Developing a Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America

by

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A thesis submitted in conformity with the requirements for the degree of Doctor of Philosophy

Dalla Lana School of Public Health
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Abstract

Mental health, including substance and concurrent disorders, is a major public health challenge worldwide. Approaches to collaborative mental health care (CMHC) are being implemented in Latin America to strengthen the accessibility and delivery of mental health services in primary health care settings. However, there are no well-defined frameworks to evaluate CMHC.

**Objective:** To develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC.

**Methods:** Three public health networks were selected in Mexico, Nicaragua and Chile. The study included: (1) a critical review of the literature focused on relevant health services research approaches, theory and evaluation models; (2) an environmental scan at each of the three research sites, comprising document reviews, key informant interviews with decision makers, focus groups with front line clinicians, and a survey for other key stakeholders, to better understand the local context and evaluation needs, as well as to identify some implementation challenges and opportunities; (3) a Delphi group with experts to identify the
main areas of consensus, as well as disagreements about the importance and feasibility of evaluation dimensions; and (4) a final consultation in the three sites aimed at discussing preliminary results and refining the evaluation framework. Quantitative and qualitative data were integrated in the analysis.

**Results:** A comprehensive evaluation framework for CMHC in Latin America was developed. It includes 5 levels, 28 dimensions and 40 domains, as well as examples of indicators and an implementation plan. A knowledge exchange strategy was developed aimed at reaching the research sites as well as the academic community and other stakeholders.

**Conclusion:** The evaluation framework represents an important effort to foster accountability and quality regarding CMHC in Latin America. Recommendations to build upon current capacity and to successfully address the existing implementation challenges are further discussed.
Dedication

I would like to dedicate this thesis to my family: to Susana, my wife, who always supported me to complete the PhD program and to seek a balance between personal, family and professional life; to my son, Alfonso, who represented hope and inspired me; to my parents, who encouraged me from an early age to discover the world and to work for the wellbeing of society; to my sisters and brother (Rocío, Amalia, Belén, and Pablo) who were always present even though we live in different countries. I would like to make a special dedication to Rocío, who was passionate for Public Health and always believed and supported me in my efforts to contribute to primary health care and social justice. She passed away in 2010, just a few weeks after I took my Doctoral Qualifying Examination. I love you all!

I also want to dedicate this thesis to those community members, health professionals, and decision makers who work tirelessly to enhance both primary health care and mental health services in Latin America and worldwide. I hope this thesis will be useful for them and provide insight into evaluating, planning and implementing health services. The evaluation framework can help those involved in promoting health, equity and human rights.
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This thesis would not have been possible without the support and commitment of many people.

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List of Abbreviations and Acronyms

AEA: American Evaluation Association
AUGE: Acceso Universal de Garantías Explicitas (Regime of Explicit Health Guarantees)
CAMH: Centre for Addiction and Mental Health
CAPS: Centro de Atención Psicosocial (Centre for Psycho-Social Care)
CDT: Centro Diagnóstico y Terapéutico (Centre for Diagnosis and Treatment)
CESFAM: Centro de Salud Familiar (Centre for Family Health)
CFPC: College of Family Physicians of Canada
CIHR: Canadian Institutes of Health Research
CINAHL: Cumulative Index to Nursing and Allied Health Literature
CMHC: Collaborative Mental Health Care
COSAM: Centro Comunitario de Salud Mental Familiar (Community Centre for Family Mental Health)
CPA: Canadian Psychiatric Association
CPhI: Canadian Population Health Initiative
CRS: Centro de Referencia de Salud (Centre for Health Referrals)
CSDH: Commission on Social Determinants of Health
DALYs: Disability Adjusted Life Years
EMBASE: Excerpta Medica Database
ERIC: Education Resources Information Center
HIV/AIDS: Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
IMSS: Instituto Mexicano de Seguro Social (Mexican Institute of Social Security)
INSS: Instituto Nicaragüense de de Seguridad Social (Nicaraguan Institute of Social Security)
ISSSTE: Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (State's Employees’ Social Security and Social Services Institute)
JCSEE: Joint Committee on Standards for Educational Evaluation
MEDLINE: Medical Literature Analysis and Retrieval System Online (U.S. National Library of Medicine's life science database)
MH: Mental Health
mhGAP: mental health Gap Action Programme
MOSAFC: Modelo de Salud Familiar y Comunitario (Family and Community Health Model)
NGO: Non-Governmental Organization
NIDA: National Institute of Drug Abuse
PAHO: Pan-American Health Organization
PC: Primary Care
PHC: Primary Health Care
PhD: Doctor of Philosophy
PsycINFO: Psychological Information Database
PubMed: Public/Publisher MEDLINE (National Library of Medicine’s database service)
SciELO: Scientific Electronic Library Online
SILAIS: Sistema Local de Atención Integral de Salud (Local Integrated Health Care System)
SSMSO: Servicio Metropolitano de Salud Sur-Oriente (South East Metropolitan Health District)
SPS: Seguro Popular de Salud (Popular Health Insurance)
UNEME: Unidad Médica de Atención a las Adicciones (Medical Unit for Addiction Care)
UNICEF: United Nations Children's Fund
UNODC: United Nations Office on Drugs and Crime
WHO: World Health Organization
WONCA: World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians
Glossary of Terms

**Benchmark.** Reference point or standard against which performance or achievements can be assessed. A benchmark refers to the performance that has been achieved in the recent past by other comparable organizations, or what can be reasonably inferred to have been achieved in the circumstances.¹

**Collaborative Mental Health Care (CMHC).** Primary care-based approaches of practice that involve providers from different specialties, disciplines or sectors working together to offer complementary services and mutual support aimed at addressing the mental health needs of individuals and communities². The main focus of CMHC is the provision of appropriate, relevant and cost-effective mental health, behavioral health and substance use/addiction services in primary health care. It considers high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery. In this thesis, the concepts of collaborative mental health care, shared care and primary mental health care are used as synonymous.

**Evaluation.** Systematic acquisition and assessment of information to provide useful feedback about the worth or merit of some object (e.g., program, policy, technology).³

“It is a systematic process of delineating, obtaining, reporting, and applying descriptive and judgmental information about some object’s merit, worth, probity, feasibility, safety, significance, and/or equity” ⁴

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Evidence. “Any form of knowledge, including, but not confined to research, of sufficient quality to inform decisions.”

Global Mental Health. An area for study, research and practice that places a priority on improving health and achieving equity in health for all people worldwide.

Health Indicators. Summary measures of health and the factors that affect health. In the appropriate context, health indicators can be useful for comparison and performance measurement.

Health Services Evaluation. The integration of epidemiologic, sociological, economic, and other analytic sciences in the study of health services. Health services research is usually concerned with relationships between need, demand, supply, use, and outcome of health services. The aim of the research is evaluation, particularly in terms of structure, process, outputs, and outcomes.

Health Services Research. Multidisciplinary field of inquiry, both basic and applied, that examines the use, costs, quality, accessibility, delivery, organization, financing, and outcomes of health care services to increase knowledge and understanding of the structure, processes, and effects of health services for individuals and populations.

Latin America. A geographic and cultural diverse region of the American continent to the south of the United States where Romance languages (Spanish, Portuguese, or French) are officially spoken. It is comprised of 18 Spanish-speaking countries, Brazil, and Haiti. Puerto Rico is often included as part of Latin America, as are Guyana, French Guiana, Belize,
Suriname and the islands of the West Indies where Latin-derived languages are spoken. Latin-American countries shared a history of colonization beginning in the fifteenth and mid-sixteenth centuries.¹⁰ ¹¹

**Mental Health.** A state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community. In this positive sense, mental health is the foundation for individual well-being and the effective functioning of a community. Mental health is an integral and essential component of health.¹² Mental health is viewed as more than the mere absence of mental illness. Cultural differences, subjective assessments, and competing professional theories all affect how mental health is defined¹³. There are different types of mental health problems, including mental illness and addiction/substance use disorders.

**Mental Health Issues, Problems, Illnesses or Disorders.**¹⁴ ¹⁵ ¹⁶ ¹⁷ ¹⁸ Health conditions that may take many forms and are usually associated with changes in thinking, mood, and/or behaviour; and frequently accompanied by distress and impaired functioning. Mental health issues reflect a continuum from broad mental health care problems to narrower clinical definitions and range from the common worries people experience as part of everyday life to serious acute or long-term conditions. Mental illness, addiction and/or concurrent disorders are covered by these terms. Some examples of mental health issues include mood disorders,

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anxiety disorders, schizophrenia, personality disorders, and substance use and addictive disorders such as alcohol and other substance use problems.

**Primary Care.** The level of a health service system that provides entry into the system for all new needs and problems, and provides general person-focused (not disease-oriented) care over time, and co-ordinates or integrates care provided elsewhere by others. It is often used interchangeably with first level of care.

**Primary Health Care.** Essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

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Chapter 1

Background & Objectives

1.1 Introduction

Mental health issues\(^1\) represent a major public health challenge worldwide, accounting for about 14% of the global burden of disease (Prince et al., 2007). The limited resources available for mental health in low- and middle-income countries have led to poor delivery of services, and to suffering and disability in people with mental and substance use disorders (WHO, 2001; WHO, 2012).

There is much to be accomplished in reducing the societal burden of mental health. It is necessary to develop and test policies and programs with a broader interdisciplinary focus that integrates biological, behavioural and psychosocial variables in mental health and substance use. The current research (Larivière et al., 2013; McCusker et al., 2013) suggests that special attention should be directed to mental health and substance use service design, implementation and program evaluation, human resource development, effective knowledge exchange from research to practice, and the human rights of people with mental illness.

