

The term ‘integration’ has multiple meanings as it pertains to the prevention and management of mental disorders and other communicable and noncommunicable chronic diseases. Collectively, integration efforts span multiple levels of the health system.[35] First, integration occurs at the micro level of the service user or patient. In practice, this means that services are person-focused and coordinated from the perspective of the patient, across diseases, settings, and time. Integration also occurs at the meso level of health-care organization and the community. This includes common information systems and professional partnerships based on shared competencies, roles, responsibilities, and accountability to deliver a comprehensive continuum of health and social care to a defined population. Macro-level integration involves policies, financing mechanisms, and shared governance structures.

OVERALL ORGANIZATIONAL MODELS

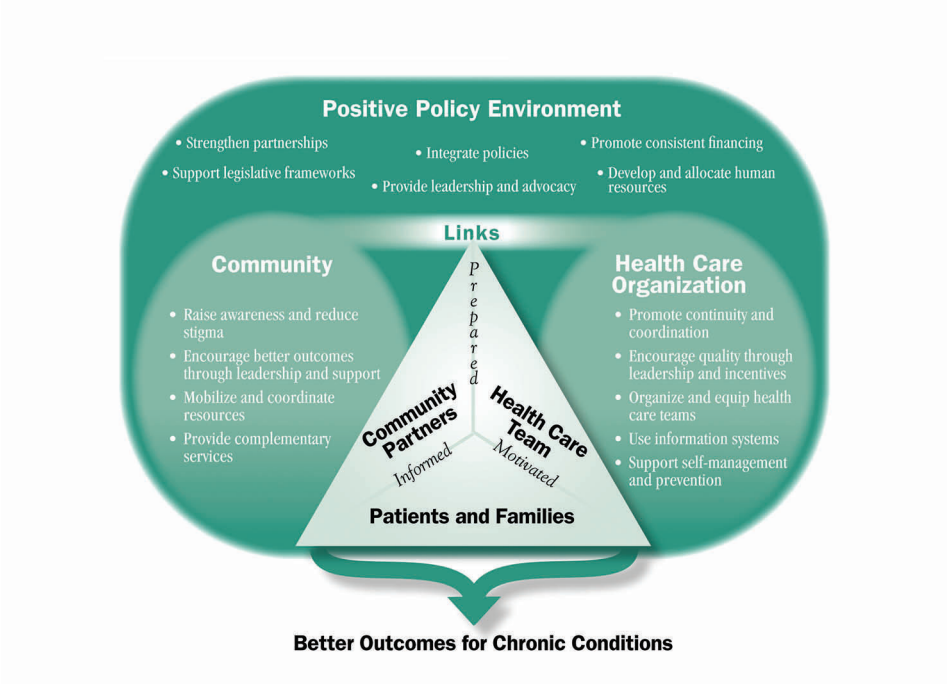
Various health-care organization models have been put forward to describe what is needed in greater detail.[36] A full review of these models is beyond the scope of this background paper, but virtually all emphasize the central importance of integration. Perhaps the best known and most influential is the Chronic Care Model (CCM; Figure 2),[37] which focuses on linking informed, actively engaged patients with proactive and prepared health care teams. According to the CCM, the six factors that are necessary to improve care are community resources; the health care system; patient self-management; decision support; delivery system redesign; and clinical information systems. The CCM has substantially influenced thinking about chronic disease management and its reform, especially the shift towards a more integrated, person-centred, and shared care approach. Accumulated evidence supports the CCM as an integrated framework to guide practice redesign. Although work remains to be done in areas such as cost-effectiveness, studies suggest that redesigning care using the CCM leads to improved patient care and better health outcomes.[38]

Figure 2. The Chronic Care Model



In 2002, WHO produced an expanded version of the Chronic Care Model, the Innovative Care for Chronic Conditions (ICCC) framework (Figure 3).[39] The ICCC framework expands and enriches the CCM with additional emphasis on the roles of communities and macro-level system changes.

Figure 3. The Innovative Care for Chronic Conditions Framework



The ICCC report[39] proposed eight key actions that decision-makers can take to reduce the threats that chronic conditions pose to the health of their population, their health-care systems, and their economies:

1. *Support a paradigm shift*: Patients, health workers, and decision-makers need to recognize that effective care for chronic conditions requires a different kind of health-care system;
2. *Manage the political environment*: For transformation toward care for chronic conditions to be successful, it is crucial to initiate information sharing and to build consensus and political commitment among stakeholders at each stage;
3. *Build integrated health care*: Care for chronic conditions needs integration to ensure shared information across settings, providers, and time. Integration also includes coordinating financing across different arms of health care, including prevention efforts, and incorporating community resources that can leverage overall health-care services;
4. *Align sectoral policies for health*: In government, diverse authorities create policies and strategies that touch upon chronic conditions. The policies of all sectors need to be aligned to maximize health outcomes;
5. *Use health-care personnel more effectively*: Health-care providers and public health personnel need new team care models and evidence-based skills for managing chronic conditions;
6. *Centre care on the patient and family*: Because the management of chronic conditions requires life-

long behaviour change, emphasis must be upon supporting the patient to self- manage his/her condition in coordination and partnership with the health-care team;

7. *Support patients in their communities*: Health care for people with chronic conditions needs to extend beyond clinic walls and permeate their living and working environments. To manage chronic conditions, patients and families need services and support from their communities;
8. *Emphasize prevention*: Most chronic conditions are preventable, so too are many of their complications. Prevention should be a component of every health-care interaction.

More than ten years since their publication, these recommendations are as relevant and necessary as ever. They resonate strongly with subsequent international calls for action advocating enhanced prevention and control for chronic noncommunicable diseases, as well as with health system strengthening efforts in a range of different countries.[40 41 42 43]

The following sections examine integration in greater detail: at the level of the patient; at the level of the health care organization; at the level of the community; and at the policy level.

INTEGRATING AT THE LEVEL OF THE PATIENT

Patient-level integration is grounded in the perspective that people are more than their disorders or health conditions. Patients are viewed as individuals with unique experiences, needs, and preferences. They also are seen in the context of their daily lives, as part of a family and a community.

By focusing on people rather than diseases, patients are placed at the centre of the health-care system. Services are developed or redesigned to revolve around their needs. This stands in contrast to the way most health systems are currently designed: around the needs of health professionals and/or health-care administrators. Integration is important for all patients, but especially so for those with multimorbid conditions.

Patient-level integration can be facilitated via integrated care pathways. Care pathways provide structured, multidisciplinary plans that focus on the patient's overall journey, rather than on the contribution of each specialty or service. They depict service delivery from the patient's perspective, so as to provide a more integrated, seamless experience. Integrated care pathways have been increasingly applied over the last 20 years to a range of settings and disease areas, including mental health and other noncommunicable diseases.[44 45] In part due to their inherent complexity, however, solid evidence to support their use is still generally lacking, particularly in the context of heavily resource-constrained health care settings. [46]

Patient-level integration also implies integrated self-management support. Across the full range of chronic diseases, patients have essential roles to play in the daily management of their conditions. It is perhaps not surprising, therefore, that major reviews have found that self-management support is an important element of improved outcomes for chronic diseases.[47 48 49] Self-management support can be provided in a range of venues and formats. Routine clinic visits provide excellent opportunities to build and reinforce self-management skills. Alternatively, self-management support can be provided during health worker-led group sessions, or in groups run by lay leaders in health care settings or community venues. Telephone or internet-based self-management programmes are another option.

Although self-management support is essential, more research is needed on how best to structure programmes for people with multimorbid health concerns.[50 51]

INTEGRATING AT THE LEVEL OF THE HEALTH CARE ORGANIZATION

Numerous models and programmes of integrated health-care delivery have been proposed and implemented. While details vary, these models tend to incorporate the following health-care practices:

- Use of multidisciplinary teams;
- Task shifting (also called task sharing), which leverages clinicians with higher levels of training;
- Continuity of care between different health workers and system levels, facilitated by common clinical information systems;
- Proactive and systematic monitoring and follow-up of patients;
- Goal setting and care planning that is shared by health worker and patient;
- Systematic patient self-management support, including through the use of e-health technologies;
- Links to social care and community services.

INTEGRATING MENTAL HEALTH INTO PRIMARY CARE

Integrating mental health services into primary care is a key strategy for overall integration at the level of the health care organization. Programmes take different forms but typically involve training and support to primary health workers in identifying and treating common mental disorders, establishing links to secondary care mental health specialists for supervision and referral when required, and integrating mental health services with the management of other chronic diseases, especially in people with comorbid or multimorbid conditions.

A 2010 WHO and World Organization of Family Doctors (Wonca) report, *Integrating Mental Health into Primary Care: a Global Perspective*, examined experiences with primary care integration across a range of countries and identified ten principles for the successful integration of mental health into primary care:[52]

1. *Policy*: Government policy and plans need to incorporate primary care for mental health;
2. *Advocacy*: Advocacy is required to shift attitudes and behaviour;
3. *Training*: Adequate training of primary care workers is required;
4. *Roles*: Primary care tasks must be limited and doable;
5. *Support*: Specialist mental health workers and facilities must be available to support primary care;
6. *Medicines*: Service users must have access to essential psychotropic medications in primary care;
7. *Engagement*: Integration is a process, not an event;
8. *Coordination*: A mental health service coordinator is crucial;
9. *Collaboration*: Collaboration with other government non-health sectors, nongovernmental organizations, village and community health workers, and volunteers is required;
10. *Resources*: Financial and human resources are needed.

Such principles correspond closely with those underlying the overall push by WHO and others for a renewal of primary health care.[53] Translating these principles into action, however, can be challenging, especially in resource-constrained settings. More specific programmes and experiences of successful integration are described below.

COLLABORATIVE CARE

Collaborative Care (CC) is an evidence-based approach to improve the management of mental disorders and comorbid chronic diseases in primary care settings. The overall aim is CC is to enhance quality of care and quality of life, consumer satisfaction and system efficiency of patients with complex, long-term problems cutting across multiple services, providers and settings.[54] CC has been used successfully for the management of common mental disorders such as depression, and also for people with multimorbidities.