Primary health care provides a unique opportunity to address needs of clients with common mental health problems, such as depressive and anxiety disorders, and substance use at different levels of severity (Ivbijaro, 2012; WHO&WONCA, 2008). Integrating and fostering mental health services in primary health care capitalizes on the longitudinal relationships, frequent routine contact, opportunity to screen for mental and substance use disorders, and the potential to reduce stigma and barriers to care that characterize this setting (Gask, Sibbald, & Creed, 1997). Approaches to shared or collaborative mental health care

\(^1\) The term “mental health issues” refers to mental illnesses, substance use and addictive disorders, and concurrent disorders. Please, see the glossary for a complete definition.
(CMHC) have been implemented in Canada and other countries to strengthen the accessibility and delivery of mental health services in primary health care settings through interdisciplinary/inter-sectoral collaboration (Gagné, 2005; Paton, Callander, Cavill, Ning, & Weavell, 2013).

There are many definitions of what CMHC is (Peek, 2011). For this thesis, CMHC refers to primary care-based approaches of practice to offer complementary services and mutual support aimed at addressing the mental health needs of individuals and communities. Those services follow high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery support, and encompass the participation of providers from different specialties, disciplines or sectors (Gagné, 2005).

Mental health and primary health care providers are facing the opportunities and challenges posed by service integration and the need to communicate and collaborate better. The integration of individual and family clinical care with public health, including biological, psychological and social factors, reflects the spirit of the WHO/UNICEF International Conference on Primary Health Care held in Alma-Ata in 1978 (WHO, 1978). Thirty five years after that Conference, there is a worldwide movement to strengthen primary health care, including addressing mental health.

Particularly, there is an urgent need to focus on the development of effective, affordable and equitable mental health systems (including substance use) in Latin America² (PAHO, 2011; Rodriguez, Kohn, & Aguilar-Gaxiola, 2009). One of the major difficulties to the achievement of this goal is the lack of evidence for what kinds of mental health systems are appropriate and effective in varying contexts.

An ongoing transformation process in primary care is happening in many Latin American countries, creating interdisciplinary health teams responsible for a community, its families and individuals (Giraldo Osorio & Vélez Álvarez, 2013; Ventres, 2013). This process incorporates the idea to facilitate continuity of care and a more holistic, bio-psycho-social

² Please, see the glossary for a definition of “Latin America”.
perspective for health and health care. Decision makers expect that mental health care is better when integrated with primary health care and there is supportive evidence in that direction (Razzouk, Gregório, Antunes, & Mari, 2012).

The general objective of this PhD thesis study was to develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC. This research would be critical in order to provide relevant information and key recommendations that can guide advocacy, policy and planning for improving CMHC.

1.2 Background and Literature Review

This sub-section analyzes and synthesizes selected quality literature in order to provide a firm foundation to the research subject - evaluation of collaborative mental health care in Latin America. In order to advance in the discussion of the theoretical and methodological bases for evaluating CMHC in Latin America, it is first necessary to understand the mental health and primary health care contexts, what CMHC is and what works in shared care models.

1.2.1 Mental health situation in Latin America: needs & challenges

In 1990, psychiatric and neurological conditions accounted for an estimated 8.8% of DALYs³ in Latin America. By 2002, the figure had more than doubled to 22.2% (Kohn et al., 2005; PAHO, 2007). A review of the region’s most important epidemiological studies of mental health disorders reveals that the estimated average prevalence rates are 5.7% for alcohol abuse or dependence, 4.9% for major depression, 3.4% for anxiety disorders, 1.4%

³ Disability-Adjusted Life Years (DALYs).
for obsessive compulsive disorder and 1% for non-affective psychosis (including schizophrenia) (Khon et al., 2005). The prevalence for any mental and behavioural disorder among children and adolescents in the region varies from 12.7% to 15%, similar to other regions (Benjet, 2009). Finally, it is important to be noted that life expectancy is increasing in Latin America (PAHO, 2012; Palloni & McEniry, 2007), so mental health needs among the elderly represents a relevant component of a dynamic epidemiological profile.

Currently, only limited data exist on the prevalence of drug use in the region and the quality of the available data is generally poor (Monteiro, Telles-Dias, & Inglez-Dias, 2009). Tobacco and alcohol account for the highest substance consumption levels in Latin America, followed by cannabis, cocaine, crack cocaine, and cocaine paste\(^4\), amphetamine-type stimulants (ATS), and ecstasy (Monteiro et al., 2009; UNODC, 2009; UNODC, 2012). The misuse of pharmaceuticals, including opioids and prescription medications, also remains of concern in the region (UNODC, 2012). The estimated midpoint prevalence of injecting-drug use in Latin America is 0.59%, lower than Eastern Europe (1.5%) or North America (0.99%), but higher than the extrapolated global estimates (0.37%). Latin America is one of the regions with the highest number and concentration of HIV-positive injecting-drug users: the estimated midpoint prevalence of HIV among people who inject drugs is 28.77% (UNODC, 2009).

Mental illness and drug misuse are related to self-harm and suicide (Arsenault-Lapierre, Kim, & Turecki, 2004; PAHO, 2008; Schneider, 2009). Contact with primary care providers in the time leading up to suicide is common (Luoma, Martin, & Pearson, 2002; Rihmer et al., 2013), so alternative approaches to suicide-prevention efforts are needed in CMHC.

Over the last 15 years, the complex relationship between substance use and mental disorders has received particular attention as part of larger efforts to assess needs and direct integrated planning and delivery of services (CAMH, 2001; Rush et al., 2008; Strehlau, Torchalla, Kathy, Schuetz & Krausz, 2012). Few studies have evaluated con-current disorders in Latin American countries (Jiménez-Castro, Raventós-Vorst, & Escamilla, 2011; Vicente et al.,

\(^4\) An extract of the leaves of the coca bush. Purification of coca paste yields cocaine.
2006), but further exploration is necessary to have a clear estimate of regional differences in Latin America. Concurrent disorder approaches need to be considered in modern CMHC and might be an area to consider in an evaluation framework for CMHC.

Stigma is one of the main factors among people with mental health problems who do not seek health care services in Latin America (Acuña & Bolis, 2005). Stigma and discrimination toward people with mental health issues are significant obstacles for implementing and strengthening CMHC (Sapag, Mohamoud, & Khenti, 2012) and represent a tremendous source of harm related to (1) continuing problems in finding employment and housing for people who have had an episode of mental disorder; (2) social isolation; and (3) limited access to appropriate health services (Sartorius, Stuart, & Arboleda-Florez, 2012).

There are few international studies on stigma among health providers, and even fewer that address this among primary health care providers in Latin America (Ronzani, Higgins-Biddle, & Furtado, 2009; Saldivia, Vicente, Kohn, Rioseco, & Torres, 2004). The negative impact of stigma is observed in the general health care system where people labeled as mentally ill or addicted are less likely to benefit from the depth and breadth of available health care services than people without these conditions (Desai, Rosenheck, Druss, & Perlin, 2002). Primary care service users report that some health practitioners are more often stigmatizing than psychiatrists in responding unsympathetically to people with mental health issues (Hodges, Inch, & Silver, 2001; Pinfield et al., 2003).

A number of social and environmental determinants affect the growing prevalence of mental health problems (Breilh, 2008; PAHO, 2012) and overall health inequities (Etienne, 2013). It is also very important to consider the ethnocultural diversity (Montenegro & Stephens, 2006; PAHO, 2004). For example, Indigenous and African descendants represent almost 33% of the total population in the region (Busso, Cicowiez, & Gasparini, 2005). Most Latin American countries have faced traumatic situations associated with natural disasters, armed conflict and political violence (Norris & Kohn, 2009; Tremblay, Pedersen, & Errazuriz, 2009). All these factors, along with contextual differences, must be considered in the process of developing an appropriate evaluation framework for CMHC (Cristofalo et al., 2009).
1.2.2 Mental health response in Latin America

There has been an important response to mental health in Latin America in recent decades (Alarcon & Aguilar-Gaxiola, 2000). In the 1970s psychiatric care was structured mostly around custodial care centered in asylums far from urban areas. A coherent mental health policy was also lacking (Alarcon & Aguilar-Gaxiola, 2000). In the mid-1980s an important sociopolitical change took place in the region with the restitution of democratic systems, which favored the restructuring of the mental health services and the review of applicable legislation.

Since the beginning of 1990s, a process of mental health reform directed to protecting human rights and promoting community-based mental health services is taking place in the region (PAHO, 2009). In 1990, Latin American countries signed the Caracas Declaration (PAHO, 1990) aimed –among other objectives- at promoting respect for the human and civil rights of the mentally ill and restructuring of psychiatric care on the basis of primary health care in the framework of local health systems. Important changes were made during the following years. For example, by 2005, 77% of the countries had a national mental health plan, and 75% had enacted mental health legislation (WHO, 2005a).

This transformation strategy was ratified later in Brasilia (PAHO, 2005), where there was a call to face new cultural and technical mental health challenges that have become more evident in the last 15 years, such as: (1) the increasing psychosocial vulnerabilities of specific population groups, e.g., indigenous communities; (2) the growing magnitude of both morbidity and psychosocial problems among children and adolescents; (3) the importance of making effective measures available for prevention and management of suicidal behaviour and alcohol abuse; and (4) the increase in different modalities of violence.