Key elements of CC include:

- Systematic identification of those in need;
- Multidisciplinary team approach, integrating primary care professionals and those in specialist settings;
- Multidisciplinary guidelines, with redesigned systems and care pathways;
- Presence of a care or case manager, similar to disease management models, but with enhanced responsibilities for integration of care across comorbid conditions;
- Regular, systematic caseload reviews and consultation with a mental health specialist regarding patients who do not show clinical improvement;
- Close collaboration and involvement of patients in joint decision-making regarding their care;
- Holistic care plans, covering all conditions, and including medications, psychological interventions, and where appropriate, social care, with a streamlined referral pathway that allows patients to move easily from one service to another;
- Self-management systems;
- Regular and planned monitoring and 'treatment to target' using validated clinical rating scales;
- Integrated electronic health records for information sharing between different teams.

A recent Cochrane Collaboration review of 79 randomized controlled trials concluded that CC for depression is consistently more effective than usual care.[55] CC has also been shown to be effective in a range of other mental disorders (anxiety disorders, post-traumatic stress disorder), and for improving general health outcomes. As such, it is the best-evaluated model for treating common mental disorders in primary care. While much of the CC evidence is based on research literature from high-income countries, such as Canada, the United Kingdom, and the USA, evidence is growing from low- and middle-income countries.

Beyond the treatment of mental disorders, CC also has been evaluated for people with comorbid major depression, diabetes and/or heart disease.[56] The programme (TEAMcare) targeted symptoms of depression, motivation, and hopelessness with medication and behavioural therapy. It also targeted cardiovascular disease risk factors by supporting people to better self-manage their conditions. When compared with usual care, the TEAMcare approach resulted in better depression outcomes, better overall functioning, and better control of diabetes, hypertension, and hyperlipidaemia.

Implementation of CC entails significant changes at multiple levels of the health-care system.[57] As such, the success of these initiatives depends on support by decision makers, who are in a position to adopt relevant policies to this effect. CC models also require allocation of additional funding for training of health workers working in primary care and specialized services, for appointing new health workers (for example, care coordinators), for adequately compensating health workers for increased responsibilities, as well as for allocating health workers' time for joint work between multidisciplinary teams. Further funding is required for reorganization of infrastructure, as needed, and for establishing unified clinical electronic information systems.

STEPPED CARE

Stepped care programmes for the management of mental disorders are typically situated within primary care settings. Within a stepped care approach, patients typically start treatment using a low-intensity, low-cost intervention. Treatment results are monitored systematically, and patients move to a higher-intensity treatment only if necessary. Programmes seek to maximize efficiency by deploying available human resources according to need, reserving the most specialized and intensive resources for those with complex or severe problems.

Stepped care is closely related to Collaborative Care, described above. Some programmes are self-described as Collaborative Stepped Care, in that they incorporate aspects of each approach within their interventions.[58 59]

Although limited, the available evidence supports the utility of stepped-care models in bridging the resource gap for mental health services in low- and middle-income countries. Stepped care brings care closer to communities while reducing stigma, thus increasing the likelihood that people with mental disorders will seek care.

Panel 2 describes how stepped care has been implemented in Brazil, Chile, and Nigeria, and provides evidence to support the efficacy of this approach.

Panel 2. Stepped care experiences in Brazil, Chile, and Nigeria

Brazil

In Sao Paulo, Brazil, a programme is being tested in which pregnant, depressed women are managed by auxiliary nurses (AN) and midwives. Within the programme, pregnant women are screened for depressive symptoms in the course of pre-natal visits to midwives. Depending on the severity of their depression, pregnant women who screen positively are offered different treatment strategies. Those with more severe symptoms are offered more intensive services, while those with fewer symptoms receive less intensive care. The intervention starts with a home visit from an AN, who explains the programme, provides basic information about depression, and introduces problem-solving skills. The intervention consists of six home-based sessions (plus two additional sessions after delivery). The AN monitors depressive symptoms; if the woman does not respond or her condition worsens, the AN facilitates a consultation with a physician to consider antidepressants. The general practitioner has access to a psychiatrist for telephone-based consultations if necessary. Outcomes are assessed at 3-months after entering the study, and at 6-months after delivery.

Chile

In Chile, primary care programmes for depression have been tested and shown to be effective. In a first study, a stepped-care programme was compared with usual care in the management of depression among low-income women in Santiago, Chile. Stepped care was a 3-month, multicomponent intervention led by a non-medical health worker. The intervention included a psychoeducational group intervention (consisting of nine weekly sessions), structured and systematic follow-up, and drug treatment for women with severe depression. Despite few resources and marked deprivation, women with major depression responded well to the stepped-care treatment programme. At 6-months' follow-up, 70% of the stepped-care group had recovered, compared with 30% in the usual-care group. The programme is now being introduced across Chile.[60]

A similar programme was subsequently tested among low-income mothers in postnatal primary-care clinics in Santiago, Chile. A total of 230 mothers with major depression were recruited to the study and randomly assigned o either a multicomponent intervention or usual care. The multicomponent intervention involved a similar psychoeducational group delivered by non-physicians, treatment adherence support, and pharmacotherapy if needed. Usual care included all services normally available in the clinics; including antidepressant medications, brief psychotherapeutic interventions, medical consultations, or external referral for specialty treatment. At 3-months after randomization, women who received the stepped-care intervention were significantly less depressed than those who received usual care. [61]

The National Depression Treatment Programme, the first of its kind in a low- or middle-income country, introduced a version of these programmes into primary care throughout the country. Depression care is integrated with more traditional primary care programmes for the management of hypertension and diabetes within a network of 520 primary care clinics. The programme is led by psychologists and follows clinical guidelines similar to those tested previously, with additional support from physicians and specialists for people with severe depression. [62]

Nigeria

In Ibadan, Nigeria, a pilot study evaluated the usefulness of a stepped-care intervention for depression delivered by non-physician primary health workers, with support and supervision by physicians and psychiatrists as needed, using mobile phones. The main components of the intervention were psychoeducation, problem-solving treatment, and a rational use of antidepressant medications, all delivered by primary health workers. The intervention was based on WHO's mhGAP guidelines, adapted for the Nigerian health system.

The study was conducted in six clusters of primary care clinics. Clusters were randomly assigned to intervention or usual care. Recovery at outcome, defined as no longer meeting DSM-IV major depression criteria at 6 months, was achieved by 73% of participants in the intervention group and 51.6% of those in the usual care group, representing a risk difference of 21.4%. Intervention group participants also showed significantly less disability at follow-up, compared with usual care participants.

The process evaluation of the pilot study showed that the stepped-care package worked as expected; for example, 50% of intervention group participants completed at least 6 sessions of problem solving treatment, and supervising physicians needed to be contacted in only 15% of cases. A fully powered study is now being implemented to determine the effectiveness and cost effectiveness of the package.

To be fully effective and efficient, primary mental health care must be complemented by additional levels of care. These include secondary care components to which primary health workers can turn for referrals, support, and supervision. Linkages to informal and community-based services also are necessary. Understanding and appreciating these relationships is crucial to understanding the role of integrated primary mental health care within the context of the overall health system.

INTEGRATING MENTAL HEALTH INTO EXISTING SERVICE DELIVERY PLATFORMS

Closely related yet distinct from primary care integration, another approach to mental health integration is to use service delivery platforms that already exist for other chronic diseases (e.g. HIV/AIDS) as the basis for expanding mental health services. As noted in previous sections, many commonalities exist between mental disorders, other chronic NCDs, and HIV/AIDS, and further, they tend to co-occur. It therefore makes sense that mental health services could be better integrated into service delivery platforms for these other conditions. This general approach was reflected in a recent series of articles[63 64 65] appearing in PLoS Medicine.

In particular, clear opportunities exist for mental health integration in low- and middle-income countries faced with major epidemics of HIV/AIDS. Many of these countries have received considerable funding and support to develop their HIV/AIDS service delivery systems. WHO's Integrated Management of Adult and Adolescent Illness (IMAI), for example, is a broadly disseminated health care strategy that addresses the overall health of patients with HIV/AIDS and co-occurring tuberculosis. It emphasizes a person-centred approach to care and provides tools for evidence-based decision making, patient monitoring, referral and back-referral to district hospitals, clinical team building, clinical mentoring, and district planning.[66] IMAI also promotes the inclusion of mental health into the overall care model for HIV/AIDS. As such, the mental health needs of many persons living with HIV/AIDS can be largely addressed with little duplication or waste, while simultaneously improving programme outcomes such as anti-retroviral drug adherence .

Further opportunities exist in settings that have experimented with NCD and HIV/AIDS integration. In Cambodia, for example, Médecins Sans Frontières and the Cambodian Ministry of Health established chronic disease clinics to integrate HIV/AIDS care with the management of diabetes and hypertension in two provincial capitals. Health workers were trained and reconfigured to create combined clinics, with good patient outcomes. [67]

This sort of comprehensive approach is possible. In South Africa, the government has published integrated guidelines for all primary health workers, including HIV/AIDS, major NCDs, and a range of mental health problems including depression, anxiety, mania, and psychosis. Primary Care 101[68] uses an algorithmic approach for the management of common symptoms. Similarly, in Myanmar and in several other low and middle income countries, epilepsy has been included as part of the process of local adaptation and implementation of WHO's package of essential NCD interventions in primary care .[69] The scope of integration is being broadened to include prevalent mental disorders such as depression which impact on the health outcomes of major NCDs such as cardiovascular disease and diabetes. As highlighted in the Global NCD Action Plan 2013-2020, exploring opportunities for integrating service delivery approaches for NCDs and mental health will be critical for attaining the global target of 25% reduction in premature mortality from major NCDs by 2025.[2]

Integration also can occur at the level of health care system strengthening. Integrated action can occur in the domains of human resources (trained health workers to manage multiple conditions); infrastructure (structural integration at community and primary care levels, leading to establishment of a single point of entry to manage multiple diseases); monitoring and evaluation (including clinical information systems for tracking individuals and populations); and supply chain management to ensure timely procurement, forecasting, purchasing, and distribution of health technologies and products.

INTEGRATING AT THE LEVEL OF THE COMMUNITY

In addition to integrated health-care models, community-based interventions are important in the prevention and management of multimorbid chronic conditions, particularly among marginalized and vulnerable groups (e.g. older people, people from minority groups). Such interventions involve people from the community who are not health professionals, along with professionals and community health workers. Community-based interventions can be provided at small scale, targeting a particular group, or at larger scale in the community. An example of such a community intervention is the SONRISA project, in which community health workers, or *promotores* provide culturally appropriate education for community members to prevent diabetes and mental disorders in a Hispanic community in the USA. [70]

The BasicNeeds approach (Panel 3) is an example of community-level integration. It extends well beyond clinical care to focus also on the broader social and economic needs and opportunities of people with mental disorders in low- and middle-income countries.