Integration of mental health into primary care has been a major component of mental health reform processes in many countries in the region, including Brazil, Cuba, Chile, and Panama, among others (WHO & WONCA, 2008). Cuba was the first country in the region to integrate mental health care into primary care as the foundation of the mental health system at the
national level (Caldas de Almeida & Horvitz-Lennon, 2010). However, in many countries CMHC is clearly insufficient. For example, in some Central American countries there is a lack of mental health capacity building in primary care and primary care workers do not usually interact with mental health professionals. As well, psychotropic drugs are not regularly available at primary care centers (Caldas de Almeida & Horvitz-Lennon, 2010).

There are still important treatment and financial gaps (PAHO, 2007; Rodriguez 2010) and much more has to be done to address mental health population needs (PAHO, 2009; PAHO, 2011) in Latin America. For example, less than 2% of total health budgets are dedicated to mental health in various countries (PAHO, 2007; Rodriguez et al., 2007). Even countries with more fully developed mental health reform processes devote small proportions of their health budgets to mental health; Brazil’s is 2.35% (WHO & the Ministry of Health Brazil, 2007) and Chile’s is 2.14% (WHO & MINSAL, 2006).

In summary, there are two simultaneous major changes in mental health care in Latin America: (1) a shift from institutions to the community, and (2) collaborative practice. That the two changes are happening at the same time represents an extremely ambitious and complex health system transformation that will take time to unfold. It is necessary to design an evaluation framework for CMHC that can be used to provide feedback to those managing the system to better address regional mental health challenges with an emphasis on improving quality.

1.2.3 Primary health care and primary care

The Alma Ata Declaration (WHO, 1978) defines primary health care as an integral part of both a country’s health system and the overall social and economic development of the community, which provides universal, comprehensive community-based health care. On the other hand, primary care can be seen as a component within primary health care that focuses on health care services, including health promotion and prevention, diagnosis and treatment of illness and injury (WHO, 2008). Primary care can be considered as the point of entry to a
health care system, the provider of person-focused care (not disease oriented) over time for all but the rarest conditions and the part of the system that integrates or co-ordinates care provided elsewhere or by others (Starfield, 1998).

While the principles of Alma Ata remain relevant, there have been many changes in primary health care worldwide in terms of emphasis and actions, which include moving (WHO, 2008):

a. from extended access to a basic package of health interventions to the transformation and regulation of existing health systems, aiming for universal access and social health protection,
b. from concentrated services on mother and child health to dealing with the health of everyone in the community,
c. from a focus on a few selected diseases, primarily infectious and acute, to a comprehensive response to people’s needs, spanning the range of risks and illnesses and recognizing the importance of chronic diseases and mental health,
d. from simple technology for volunteer, non-professional community health workers to teams of health workers facilitating access to and appropriate use of technology and medicines, and
e. from primary care as the antithesis of the hospital to primary care as coordinator of a comprehensive response at all levels.

Primary health care has been especially relevant in Latin America where there is a strong history of community participation in health (Ventres, 2013). There was an increasing interest in community participation in Latin America in the 1970s and 80s, led by the idea of sharing power and addressing social injustice (Freire, 1970). The main approach to transforming primary health care at the end of 1980s was the SILOS model (Sistemas Locales de Salud), which promoted the concept of local health systems (PAHO, 1989). The health reforms implemented during the 90s in most of the Latin American countries (Infante, de la Mata, & López-Acuña, 2000) have been influencing the profile of primary health care in the region. According to Armada, Muntaner, & Navarro (2001), many of them have been guided by some of the underlying hypotheses and principles of neoliberal thinking, being
characterized by a shift, from the public to the private sector, in the delivery and financing of health services assigning an important role to the private market in the allocation and use of resources, even in the field of public health.

In the last twenty years, in parallel or as a component of the aforementioned health reforms, most primary care services in Latin America (Ceitlin, 2006) are provided by the public sector and the principles of family medicine (McWhinney, 1997) and Community-Oriented Primary Care -COPC- (Gofin & Gofin 2005; Susser, 1999) have been adopted. The focus is on inter-professional family health teams, rather than just physicians, facilitating access, and working very closely with the community. For example, Cuba has been a pioneer in developing a family health model with a strong emphasis on family medicine and COPC (Dresang, Brebrick, Murray, Shallue, & Sullivan-Vedder, 2005), and with positive results in terms of health outcomes (Ventres & Hale, 1993). In the case of Brazil, as part of the implementation of the country's Unified Health System (Sistema Único de Saúde), since the mid-1990s, the government has been developing the Family Health Program (Programa de Saúde da Família) based on community-oriented, multidisciplinary care, which provides a real opportunity for the development of a comprehensive network of health services and the active incorporation of innovations such as CMHC in the health system (Almeida, Sarti, Ferreira, Diaz, & Campino, 2013; Escorel, Giovanella, Mendonca, & Senna, 2007; Fernandes, Bertoldi, & Barros, 2009). The development of these kinds of models in Central American countries has been more erratic in some cases because of the lack of political support (Barret, 1996).

Recently, the Pan American Health Organization called for renewing primary health care (Roses-Periago, 2007) in order to emphasize the need for reorienting systems and services in response to the demands of the new regional context. Primary health care is considered the best and most appropriate strategy to reach an ongoing and equitable improvement of health systems in the region (Macinko et al., 2007; PAHO, 2009; PAHO, 2011). A critical goal for Latin America is to improve the organization of health systems based on the renewed primary health care strategy and to foster integration of systems/health care delivery networks.
However, what is the rationale for mental health services in primary care settings? As a matter of fact, there is a high level of need for mental health care among people who attend primary care. An international study found that 24% of consecutive primary care attenders and 69% of patients presenting physical symptoms to primary care physicians had mental disorders (Ustun & Sartorius, 1995). The primary health care system needs to respond to a high demand and to increase the efficacy of care through a systematic improvement that considers a holistic health approach in which psycho-social-cultural factors are fundamental. Mental health services delivered at the primary level may minimize stigma and discrimination, as well as contribute to decreasing human rights violations, in part because people with mental illness are treated by the same health workers and in the same location, close to their communities, in the same way as people with other conditions (WHO & WONCA, 2008).

Thirty five years after the emblematic WHO/UNICEF Primary Health Care Conference in Alma-Ata, there is a worldwide movement to strengthen primary health care, including addressing mental health (Walley et al., 2008). In the case of Latin America, there is a clear call for integration and collaboration and CMHC represents a natural stage of development.

### 1.2.4 Collaborative mental health care

Integrating mental health into primary care is an urgent and important need and involves a health system transformation (WHO & WONCA, 2008). Governments have instituted a number of policies designed to shift mental health care from specialized hospitals to the community, and there have been increasing efforts to adopt models of CMHC (Royal College of General Practitioners, 1993).

There are many definitions of what CMHC is. For the effects of this research study, CMHC refers to primary care-based approaches of practice that involve providers from different specialties, disciplines or sectors working together to offer complementary services and
mutual support aimed at addressing the mental health needs of individuals and communities. The main focus of CMHC is the provision of appropriate, relevant and cost-effective mental health, behavioral health and addiction/substance use services in primary health care. It considers high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery (Gagné, 2005). In this thesis, the concepts of collaborative mental health care, shared care and primary mental health care are used as synonymous.

CMHC is based on concrete principles (CFPC & CPA, 2000):

a. Primary care providers and mental health specialists are part of a single mental health care delivery system.

b. Primary care providers (e.g. family physician) have an enduring relationship with a client that the mental health specialist (e.g. psychiatrist) should aim to support and strengthen.

c. No single provider can be expected to have the time and skills to deliver all the necessary care a client may require.

d. Professional relationships must be based upon mutual respect and trust.

e. Roles and activities of primary care providers and mental health specialists should be defined, coordinated, complementary and responsive to the changing needs of patients, their families and other caregivers, as well as to resource availability.

f. The client must be an active participant in this process, understanding that both the primary care provider and mental health specialist will remain involved in his or her care, and knowing who to contact when a particular problem arises.

g. Shared care should be sensitive to the community context in which such care takes place.

CMHC highlights a systems approach, encompassing a number of key components, with a focus on the integration of care between health, social services and other agencies (Evans & Baker, 2012); integration between the different health sectors. It also reinforces the importance of appropriate evaluation and monitoring (Myette, 2008).
An interesting framework to better understand CMHC is that of Canadian Collaborative Mental Health (Gagné, 2005). It puts consumers at the centre and assumes that CMHC will increase access to mental health services, decrease the burden of illness and optimize care. It is made up of fundamentals that influence the success of CMHC, and key elements that are considered critical to providing effective services. The three fundamentals are (1) the degree of consistency of legislation, policies and funding structures with the principles of CMHC; (2) funds and research findings that support it; and (3) community strengths, needs, resources and readiness to implement CMHC. The key elements are (1) accessibility; (2) collaborative structures; (3) richness of collaboration; and (4) consumer centeredness.

There are some critical dimensions, possibly implicit in CMHC, that need to be considered to better understand some of the challenges for CMHC, or when developing an evaluation framework for CMHC:

- **A population health approach.** Population health is an approach to improving the health and well being of the entire population and to reducing health inequities among population groups (Health Canada, 2006; Jacka, Mykletun, & Berk, 2012).

- **Complex problems and the chronic care model.** CMHC recognizes the complexity and chronicity of most mental health problems. This is consistent with both the overarching sociocultural context of health systems and findings regarding the existence of complex challenges, such as competing demands, heavy caseloads, limited resources, and inadequate training in primary care settings (Bodenheimer, Wagner, & Grumbach, 2002; Munson, Proctor, Morrow-Howell, Fedoravicius, & Ware, 1997; Wagner 1998).