Panel 3. The Basic Needs approach

BasicNeeds was founded with a vision that "the basic needs of all people with mental disorders throughout the world are satisfied and their basic rights are respected." It was started in India and now is active in numerous countries throughout the world.

BasicNeeds' approach is community-based and focused on five core areas.[71] Capacity building involves identifying, mobilizing, sensitizing and training a variety of mental health and development stakeholders; community mental health enables effective and affordable community based mental health treatment services; a focus on livelihoods creates opportunities for affected individuals to gain or regain ability to work, earn and contribute to family and community; research generates evidence from the practice of mental health and development; and management applies robust systems for monitoring and quality assurance.

Since 2000, BasicNeeds has incrementally expanded its field operations to 11 countries, reaching 108 201 individuals by September 2012. Multistakeholder participation in each country involves and builds capacities of health-care providers, community based workers, user self-help groups, local partners, health and government authorities, and civil society. [72]

Broad factors have facilitated BasicNeeds' scale-up. These include a bottom-up approach, starting from the communities where affected individuals live, mobilizing them to seek treatment and socioeconomic opportunities; close involvement with the public health system and other development-related arms of government; and consistent

involvement of stakeholders, including skilled professionals from the fields of health, mental health and development, local business people, landowners, local influential persons such as village leaders, and traditional healers.

INTEGRATING AT THE POLICY LEVEL

Policy reforms are the linchpin for developing and implementing integrated responses to mental disorders and other chronic diseases. Commitment from the government, and formal policies, legislation, regulations and financing that concretize this commitment are fundamental to success. These processes require careful negotiation, the involvement of a number of stakeholders, and needs-based decision making. Just in the last three years, major progress has been made in building and obtaining an international consensus on key priorities and coordinated actions for preventing and managing mental disorders and other chronic noncommunicable diseases.[2 5 6]

In some countries, mental health issues and actions are incorporated within an overall health policy and plan, while in others the mental health policy and plan appear as separate documents. The ideal situation is arguably one in which mental health is incorporated within the general health policy and plan, with a supplementary, more comprehensive mental health policy and plan to provide details for how the country plans to address mental health issues.[73] Policies should beintegrated across levels of care and care settings such as primary health care and hospital-based care. Policies and related planning are more likely be more successful and sustainable when they encompass prevention, promotion, and control strategies, and when they make explicit links to other governmental programmes and community-based organizations.[6 74]

Mental health parity is another important aspect of policy-level integration. 'Parity' refers to the idea that mental health services receive the same coverage under public health systems and within health insurance schemes, as does coverage for other conditions. Parity applies to availability of services, out-of-pocket expenses including health insurance deductibles and/or co-pays, and limits or restrictions on the allowed number of consultations or referrals to more specialized care levels.

In Pakistan, a National Action Plan extended beyond the traditional NCDs (cancer, diabetes, heart disease and respiratory disorders) to include mental disorders and injuries, in order to take advantage of their commonalities. This example is detailed in Panel 4.

Panel 4. Integrated Policy Development in Pakistan

In 2003, a public-private partnership released the National Action Plan for Noncommunicable Disease Prevention, Control and Health Promotion in Pakistan (NAP-NCD).[75] This partnership was led by Heartfile, a non-profit nongovernmental organization (NGO), and included the Ministry of Health and the WHO country office. The NAP-NCD outlined a comprehensive approach within a life-course perspective, incorporating both policies and actions. A particular feature of its development was the use of an evidence-based approach and a focus on achieving a set of defined goals and objectives, with agreed process, output, and outcome indicators for measuring progress.

Within the plan, integration takes placeat six levels:

- Disease domain integration: the NAP-NCD extended beyond leading causes of NCDs (cancer, diabetes, heart disease and respiratory disorders) to include mental disorders and injuries, in order to take advantage of commonalities in their treatment and management;
- Action-level integration: the NAP-NCD used an integrated framework for action that encompassed strategies common across the entire range of NCDs, as well as specifically for each NCD domain;
- System-level integration: the approach horizontally integrated NCD prevention with existing public health and social welfare infrastructures, thereby contributing to a strengthened public health configuration and shifting health services to a more preventive orientation;
- Conceptual integration: the NAP-NCD packaged together a number of innovative approaches, including a behavioural research and social marketing-guided communication strategy, an active role for local opinion leaders and educational institutions, and a common population surveillance mechanism for NCDs, injuries, and mental health;
- Integration of health promotion and disease prevention: the NAP-NCD combined prevention and health promotion to improve multiple outcomes;
- Public-private integration: a national consultation process facilitated the involvement and participation of relevant ministries, educational institutions, NGOs, and senior leadership.

Developing a scientifically valid, culturally appropriate, and resource-sensitive model for NCD prevention was not sufficient to ensure success; for that, lobbying was required for appropriate investments and policies to facilitate their inclusion in the development and health agenda.

Yet despite the deployment of both strategies, the NAP-NCD has not been implemented.[76] This is due to changes in national governance (a change of government combined with devolution of responsibility for health to the provincial level) and prevailing health system constraints (including inadequate regulation of private sector providers, a high level of out-of-pocket spending for financing health services, and an imbalanced workforce [physicians outnumber nurses and midwives by two to one]).