- **Context specific characteristics.** Some of the barriers and opportunities for effective collaborative care are very context specific, like the type of population served, the local organization, funding and specific communication barriers with specialty mental health and addictions agencies. The unique barriers to care in the community health care setting, as well as the unique characteristics of patients served, are likely to require context specific solutions (Cristofalo et al., 2009). It is essential for the
development of a CMHC evaluation framework relevant for Latin America, to start by having a clear understanding of the context of CMHC in the region, so as to properly integrate context specific perspectives in the framework (Feinstein, 2010). At the same time, evaluators should be aware of inter-country differences in order to provide the necessary flexibility to the evaluation framework to respond to local needs, as well as to facilitate a knowledge exchange process of the results within the region (in other CMHC settings).

- **System change.** Collaborative care models are based on the concept that systems change is required to improve care (Williams & Imam, 2007; Williams & Manning, 2008).

Further, there are different models of implementing CMHC in practice (Bower & Gilbody, 2005; Gask, Sibbald, & Creed, 1997; Kates et al., 2011; Pincus, 1987):

a. **Community mental health team:** is an interface between primary and secondary care. Most aim to make multi-disciplinary mental health treatment more widely available in the community; a few have specified priority for the seriously mentally ill. They usually operate within the ambit of sectorised psychiatric services and provide a single point of referral for multi-disciplinary care, with pooling and discussion of referrals.

b. **Shifted out-patient clinic:** Visiting psychiatrists operate clinics within health centres and see both new and follow-up patients. Their treatment may be relatively independent of the general practitioners as members of the primary and secondary care teams do not have fixed meetings and may have little or irregular contact. Although based in primary care, the shifted out-patient clinic has much in common with the hospital out-patient service, and its major benefit to primary care and impact on the interface may lie in informal coordination.
c. **Attached mental health professional**: Many practices have links to mental health professionals other than psychiatrists (e.g., clinical psychologists, social workers, community psychiatric nurses) and there is also a growing number of counselors directly employed in primary care. Professionals attached to primary care, but still employed by secondary care services, nevertheless tend to be perceived as part of the extended primary care team.

d. **Consultation-liaison**: It places greater emphasis on developing close links within a practice between the primary care team and psychiatric staff, with a view to (a) reduce referrals of milder disorders, (b) selectively encourage referral of serious mental illness, and (c) enhance the skills of general doctors in the detection and management of mental illness. The theoretical advantages of this model have been promoted by enthusiastic exponents, but it has not been formally evaluated. The major aim of this model, which is to retain care of patients with mental illness/addictions within primary care under the care of the primary care team, is consistent with government policy in the region. Consultation-liaison can be combined with any or all of the three models above, and this is probably the case of CMHC in Latin America.

In reality, there is no a single or rigid model of CMHC, and most settings have a mix of models in place (WHO-WONCA, 2008). These approaches usually use shared clinical and informatic tools, closer working relationships between mental health and primary care and, many times, employ a care manager with specialized training to support the care plan. These closer collaborative working relationships require a shared understanding of goals and roles, effective and ongoing clinical communication and shared decision-making.

There are two important strategies that are being implemented worldwide and in Latin America to foster CMHC practices:

- **Screening and brief interventions**. There is evidence regarding the benefits of screening and brief intervention for mental health and substance use issues (Grupp-
Phelan, McGuire, Husky, & Olfson, 2012; Madras et al., 2009; Nilsen, Wåhlin, & Heather, 2011). Special efforts are being made to integrate and evaluate these approaches in primary care settings (Babor et al., 2007; Kaner et al., 2009). For instance, a recent study demonstrated that a screening-linked brief intervention of about 15 minutes in duration significantly reduced illicit substance use and associated risk among clients in primary care in several countries (Humeniuk et al., 2012). The incorporation of screening and brief intervention for mental and substance use issues in primary care settings is also an ongoing reality in Latin America (Amaral-Sabadini, Saitz, & Souza-Formigoni, 2010; Boo-Vera, Martínez-Torres, Montesinos-Balboa, & Espinosa-de Santillana, 2011; Cruvinel, Richter, Bastos, & Ronzani, 2013).

- **The WHO Mental Health Gap Action Program (mhGAP).** This initiative is aimed at scaling up services – mainly in primary care - to address the lack of care, especially in low- and middle-income countries, for people suffering from mental, neurological, and substance use disorders (WHO, 2010). The program is focused on the following conditions: depression, psychosis, bipolar disorders, epilepsy, developmental and behavioural disorders in children and adolescents, dementia, alcohol use disorders, drug use disorders, self-harm / suicide, and other significant emotional or medically unexplained complaints. These priority conditions were selected based on their burden in terms of mortality, morbidity or disability, their economic costs, and their association with violations of human rights. The mhGAP package provides evidence-based guidelines and protocols to effectively work on the prevention and management for each of these priority conditions. The program is being implemented in many countries, including in Latin America (WHO, 2011a). Capacity building initiatives and adaptations of the mhGAP program are essential components of that process.

Figure 1 summarizes some key considerations regarding the implementation of CMHC that have been discussed above.
The new efforts from WHO and PAHO, in particular, the recently approved *Strategy and Plan of Action on Mental Health for the Americas* (PAHO, 2009) are supporting the development of CMHC services in the region. One of its five components is “Primary health care-centered mental health services delivery: Determination of priority conditions and implementation of interventions”, proposes a community mental health model grounded on the basic principles adopted by each country to organize service delivery and actively considering decentralization, social participation, and the inclusion of a mental health component in primary health care. CMHC in Latin America is being emphasized in most countries, and now there is a special interest in identifying the gaps between what is recognized as working well (based on concrete evidence) and what is funded/practiced as CMHC.
1.2.5 Evaluation of collaborative mental health care: existing evidence

Research on CMHC has moved from describing CMHC to more rigorous experimental studies. Recent initiatives have focused more on patient-level outcomes, often evaluating combined collaborative interventions with guideline-driven treatment protocols. There is promising evidence in terms of the effectiveness, cost-effectiveness, and generalizability of CMHC programs (Dewa, Hoch, Carmen, Guscott, & Anderson, 2009; Dowell et al., 2009; Simon, 2008; Smith, Allwright, & O’Dowd, 2007; van Orden, Hoffman, Haffmans, Spinhoven, & Hoencamp, 2009; Woltmann et al., 2012). It is beyond the aim of this thesis to review this in detail, but a summary of the existing evidence is presented in the following paragraphs.

The literature concerning the feasibility and effectiveness of the various collaborative care models mainly addresses specific mental health/addiction conditions. Collaborative care for a heterogeneous group of persons with common mental disorders seems to be as effective as the usual practice of referral to mental health services for reducing psychopathology, but it is significantly more efficient regarding referral delay, duration of treatment, number of appointments, and related treatment costs (van Orden et al., 2009).

Many of the studies have dealt with depression, probably because it is one of the most common disorders seen in primary care settings, and because efficacious treatments have existed for several decades (Unutzer, Schoenbaum, Druss, & Katon, 2006; Thota et al., 2012). Compared to patients in usual care, patients entering collaborative care are about twice as likely to experience a reduction of at least 50% in depressive symptoms (CDC, 2009). Studies are beginning to examine economic outcomes (Schoenbaum et al., 2002), suggesting positive effects. Randomized controlled trials have shown evidence of benefits of collaborative care to a broad group of stakeholders, including the individual and the family (Neumeyer-Gromen, Lampert, Stark, & Kallischnigg, 2004), the health care system (Levine et al, 2005), the healthcare insurer (Katon et al., 2005), and the employer, who often pays for
the health insurance (Rost, Smith, & Dickinson, 2004). There is also some evidence about the positive effects of CMHC among clients with anxiety disorders (Stein et al., 2011).

On the other hand, studies involving clients with psychosis and substance use issues have yielded mixed results. Studies of patients with personality disorders, eating disorders, attention-deficit disorder, and dementia are under-represented (Craven & Bland, 2006). Finally, to summarize some of the main conclusions of an extensive and systematic international and Canadian literature review of CMHC evidence (Craven & Bland, 2006):

a. Successful collaboration requires building on pre-existing clinical relationships. Preparation, supportive structures, and time are important ingredients.

b. Collaborative practice is likely to be better developed when practitioners are co-located.

c. CMHC is likely more effective when the service location is familiar and non-stigmatizing for patients.

d. The degree of collaboration does not seem to predict clinical outcomes.

e. Enhanced collaboration paired with treatment guidelines or protocols represents important benefits over either intervention alone in major depression.

f. Collaboration alone has not been shown to produce skill transfer in primary care physician knowledge or behaviours (e.g., treatment of depression). Service restructuring designed to support changes in the patterns of clinical practice is also required.

g. Systematic follow-up is an excellent predictor of positive outcomes in CMHC.

h. Enhanced patient education was part of many studies, with positive outcomes.

i. Collaborative interventions that are part of a research study may be difficult to sustain for the long-term without ongoing funding.

j. Patient choice about the treatment modality may be important in treatment engagement in CMHC (e.g., choosing among pharmacotherapy, psychotherapy or both).

In summary, there is promising evidence in terms of the effectiveness, cost-effectiveness, and generalizability of collaborative care programs, especially for depression (Gilbody, Bower,
Fletcher, Richards, & Sutton, 2006; Woltmann et al., 2012) in primary care. There is a particular need to develop more research regarding dissemination and implementation (Simon, 2008). However, the limitations of the evidence also need to be recognized. For example: (1) the number of experimental studies is relatively small; (2) the majority of studies focus on a single diagnostic entity—depression; (3) the variation in methodology restricts the validity of meta-analysis; and (4) most of the studies are very context specific, making it difficult to generalize the results to other settings. Based on the lessons learned, CMHC for the coming years should consider (Kates, Gagne, & Melville Whyte, 2008): (1) greater involvement of consumers; (2) changes in systems of care for effective collaboration; (3) additional training for providers and support to collaborate effectively; and (4) the impact of collaborative models in addressing wider health system issues.

**Evidence from Latin America.** There is a lack of evaluation studies regarding CMHC in Latin America (Razzouk et al., 2012). However, there are a few studies in the literature, for example:

- A randomized controlled trial of a stepped-care program for the treatment of depression in primary care in Chile (Araya et al., 2003) determined a substantial between-group difference in all outcome measures in favour of the stepped-care program. An evaluation by Alvarado, Vega, Sanhueza, & Muñoz (2005) of the national depression program in Chile, which has a strong primary care component, demonstrated good adherence (73.3%) to pharmacological treatment, but less to individual psychotherapy (47.4%) and group psychotherapy (37.8%). As well, the evaluation identified a significant decline in the intensity of depressive symptoms at the end of the three months, with the decline being greater among the women with more serious symptoms. This program is an example of an evidence-based mental health initiative that has been scaled up to the national level in a Latin American country (Araya, Alvarado, Sepúlveda, & Rojas, 2012).

- In the city of Sobral, Brazil, joint consultations are undertaken between mental health specialists, primary care practitioners and patients. Primary care practitioners over
time have become more confident, proficient and independent in managing the mental health problems of their patients (Fortes et al., 2008).

- In Panama, the primary healthcare networks have been strengthened in the area of mental health by the integration of psychiatrists, psychologists and nurses in health facilities across the country (PAHO & Panama Ministry of Health, 2006). The majority of primary health care physicians and nurses have participated in training on mental health within the last five years, and CMHC referral and contra-referral protocols have been approved (WHO, 2011b).

However, a national and/or provincial comprehensive performance evaluation framework for CMHC systems has not been developed in Latin America and is urgently needed (Gregório et al., 2012; PAHO, 2009; PAHO, 2011). Such a framework would form a necessary foundation for the development of consistent indicators and data collection. A framework is key in evaluating the ongoing process and outcomes of collaborative care initiatives, enabling performance reporting across jurisdictions and over time, and assessing the attainment of goals established both for primary care and mental health/addiction, as well as for the broader health system renewal.

1.2.6 Theoretical perspectives and evaluation of collaborative mental health care

As in many other health system initiatives, it is not easy to find an explicit theory behind the development of CMHC. Having analyzed CMHC in the previous sub-section and contrasting it with existing theories, it is possible to recognize some theories that are particularly useful for understanding CMHC and/or that can inform the development of a CMHC evaluation framework. It is important to identify the contribution of each of them and how they can together represent the theoretical base of the intervention (CMHC).
There have been three different, but not mutually exclusive stages regarding program evaluation theories and models, each of which provides a different perspective and methodological approaches (Shadish, Cook, & Levinton, 1991a).

The first stage can be termed “traditional research methods” (1960-1980), which promotes unambiguous ways to define, implement and evaluate interventions, and is represented by evaluators like Scriven (1991) and Campbell (1969). They valued demonstrative programs as a way to learn and create manipulable solutions and considered that feedback about programs would be used by decision makers to maintain or expand effective programs or to radically change or stop ineffective programs. They believed that it is possible to construct more or less valid knowledge about reality and that biases are a constant threat that should be prevented. Evaluators should maintain distance from stakeholders in order to foster the integrity of the evaluation. Quantitative methods and traditional experimental perspectives have a major role in evaluation.

The second stage is “alternative evaluation models” (1970-1985), which basically advocates integrating qualitative methods and using evaluation results for action and social change, and is represented by evaluators like Carol Weiss (1998) and Joseph Wholey (1981). Among their assumptions are: (1) the best knowledge should be useful and not just interestingly true; (2) instrumental use of knowledge (from evaluation) must be promoted by evaluators by working closely with stakeholders and specific users of each evaluation; (3) evaluation can provide enlightening information about the nature and causes of social problems and this information may be helpful to make incremental improvements rather than a total program change; and (4) methodological pluralism offers new opportunities for evaluation.

Finally, a third stage (1985 to the present) has developed a more comprehensive approach by integrating previous theories and adding new perspectives, like systems thinking (Jackson, 2003; Williams & Imam, 2007). Among the most recognized authors of this wave are Lee J. Cronbach (1982; Shadish et al., 1991b) and Peter H. Rossi (Rossi & Freeman, 1993). Theorists from the third-stage indicate that the specific evaluation design and methods should be defined depending on the purposes and different circumstances. That gives space for a
variety of evaluation possibilities to address concrete challenges, where previous concepts from first-stage or second-stage evaluation theories might be less appropriate. They value descriptive knowledge about use (second stage) and also the relevance of validity (first-stage). They do not believe in single paradigms to resolve evaluation challenges and are explicitly open to multiple epistemologies, multiple methods (methodological pluralism), and multiple priorities in terms of what the important questions are and the kind of knowledge that is relevant.

Evaluation of CMHC services and how they address mental health and addiction issues at the individual and population levels is a critical challenge. First and second-stage evaluation theories can be useful to achieve these goals. However, they have some limitations, e.g.: (1) generalizations of results based on real randomized experiments might be useful, although not always realistic; and (2) a case study approach and the use of quasi experiments sound attractive, but they might not be ideal when thinking in terms of external validity or in understanding primary care as a component of primary health care, and even more when a systems approach is needed. Third-stage theories offer a more comprehensive and holistic evaluation approach for CMHC, considering mixed methods, and understanding the particularities of the circumstances, as well as the complexities of systems. It gives space for different alternatives in terms of design and methods, so that the expertise and competencies of the researcher to guide the evaluation process becomes a critical variable.

Recently, Alkin and Christie (2004; Alkin, 2012) provided a classification of evaluation theories. They used the term theory as somewhat synonymous with approaches or models. Relationships between theories were represented in the form of an Evaluation Theory Tree with three branches that represent main dimensions: methods, judgment/valuing, and use. The Methods branch of the evaluation tree is primarily focused on knowledge construction and the methodology being used, in line with the analysis of Shadish et al. (1991a). The Valuing branch proclaims that evaluation is making a value judgment about the object that is under study. Finally, the Use branch is oriented to evaluation and decision-making.

5 Epistemology is understood as a branch of philosophy concerned with the nature, scope and limitations of knowledge. (Encyclopedia of Philosophy, Vol. 3, 1967, Macmillan, Inc.).
Evaluation theories (and theorists) were placed in one of the branches, according to their main emphasis. The “roots” of the evaluation tree are social accountability, systematic social inquiry and epistemology. These roots represent the foundation for evaluation work and have supported its development. The integration of other evaluation theories and perspectives, including those from low- and middle-income countries, has enriched this effort at systematization (Carden & Alkin, 2012). The Evaluation Tree, with its branches and roots, provides useful guidelines for integrating theories in the development of an evaluation framework for CMHC in Latin America.

1.2.7 Methodological considerations regarding evaluation of collaborative mental health care

Evaluation research involves defining a design that is appropriate for a specific situation and context (Patton, 2008a, 2008b); which is in this case CMHC in Latin America. The theoretical base previously discussed, as well as the research questions/objectives will help to define the best methodological approach for developing an evaluation framework for CMHC in Latin America. This sub-section does not intend to provide a detailed account of different methodological approaches to evaluation. Instead it provides some critical methodological inputs that should be considered when developing the evaluation framework for CMHC in Latin America.

There are different types and terminologies of evaluation designs (Aday, Begley, Lairson, & Balkrishnan, 2004) that could be used to assess different aspects or stages of CMHC. Perhaps the most important basic distinction in evaluation types is that between formative and summative evaluation (Scriven, 1967). Formative evaluation is most often conducted during the planning of the early stages of a program for the purpose of providing feedback for improvement during the course of the intervention, identifying deficiencies and building on strengths. Summative evaluation, in contrast, provides information on the program's effectiveness (its ability to achieve what it was designed to achieve in the real context) by examining the effects or outcomes of some object. There are also different subtypes of
evaluation, depending on which basic question needs to be answered, e.g. How well has the CMHC been implemented? (process evaluation), Has the desired change been achieved? (outcome evaluation), If the change has been achieved, to what extent can it be attributed to CMHC? (impact evaluation).

An ideal evaluation design for CMHC should be one that: (1) measures and reports on both the processes and outcomes associated with the collaborative model, including all aspects of CMHC (i.e., contexts, inputs, activities, outputs and outcomes) and recognizes the relationships between each of these aspects); (2) is population-based (CPHI, 2009; CSDH, 2008; Health Canada, 2006; Health Canada, 2001); (3) longitudinal; (4) comparative; and (5) based on multi-layered perspectives (e.g. linking individual clients to providers, clinics and organizations), including the involvement of key stakeholders.

Collaborative care programs do not happen in isolation. They are part of a historical process and have a specific context. It is important to see them as dynamic and complex systems with a trajectory of development and change over a period of time (Donaldson, Patton, Fetterman, & Scriven, 2010; Kates et al., 2011; Patton, 2010). In practice it is very difficult to separate contextual factors from policy interventions and CMHC and clearly establish causal links.