SUMMARY AND LESSONS LEARNT

In summary, mental disorders and other chronic diseases have much in common: they share common characteristics concerning their duration and course, as well as many of their underlying causes and consequences. In addition, they frequently co-occur, leading to synergistic levels of disability and complex health-care management. Treatment gaps exist for most chronic diseases but are especially pronounced for mental disorders. Within current systems of health care, only a small minority of people with mental disorders receive the treatment they need.

Various models and programmes have been proposed and/or tested for integrating the response of mental disorders with other chronic diseases. These new approaches to service delivery can improve accessibility, reduce fragmentation, improve efficiency, prevent duplication of infrastructure and services, and better meet people's needs and expectations. They involve not simply scaling up existing health-care services, but rather strengthening and transforming health systems to provide more effective, efficient, and timely care.

Experiences with integration highlight several potential pitfalls and lessons learnt.

- Truly integrated care involves more than co-locating health workers with diverse specialties into the same building.[77] Training and ongoing supervision is often needed to build competencies in multidisciplinary care, team communication, and proactive, evidence-based management of defined populations.
- Primary health workers need training, supervision, and support within a broader system of care. In particular, they must have access to evidence-based protocols and support from secondary care specialists.
- Health workers at all levels need access to timely, useful data about individual patients and their overall defined population in the form of integrated clinical information systems. This helps ensure that no one 'falls through the cracks' as services are integrated across conditions and settings.
- Successful integration requires attention to vested interests and potential resistance from health workers. Primary health workers might resent what they perceive as additional workloads and in addition, they might be skeptical that integrated care is a better way of delivering care. Specialist health professionals might share this skepticism and also might be concerned with possible decrements to their professional status. A range of other stakeholders—including health-care administra-

tors, policy-makers, educational leaders, medication and device suppliers, and payers—might have reasons to prefer the status quo health system of uncoordinated, specialist-driven care. Advocacy, communication, and management skills are needed to identify and address any of these issues that might be present.

- Models and programmes must be adapted to local contexts. Wide variations in capacity and readiness for integrated care can be accommodated through customization at the local level.62
- Integration is a process, not an event.[50] Integration takes time and typically involves a series of developments spanning several years.

PRINCIPLES AND ACTIONS

There are no simple answers or solutions to making integration a reality. Each country will need to address its situation in its unique way. Nonetheless, a number of principles and actions can provide insights to health policy makers, civil society, and development partners as they move towards more integrated health-care systems.

KEY FEATURES OF A MORE INTEGRATED RESPONSE

Based on the findings summarized in the previous section, three governing principles were identified and are detailed below.

A PUBLIC HEALTH APPROACH

To start, a genuinely ***public health approach*** is needed. This means not only providing good-quality, accessible services to those in need but also preventing the onset of disease and promoting health and well-being in the population over the entire life course. To date, much of the response to chronic diseases can be characterized as largely reactive – dealing with symptoms or disease events as and when they occur – rather than holistic, proactive, and preventive (as a genuine public health approach would require). A further set of features central to the public health approach concern relationships, in particular the partnership and collaboration between service providers, and coordination and continuity of care for patients. Again, current practice typically falls well short. Finally, and as stressed in calls to renew primary health care and move towards universal health coverage, a public health approach stresses that services be equitably distributed and truly accessible to the whole population. [51 78]

Table 3 summarizes how a public health approach might be implemented through integrated prevention and management of chronic diseases.

Table 3. Key characteristics of a public health approach to chronic disease prevention and management

DISEASE PREVENTION ESSENTIALS	DISEASE MANAGEMENT ESSENTIALS
• Promotion of healthy behaviours • Preventing exposure to adverse events and risks • Early detection • Intersectoral collaboration • Life course approach	• Person-centred care and support • Family and community support • Coordinated, holistic care • Continuity of care/proactive follow-up

A SYSTEMS APPROACH

Second, a ***systems approach*** to integrated service planning and development is needed. All critical ingredients or 'building blocks' of a health system – that is, good governance, appropriate resourcing, timely information, as well as the actual delivery of health services or technologies – need to be in place for desired health outcomes or programme goals to be fully realized. Panel 5 describes how a health systems approach can be used to strengthen the delivery of more integrated services (see also recent Global Action Plan documents for noncommunicable diseases and mental health [26]).

Panel 5. Redesigning health system functions for better integrated service delivery

Leadership and governance: Integrating mental health services into primary care and other programmes requires leadership from a range of stakeholders. These leaders need to articulate a vision and a strategic plan for mainstreaming mental disorders and other chronic diseases within a reformed health system. Integrated thinking about the causes, consequences, and care processes of these diseases is required. One pragmatic mechanism is the establishment of a multisectoral, multistakeholder commission or forum that identifies current gaps and key priorities, demonstrates synergies between different chronic diseases, and defines strategies for integrated systems of health-care provision and financing.