There are also issues of collaboration within settings and between settings that need to be considered. Given this, any method used to evaluate complex collaborative care models will have limitations. Nevertheless, a systematic approach to evaluation can yield useful information that can be used to reach plausible conclusions about how to advance and how to use the new information for effective knowledge exchange processes among researchers, evaluators, stakeholders, decision-makers and clinicians of CMHC.

An evaluation framework for CMHC should be responding to the following questions (CDC, 1999): (1) What will be evaluated? (CMHC in Latin America, specifically in the public sector); (2) What aspects of CMHC will be considered when judging program merit and performance?; (3) What standards must be reached for CMHC to be considered successful?; (4) What data/evidence will be used to assess how CMHC has performed?; (5) What conclusions regarding CMHC performance are justified by comparing the available evidence
to the selected standards (e.g., benchmarks)?; (6) How will the lessons learned from the evaluation be used to improve CMHC effectiveness?

The framework should be composed of concrete interdependent steps that are starting points for tailoring the evaluation (CDC, 1999; Finn, 2007; Porteous, Sheldrick, & Stewart, 1999) (Figure 2). Initially, it is fundamental to focus the evaluation by understanding the evaluation context, engaging key stakeholders to be part of the process of developing the evaluation framework, clarifying the evaluation objectives and/or questions of the evaluation framework, and describing the CMHC system, including (critical assumptions, target groups, components, activities and outcomes), using different approaches (e.g., logic model; Wyatt Knowlton & Phillips, 2013) to help in building an appropriate framework. Then, steps 2 through 4 involve decisions about methodology and methods, and tackle data collection and analysis. Finally, step 5 encompasses interpreting the finding, making concrete recommendations and sharing the lessons learned (knowledge exchange and translation). This five-step approach reinforces the ongoing cyclical nature of evaluation and the importance of integrating evaluation and planning (Porteus et al., 1999).

Figure 2. Evaluation framework steps.

Quantitative and qualitative methods have a role to play in comprehensive evaluation of programs and services. *Quantitative methods* probably represent the most dominant evaluation approach. They prioritize on the objectives-based evaluation research, objectivity, accuracy, and the validity of the obtained information (Punch, 2005). On the other hand, *qualitative methods* emphasize the importance of observation, the need to retain the phenomenological quality of the context, and the value of subjective human interpretation in
the evaluation process (Liamputtong Rice & Ezzy, 1999). It is beyond the scope of this subsection to describe their pros and cons in detail. Each of the various features may be viewed as strength or a weakness depending on the original purpose, context and resources of the evaluation.

With an expanded use of qualitative research in health service investigations, mixed-methods or multi-method research (Creswell, Fetters, & Ivankova, 2004) has the potential for rigorous, methodologically sound studies in primary care and CMHC. Mixed-methods investigations involve integrating quantitative and qualitative data collection and analysis in a single study or a program of inquiry. This form of research is more than simply collecting both quantitative and qualitative data; it indicates that data will be integrated, related, or mixed at some stage of the research process. The underlying logic of mixing methods is that neither approach is sufficient to capture the many and varied trends and details of the situation. When used in combination, both quantitative and qualitative data yield a more complete analysis and complement each other (Creswell et al., 2004; Creswell & Plano Clark, 2011).

The measures or indicators of a CMHC evaluation have to be reliable and valid (Rush, 2003). Reliability means that the measures must be sensitive to change in a particular characteristic across time and that this can be measured consistently. From a quantitative perspective, validity refers to the measure’s ability to accurately assess the characteristic of interest, for example, current drug use. There are many types of reliability and validity, which are related, but will not be discussed in this thesis. Nevertheless, it is necessary to remark that in evaluation research the notion of validity applies to the entire evaluation and not just the data (House, 1980).

In the case of qualitative studies, the concepts of trustworthiness, quality and rigor may be more appropriate than reliability and validity. The focus of trustworthiness is to support the argument that the research findings are “worth paying attention to” (Lincoln & Guba, 1985, p.290). This is quite different from the attempt to show validity and reliability of quantitative approaches. There are four critical dimensions of trustworthiness to be considered (Lincoln
& Guba, 1985): (1) credibility, which is an evaluation of whether or not the research findings represent a “credible” conceptual interpretation of the data drawn from the participants’ original data (Lincoln & Guba, 1985, p.296); (2) transferability, which represents the degree to which the findings of this inquiry can be applied or transferred beyond the bounds of the project; (3) dependability, which encompasses an assessment of the quality of the integrated processes of data collection, data analysis, and theory generation; and (4) confirmability, which is a measure of how well the findings are supported by the data. Guba’s constructs correspond to the criteria employed by the quantitative research approach (Shenton, 2004): (1) credibility (in preference to internal validity); (2) transferability (in preference to external validity/generalisability); (3) dependability (in preference to reliability); and (4) confirmability (in preference to objectivity).

A variety of data collection procedures can be useful in defining and/or implementing an evaluation framework for CMHC: Delphi group consultation, questionnaires, qualitative interviews, focus groups, participant and non-participant observation, document analysis, administrative databases, etc. Some existing instruments that may be considered for the data collection process are: The European Service Mapping Schedule (ESMS) (Johnson, Kuhlmann, & EPCAT Group, 2000) and the World Health Organization's Assessment Instrument for Mental Health Systems (WHO-AIMS) Version 2.2. (WHO, 2005b). The analysis of data will depend on the particular methods selected.

There are different alternatives to consider for the process of building an evaluation framework and related indicators based on literature review and expert consensus (Barnsley, Berta, Cockerill, MacPhail, & Vayda, 2005; Haggerty & Martin, 2005). Recently, Haggerty, Yavich, & Báscolo (2009) developed an evaluation framework for primary care in Latin America based on a previous work in Canada using a Delphi method to reach a consensus among primary care and evaluation experts.

Operational and structural context and constraints influence the choice of method. It will be necessary to start by describing CMHC (the object of evaluation) in Latin American contexts and to involve stakeholders from the beginning. CMHC, as an intervention, operates mainly
at the level of inter-professional collaboration and inter-organizational collaboration. More macro considerations, such as policy and specialist provider culture, as well as more micro phenomena, such as individual practitioners’ and patients’ beliefs, are likely to affect the working of the intervention; but the intervention is primarily about systems within the practice and relationships between the practice and other organizations.

Appropriate standards of professional evaluation practice exist in order to ensure evaluation quality and protect the public from potential harm relating to the evaluation itself (Stufflebeam & Shinkfield, 2007; JCSEE, 1994). There are five fundamental concepts regarding Program Evaluation Standards (JCSEE, 1994; Yarbrough et al., 2011): (1) Utility: to ensure that an evaluation will serve the information needs of intended users; (2) Feasibility: to ensure that an evaluation will be realistic, prudent, diplomatic, and frugal; (3) Propriety: to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results; (4) Accuracy: to ensure that an evaluation will reveal and convey technically adequate information about the features that determine the worth or merit of the program being evaluated; and (5) Accountability: to ensure appropriate evaluation documentation as a way of being responsible and prepared to justify decisions regarding evaluation processes and products and to achieve improvement of evaluation practices.

An evaluation should reveal and convey technically adequate information about the features that determine the worth or merit of CMHC. These standards should be at the discussion table from the beginning of the process and are critical for the decision making regarding each of the evaluation steps.
1.3 Justification for Study

Over the last 15 years in Latin America, CMHC has increasingly been seen by health authorities as an integral and critical part of their mental health care delivery systems (Roses, 2005). A transformation in primary care is taking place in many Latin American countries and it is becoming a regional priority to better integrate mental health into primary health care (PAHO, 2009). However, there are not well-defined frameworks to evaluate CMHC in terms of better informing decision-making processes for ongoing improvement (Kates et al., 2008; PAHO, 2011).

A framework is key in evaluating the ongoing process and outcomes of collaborative care initiatives, enabling performance reporting across jurisdictions and over time, and assessing the attainment of goals established both for primary care and mental health/addiction, as well as for the broader health system renewal. However, a comprehensive performance evaluation framework for CMHC systems has not been developed in Latin America. It is necessary to further develop an appropriate and feasible evaluation framework to support decision-makers and their organizations involved in primary health care and mental health in: (1) improving mental health services in terms of access, quality of care and impact on population health status, including mental health; (2) enhancing management to better use local resources; and (3) fulfilling transparency and accountability requirements.

There are some evaluation challenges regarding CMHC (Bickman et al., 1995; Kennedy & Griffiths, 2003). The complexity and variability of the CMHC model, the deficit in terms of having explicit goals to implement CMHC in many cases, may represent a barrier to implement an evaluation framework for CMHC. At the same time, limited resources, a lack of an evaluation culture in many mental health and primary care settings, as well as political instability in many Latin American countries, among other factors, make it more urgent that an appropriate evaluation framework is developed. That framework must consider all the aforementioned factors, as well as the local context and change within it. It should also incorporate existing relevant theoretical models, for example, of CMHC and program/policy evaluation.
1.4 Objectives and Research Questions

Objective
To develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC.

This flexible evaluation framework should reflect the full mandate of primary care and all the functions regarding mental health services. Measurement must consider important areas of care, including interface with the rest of the health system and other systems. Structure, process, inputs, outputs and outcomes (short-mid-long term) would be considered. However, the main focus must be on structure, process and short-term outcomes, considering the need to develop a feasible evaluation framework that can be used by the stakeholders in the near future. The framework would reflect a theoretical and contextual basis, as well as relevant evaluation approaches and methods, and will include key dimensions, key attributes/variables, core indicators, and recommendations for implementation. Instruments for data collection would not be included as part of the evaluation framework because of limited resources and time. That would be a task for a follow-up study.

One critical aspect of developing the framework would be the definition of its main levels, dimensions, domains and core indicators. These require agreement on content, applicability in the framework and validity in the real world of health care. They should be evidence-based, reproducible and relatively easily to collect. An indicator should provide answers to questions in one or more areas of the framework.

Research Questions

(1) Considering the particularities of the context of Latin America and relevant theories and evaluation approaches, what are the key elements of an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-
making processes and improving primary health care in the region at the district or municipal level? 

Research sub-questions are:

- Which particularities of the Latin American context are most relevant to be considered in developing an evaluation framework for CMHC?
- What approaches to evaluations of CMHC have been used previously in Latin America?
- What are some of the innovative evaluation approaches with potential value for developing an evaluation framework for CMHC in Latin America?
- What understanding do local stakeholders have about the importance of developing an evaluation framework for CMHC in Latin America?
- What is the existing interest of local stakeholders in evaluating structure, inputs, process, outputs and outcomes for CMHC?
- What kind of evidence is more useful / needed to inform decision making to improve CMHC in Latin America?
- What are the most relevant theoretical foundations to build an evaluation framework for CMHC in Latin America?
- What are the critical dimensions to be considered in an evaluation framework for CMHC in Latin America?
- What are the main methodological considerations for the development of an evaluation framework for CMHC in Latin America?
- What are the most culturally appropriate core indicators to consider in an evaluation framework for CMHC in Latin America?
- What are the main areas of consensus and disagreements among local stakeholders about the features of an evaluation framework for CMHC in Latin America?

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6 The main focus of this study is on the public (non private) component of the health system. This clarification is important considering that in many places of Latin America there is also a private component in the health system.
(2) What are some of the main challenges and potential solutions to consider in the implementation of an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-making processes and improving primary health care in the region?

Research sub-questions are:

- What are the main strengths and barriers perceived by local actors to conduct an evaluation of CMHC in Latin America? (e.g. cultural, organizational)
- What do local actors perceive as the potential benefits of conducting an evaluation of CMHC in Latin America?
- How open are local decision makers to supporting an evaluation of CMHC and to using its results?
- What are the existing potential economic and human resources to effectively implement an evaluation of CMHC in Latin America?
- What is the availability of required data to evaluate CMHC in Latin America?
- What kind of routine measurement systems are feasible to use in Latin American contexts?
- What is recommended to build upon current capacity and to successfully address the existing challenges in order to be able to implement an evaluation of CMHC in Latin America?
- How can the evaluation framework for CMHC and required information be integrated with other evaluation systems that are already in place?

(3) What are the main lessons learned (by the researcher) in developing an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-making processes and improving primary health care in the region?

Research sub-questions are:

- How were local stakeholders able to participate in this research process of developing an evaluation framework for CMHC in Latin America?
What were the main facilitators, difficulties, opportunities and threats during the process of developing an evaluation framework for CMHC in Latin America?

1.5 Organization of the Thesis

The remainder of this paper-based thesis is organized as follows. Chapter two describes the methods used for the study. Chapters three to five are the manuscripts that jointly contribute to address the objectives of this thesis:

Chapter 3: Theoretical and Methodological Basis for Evaluating Collaborative Mental Health Services in Latin America. This paper presents a critical analysis of the literature including relevant health services research approaches, theory and evaluation models to be considered in the development of the evaluation framework.

Chapter 4: Collaborative Mental Health Services in Primary Care Systems in Latin America: Contextualized Evaluation Needs and Opportunities. This article summarizes and analyzes the identified evaluation needs, as well as some implementation challenges and opportunities, perceived by key health care leaders and professionals regarding the development of an evaluation framework in the three participants CMHC systems located in Mexico, Nicaragua and Chile.

Chapter 5: Evaluation Dimensions for Collaborative Mental Health Services in Primary Care Systems in Latin America: Results of a Delphi Group. It presents the results of a Delphi process with 26 experts that were part of the Regional Expert Evaluation Committee (10 members) and the three local Committees in the research locations in Mexico, Nicaragua and Chile to identify main areas of consensus, as well as disagreements, about the importance and feasibility of evaluation dimensions.
Chapter six summarizes the final product: a flexible and comprehensive evaluation framework for CMHC in Latin America. The framework is based on the previous research steps, a final visit to each of the research sites for a knowledge exchange and consultation process, as well as on existing health services quality improvement experiences and indicators.

Chapter seven addresses Research Question three providing the author’s perspective about the main lessons learned developing an evaluation framework for CMHC in Latin America.

Finally, the Discussion section (Chapter 8) summarizes the main results of the thesis, identifies main strengths and limitations, as well as main contributions and implications for future research.
Chapter 2

Methods

A research study was implemented in three Latin American countries, based on a critical analysis of literature and relevant theories, as well as the reality of three CMHC systems in Latin America (multiple-case study), involving multiple stakeholders, and aimed at developing a feasible and meaningful evaluation framework for CMHC in Latin America. Anticipating the many types of information needs that an evaluation framework must address, a mixed methods approach was selected to implement this research.

Research Sites (Figure 3): Three primary care settings (research sites; e.g., districts or municipalities) were selected based on the following criteria: characteristics of the served population (e.g., rural/urban, levels of poverty, presence of indigenous communities); characteristics of the health care system (e.g., local CMHC approaches); geographical realities (Mexico, one country from Central America, and one country in South America); as well as feasibility criteria (e.g., local commitment of collaboration and availability of resources). The three research sites were: Mexico (Secretary of Health, State of Hidalgo), Nicaragua (Local Integrated Health Care System in León, SILAIS- León, with the support of the Universidad Nacional Autónoma de Nicaragua-León), and Chile (South East Metropolitan Health District, Santiago).

Each of the selected primary care settings were carefully assessed thorough environmental scans and key decision makers were identified (in a field visit). (Table 1)
Figure 3. Research sites: geographical location.\textsuperscript{7}

\textbf{Mexico:} Secretary of Health, State of Hidalgo.

\textbf{Nicaragua:} Local Integrated Health Care System - León / Universidad Nacional Autónoma de Nicaragua-León.

\textbf{Chile:} South East Metropolitan Health District, Santiago.

\textsuperscript{7} The three circles indicate the approximate location of each research site. They are not drawn to a scale in the map.
### Table 1. Overview of the three research sites.

<table>
<thead>
<tr>
<th>Research Sites</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Secretary of Health of the State of Hidalgo, Mexico.</strong></td>
<td>A decentralized health network that provides services to the “open” population of the state. This state, divided in 13 health jurisdictions and 84 municipalities, has a population of 2,396,201 inhabitants, 53.1% of them living in rural areas. More than 320,029 speak a native language. In 2002 the Psychiatric Hospital was replaced by community services “Villa Ocaranza”. There are 467 primary health care centres, 13 hospitals and specialized care units, including services for addiction (e.g. UNEMEs) and mental health (Villa Ocaranza). Advances primary mental health is provided at 84 Núcleos Básicos en Salud Mental (within primary care centres) and 3 Módulos de Salud Mental.</td>
</tr>
<tr>
<td><strong>Leon Local Integrated Health Care System (SILAIS), León, Nicaragua.</strong></td>
<td>One of the 17 SILAIS in Nicaragua, situated in the North-West of the country. It is part of the Ministry of Health and works in coordination with the National Health Program (2010) which gives a strong role to primary health care. It serves the León Department that has a population of about 441,308 inhabitants, including indigenous groups (e.g. Subtiaba) in 138.03 km², with rural and urban areas distributed in 10 municipalities. Services are provided with a strong emphasis on primary care. There are 10 centres and other smaller units for PHC; one Centro de Atención Psicosocial (CAPS) – Centre for Psyco-Social Care- that provides ambulatory mental health care with a community approach, and one general hospital and no mental health hospitals.</td>
</tr>
<tr>
<td><strong>South East Metropolitan Health District, Santiago, Chile.</strong></td>
<td>One of the biggest of the 29 Health Districts in Chile. It provides public services in the context of 3 sub-networks and 7 municipalities in the South East area of the Chilean capital under the umbrella of the Ministry of Health. There are 1,500,651 inhabitants (22.6% of the metropolitan population) in the assigned territory and around 76.5% of them have public insurance. Mental health services follow a community network based approach. There are about 40 primary care centres (e.g. CESFAMs), seven specialized community mental health facilities (COSAMs), 3 specialized mental health outpatient facilities (CRS and CDT), one mental health hospital (El Peral), and mental health beds within the general hospital.</td>
</tr>
</tbody>
</table>

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2 Based on the information collected during the site visit on Dec 2010.

3 Based on the information collected during the site visit on Feb 2011.


5 SSMSO. (2011). *Análisis de la red de salud mental del SSMSO* [Analysis of the mental health network]. Santiago: SSMSO.

6 SSMSO. *Plan de Salud Mental 2011, SSMSO* [2011 SSMSO Mental Health Plan]. Santiago: SSMSO.
The study consisted of the following phases (Table 2 & Figure 4):

Table 2. Summary of research phases and data collection methods.