Financing: Like service provision, health-care financing is often highly vertical (so-called 'silo budgeting'), while funding is typically scarce and often fiercely protected. Moving towards more integrated funding for chronic diseases is therefore likely to represent a challenging and time-consuming process, requiring careful analysis, planning, and negotiation. One informative way of showing the extent of overlap between vertical programmes is by separating resources and costs into those that are genuinely specific to a particular disease programme (e.g. bed nets for the prevention of malaria or insulin treatment for diabetes) from those that are shared with other disease programmes (e.g. health-care facilities, medical supplies, health worker training and supervision). An analysis of the resources needed to meet the MDGs in 49 low-income countries showed that well over half of costs were shared. The equivalent analysis for a set of chronic diseases spanning mental disorders, NCDs, HIV/AIDS, and tuberculosis – an exercise that can be readily completed with the newly developed, inter-UN One-Health Tool [79] would be expected to reveal a similar pattern. Such analysis and information can reveal critical resource gaps or needs for mental health services scale-up, while at the same time promoting an integrated approach to national health planning, budgeting, and financing.

Health workforce: Effective integrated care crucially depends on a suitably trained, skilled, and motivated workforce. It is therefore important to implement appropriate recruitment and retention strategies; shared training programmes that focus on the generation of core competencies for chronic disease management offer one clear direction. Task sharing (also referred to as task shifting) has been identified as a promising, even a necessary, strategy for making human resources for mental health more readily available; however, it should not be viewed as a panacea, nor should it overlook the continuing need for specialists and referral care.[80] Supervision is a critical success factor for integrated care, both in terms of providing ongoing training and support to team members but also overseeing the multifaceted nature of integrated care.

Access to essential medicines: The supply price of first-line medications such as haloperidol for psychosis, generic fluoxetine for depression, or phenobarbital for epilepsy is inherently very low (less than US$ 0.02 per daily dose), so affordability should not represent a major barrier. However, access to these medications is inhibited by a mix of demand- and supply-side issues, including low awareness and help seeking by potential beneficiaries, as well as inadequate systems of procurement, distribution, training, and prescription on the supply side. Enhancing access to essential psychotropic medicines requires a health systems approach that links the explicit inclusion of these drugs and disorders in national medicines policy, financing, and supply chain management with appropriate training and awareness programmes to enable their better uptake and use at community and primary health care levels.[81]

A WHOLE OF GOVERNMENT APPROACH

Finally, a ***whole-of government approach*** is required; tackling the health, social, and economic consequences of mental disorders and other chronic diseases is not something that the health sector can do alone. The promotion, pursuit, and protection of health calls for concerted action by many parts of government over and above health departments, including ministries of planning and development, finance, law and justice, labour, education, and social welfare. Panel 6 describes how a multisectoral approach was used to reduce chronic disease risk in South Africa.

Panel 6. A multisectoral approach to chronic disease risk reduction in South Africa

In South Africa, regulations have been passed recently by the Department of Health that limit the amount of salt permitted in specified processed foods. While some countries have had some success with voluntary targets, South Africa decided that regulation would be more effective and would also level the playing field among all of industry. This regulation will be accompanied by educational campaigns around discretionary salt. However, because at least half of all salt intake is already in food (rather than added by the consumer), merely educating the public would have been insufficient.

South Africa's progressive stance on this issue stands in contrast to the widely held—and erroneous—belief that health lifestyles are dependent solely on individual responsibility. Within this model, if people eat unhealthy foods, they should be persuaded to eat more healthily; or if they are not engaging in regular physical activity, they need to be convinced that they should. Attempts by governments to prompt such behaviour change are perceived to impinge on individual choice and liberties and often regarded as the interventions of a 'nanny state'.

PRACTICAL ACTIONS FOR A MORE INTEGRATED RESPONSE

This section addresses how to convert the aforementioned principles into a set of actions that can be pursued by different stakeholders. Table 4 provides a number of practical steps for each of the overarching principles described in the previous section.

Table 4. Principles into practice

OVERARCHING APPROACH	KEY PRINCIPLESOR FUNCTIONS	PRACTICAL STEPS THAT CAN BE TAKEN
Public health approach	Life course approach	(Re)design policies and plans to address the health and social needs of people at all stages of life, including infancy, childhood, adolescence, adulthood, and old age.
	Healthy living/behaviours	Promote mental and physical health and well-being through public awareness campaigns and targeted programmes.
	Person-centred, holistic care	Involve patients in the planning of their care; provide self-management support; promote and adopt a recovery approach to care and rehabilitation.
	Coordinated care	Provide training in chronic disease management and prevention; strengthen clinical and health management information systems; develop integrated care pathways.
	Continuity of care/follow-up	Develop or enhance case management mechanisms.
Systems approach	Governance and leadership	Ensure health policies, plans, and laws are updated to be consistent with international human rights standards and conventions.
	Financing	Identify and plan for future resource needs; extend financial protection to the poor, the sick, and the vulnerable; ensure mental health parity.
	Human resources	Train and retain non-specialist health workers to provide essential health care and support for mental disorders and other chronic diseases.
	Essential medicines	Ensure the availability of essential medicines at all levels of the health system (and allow trained, non-specialist providers to prescribe them).
	Information	Establish and embed health indicators for mental disorders and other chronic diseases within national health information and surveillance systems.
Whole-of-government approach	Stakeholder engagement	Support and involve organizations of people with mental disorders and/or other chronic conditions.
	Multisectoral collaboration	Establish a multisectoral working group to identify synergies and opportunities for integrated care and support.

Who could or should carry out these defined actions? Health systems involve many actors, ranging from individuals and their families and communities through to health-care providers, planners, and payers. In addition, there are further actors who reside outside the health sector, but whose actions can influence (positively or negatively)the performance of health systems. Table 5 provides an example of how different elements of a multisectoral framework for chronic disease prevention in Africa are distributed between different levels and actors, ranging from the structural level of policy, financing, and intersectoral collaboration, through to community-level prevention platforms and individual-based interventions by health-care providers.

Table 5. Multisectoral framework for chronic disease prevention in Africa[82]

LEVEL OF SOCIAL ORGANIZATION	STRATEGIES/ACTORS	DESCRIPTION AND AFRICAN EXAMPLE
Community	Policy	Targeting specific chronic diseases or risk factors (e.g. tobacco use, alcohol)
	Fiscal	Taxes on food, alcohol, or tobacco; subsidies on exercise equipment
	Industry and private sector	Working with food industry to lower fat or sugar content of products
Community	Mass media	Public health education via radio, television, and newspapers, targeting communities or the entire country
	Institutions (schools, workplaces, places of worship)	Institution-based interventions on diet, physical activity, and tobacco use
	Primary health care	Routine advice from clinicians on major risk factors; quality of care; community outreach services
Individual	Behavioural interventions	Tobacco cessation; increased physical activity; dietary changes; weight loss promotion in overweight/obese individuals
	Pharmacological interventions	Medications for individuals at high risk for a cardiovascular event

Private enterprises are also major employers, and can take proactive steps to safeguard the health and well-being of their employees through wellness and other initiatives. For example, a recent meta-analysis of 36 studies identified an average return on investment of US$ 3.27 for every dollar spent on workplace wellness programmes.[83]

Despite the growing evidence of the usefulness of the workplace to address chronic diseases and mental health, a significant implementation gap is present across all country income groupings, according to a World Economic Forum survey of more than 13000 business executives in 139 countries.[3] More than half of respondents expected that lack of well-being and NCDs, including mental health problems, will have a moderate to serious impact on their business. Yet the presence of workplace health and wellness programmes in private sector organizations varied widely. Stress prevention and mental health programmes were implemented least, although it was recognized that mental ill health drives much of the burden at the workplace.

Partnerships between workplaces and research institutions could provide additional evidence to strengthen the business case for workplace wellness programmes; in addition, the efficiency of these programmes could be enhanced through implementation research.

CONCLUSION

This paper aimed to review the links between mental disorders and other chronic diseases concerning their occurrence, causes, and consequences; to highlight mutually compatible and reinforcing models of care and prevention; and to identify key actions by different actors to realizing an integrated response.

Strong links between mental disorders and other chronic diseases do exist, not only with respect to how to effectively manage them, but also in terms of their causes and consequences. The problem has been – and continues to be in many countries – that health systems are not well prepared to deal with any chronic disease, whether depression, diabetes, or HIV/AIDS. The logical solution is to progressively reform or transform these health systems so that they are better equipped to manage these health problems, which will increasingly dominate overall health-care demand.

A number of high-income countries have developed, implemented, and tested a range of innovative and effective models of integrated care. Collaborative care has a strong evidence base for the management of common mental disorders within primary care. Broader approaches such as Chronic Care Model implementation also are supported by research, although no single intervention component has emerged as the underlying driver of success. Rather, multidimensional intervention packages that incorporate several distinct features of chronic disease management seem to be most effective. Additional research is needed at all levels on how best to manage multimorbid patients, who are increasingly prevalent in health-care settings.

Research from low- and middle-income countries is more limited but promising. Additional research is needed in resource-poor settings on how best to achieve integration in the context of already-overburdened health-care systems. With regard specifically to mental health care, additional evidence is needed on how best to provide supervision and specialist support to primary health workers, especially in contexts where secondary care has itself limited capacity to deliver mental health care.

Although additional research is needed, it makes sense to start implementation now. Table 4 describes practical steps that can be taken. Action along these lines would likely benefit a wide range of health systems around the world.

Effective chronic disease prevention and care is complex, involving many different stages, levels, and actors, all of which need to be overseen and financed. And inevitably, the redesign of health systems and services towards integrated chronic care will pose serious challenges to and place serious pressure on existing infrastructures, budgets, and health workers. But effective chronic disease management is also sensible, humane, and prudent. Providing seamless, holistic care that caters to the overall health needs of the person is not just a laudable goal; it is also a feasible and efficient way of preventing and managing mental disorders and other chronic diseases. This in turn will confer substantial benefits in terms of improved overall health, social and economic well-being.

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INTEGRATING THE RESPONSE TO MENTAL DISORDERS AND OTHER CHRONIC DISEASES IN HEALTH CARE SYSTEMS

Strong links exist between mental disorders and other chronic diseases, not only with respect to their causes and consequences, but also in terms of their prevention and management. This thematic paper reviews these links as well as service delivery programmes that have integrated the treatment of mental disorders with other chronic diseases. These integrated approaches improve accessibility, reduce fragmentation, prevent duplication of infrastructure and services, and better meet people's needs and expectations. The challenge for countries is therefore not simply to scale up existing health services, but also to transform health systems by implementing evidence-based approaches for integrated, effective, and efficient care for mental disorders and other chronic diseases

FUNDAÇÃO
CALOUSTE
GULBENKIAN

World Health
Organization

ISBN 978 92 4 150679 3