<table>
<thead>
<tr>
<th>Phase I: Creation of advisory committees for developing the evaluation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of Regional Expert Evaluation Committee (8 key experts in the Americas, about Mental Health/Primary Health Care/Evaluation/CMHC).</td>
</tr>
<tr>
<td>Creation of three Local Evaluation Advisory Committees (one per research site) and confirming roles and responsibilities (5-8 members per site).</td>
</tr>
</tbody>
</table>

Phase II: Developing the evaluation framework.

1. **Comprehensive literature review** to identify, contextualize and discuss relevant health services research approaches, theory and evaluation models for the development of the evaluation framework.

2. **Environmental scan in each site** to identify evaluation needs, as well as implementation challenges and opportunities regarding the evaluation framework.
   - Document review.
   - Key informant interviews (mainly decision makers).
   - Focus groups (mainly clinicians working in CMHC).
   - Survey (other key stakeholders related to the CMHC system).

3. **Delphi panel** with the members of the Local Evaluation Committees and Regional Expert Evaluation Committee to assess consensus, as well as disagreements, about the importance and feasibility of the evaluation dimensions.

4. **Final consultation process** to refine the evaluation framework and discuss issues of feasibility in each research site.

5. **Finalizing the evaluation framework.**

Phase III: Knowledge translation strategy.
Phase I: Creation of advisory committees for developing the evaluation.

Four Committees at the regional and local levels were created at the beginning of this research: one Regional Expert Evaluation Committee (8 members) and three local Committees in the research locations in Mexico (5 members), Nicaragua (5 members) and Chile (8 members). They were experts in the area of mental health, primary health care, evaluation and/or CMHC in Latin America.

A purposive sampling method was used to recruit participants for the Regional Expert Evaluation Committee. Specifically, the “snowball” recruitment technique was considered. The starting point for the recruitment process was based on information available at the Pan-American Health Organization and existing academic contacts of the researcher and PhD supervisor in the Region.

A purposive sampling method was used to recruit participants for the Local Expert Evaluation Committees. Potential members of the Committees and an appropriate recruitment process were defined with the local partners during the environmental scan in each of the three research sites.

These Committees were key to providing ongoing feedback to develop the evaluation framework. They also participated in the Delphi Group to provide feedback about the set of evaluation dimensions, with the idea of identifying the main areas of consensus, as well as disagreements about the importance and feasibility of the evaluation dimensions (see Phase II).

Phase II: Developing the evaluation framework.

Developing the evaluation framework required a clear understanding of the context and the evaluation needs, innovative evaluation approaches, relevant theories, methodological considerations, potential key evaluation dimensions and indicators, as well as relationships were considered in the evaluation model.
This phase involved five steps: (1) a comprehensive literature review; (2) an environmental scan of the research sites; (3) A Delphi panel with the members of the Local Evaluation Committees and Regional Expert Evaluation Committee to assess consensus, as well as disagreements, about the importance and feasibility of the evaluation dimensions; (4) consultation process to refine the evaluation framework and discuss issues of feasibility; and (5) finalizing the evaluation framework and preparing an implementation plan. The data collection process took place between December 2010 and July 2012.

Each step is outlined in more detail below.

1. **Comprehensive literature review to identify, contextualize and discuss relevant health services research approaches, theory and evaluation models for the development of the evaluation framework.**

This literature review analyzed and synthesized selected literature in order to provide a firm foundation to the development of an evaluation framework for collaborative mental health care in Latin America. It was focused on the following three areas:

- Relevant evidence related with CMHC in Latin America.
- Main theories regarding CMHC.
- Alternative evaluation methods to be considered in the development of an evaluation framework.

The following databases were searched: Medline, Pub Med, EMBASE, CINAHL, PsycINFO, ERIC, SciELO, Social Sciences Abstracts, The Cochrane Library, and Google. Key words will be used: *primary health care; primary care; general practice; mental health; mental health services; substance abuse, addiction services; collaborative mental health care; shared care; evaluation; evaluation framework*. Relevant publications of international agencies and governments were also identified. References were also provided by key informants and experts in the field. Cumulatively, the search covered January, 1985 to March, 2013 and included articles in English, Spanish and Portuguese.
2. Environmental scan in each site to identify evaluation needs, as well as implementation challenges and opportunities regarding the evaluation framework.

A site visit was conducted in each setting in order to:
- Identify main mental health/substance use population needs;
- Describe the local CMHC system;
- Identify key players/decision makers;
- Identify existing evaluation initiatives regarding CMHC;
- Identify main evaluation needs and potential needs of information for decision makers.

**Data collection methods** for this step included: document analysis, key informant interviews, focus groups, and a survey, the latter three approaches aimed at different stakeholder groups.

- **Document review.** Existing key local reports regarding mental health and substance use population needs and the health system, CMHC, and others were reviewed to accomplish the established objectives of the site visit. The focus of the analysis was a critical examination, rather than a mere description, of the documents.

- **Key informant interviews.** Six to nine suitable key informants per site were selected in advance according to the purpose of the visit. They were: (1) the health director of the district/municipality (or the person who represents that authority); (2) the mental health coordinator or CMHC coordinator of the district/municipality; and (3) one to three other key informant(s) who is/are involved in CMHC, according to the context. An interview guide was developed beforehand to ensure that all areas of interest are covered (Appendix 2). The interviews were conducted in Spanish. Most of the questions were open-ended. The participants read and signed a consent form before starting the interviews. The interviews were audio-recorded and then transcribed for the analysis. The researcher also took notes during the interviews.
• **Focus groups:** One focus group was conducted per site. The participants (6-12) were clinicians from different professions working in CMHC, mainly in primary care. A purposive sampling method was considered to recruit participants. Specifically, the “snowball” recruitment technique was used, where the main local contact helped in suggesting potential participants. A focus group guide was developed beforehand to ensure that all areas of interest are covered (Appendix 3). The focus group was conducted in Spanish and an assistant helped in taking notes and paid special attention to non-verbal communication. The participants read and signed a consent form before starting the focus group. The focus group was audio-recorded and then transcribed for the analysis. The researcher also took notes during the interview.

• **Survey** of other key stakeholders related to the CMHC system, including mental health and substance use services, social welfare, corrections, NGOs, etc., depending on the context. The expectation was to survey 10 to 20 participants in each research site. The stakeholders and respondents were defined during the site visit, as a result of the environmental scan, and the questionnaires were completed online. An informed consent form was distributed before completing the questionnaires. The survey included closed and open-ended questions, according to the visit objectives, giving special attention to system issues of CMHC. (Appendix 4)
Table 3. Research participants by geographical location and type of data collection method.

<table>
<thead>
<tr>
<th>Location</th>
<th>Interviews</th>
<th>Focus Groups (FG)</th>
<th>Survey # responded questionnaires Overall response rate=54%</th>
<th>Delphi Panel 100% response rate in the three rounds</th>
<th>Final Knowledge Translation Group Meeting (GM) (# of participants)</th>
<th>Final Knowledge Translation Individual Meetings</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>9</td>
<td>12 (1 FG)</td>
<td>9</td>
<td>6</td>
<td>20 (1 GM)</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>6</td>
<td>7 (1 FG)</td>
<td>10</td>
<td>5</td>
<td>15 (1 GM)</td>
<td>3</td>
<td>46</td>
</tr>
<tr>
<td>Chile</td>
<td>7</td>
<td>6 (1 FG)</td>
<td>8</td>
<td>9</td>
<td>12 (1 GM)</td>
<td>3</td>
<td>45</td>
</tr>
<tr>
<td>Other countries in the Americas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>25</td>
<td>27</td>
<td>26</td>
<td>47</td>
<td>10</td>
<td>157</td>
</tr>
</tbody>
</table>

Note: Some individuals (n=37, representing 23.6% of the total) participated in more than one data collection type/step. There were 120 unique participants, including: 49 in Mexico; 36 in Nicaragua; 29 in Chile, and 6 from other countries in the Americas. In other words, 76.4% (n=120) of the total participants contributed to only one data collection step.

**Analysis.** The data were analyzed within-site and across-sites. NVivo 9 Software was used for the analysis of the qualitative component and IBM SPSS Statistics 20.0 for the quantitative items. The analysis of qualitative data considered a framework analysis approach (www.natcen.ac.uk/) (Richie and Spencer, 1994) using a priori codes (pre-defined categories) and also inductive codes according to emerging categories. Main areas of consensus and disagreements among local stakeholders about the features of an evaluation framework for CMHC in Latin America were identified. A SWOT (strengths, weaknesses, opportunities and threats) analysis framework (Skinner, 2002) regarding an evaluation of CMHC in Latin
America helped also to guide the analysis. Descriptive statistics were used for the analysis of the survey quantitative data.

Analyses of the three data sets - emanating from interviews, focus groups and the survey - were triangulated. As a research technique, triangulation helps to offset shortcomings in the analyses of multiple data sets and to corroborate findings (Creswell & Plano Clark, 2011).

In addition to the mentioned sources, local reports regarding mental health and substance use population needs, local health systems, CMHC, and others, were reviewed to accomplish the established research aims.

3. Delphi panel with the members of the Local Evaluation Committees and Regional Expert Evaluation Committee to assess consensus, as well as disagreements, about the importance and feasibility of the evaluation dimensions.

All the members of the Local Committees and the Regional Expert Evaluation Committee (26 in total) were considered as one group of experts. They were invited to participate in a Delphi Group to provide feedback about the new set of evaluation dimensions, with the idea of identifying the main areas of consensus, as well as disagreements about the importance and feasibility of the evaluation dimensions. A Delphi group is a systematic and interactive research technique to collect and distill the judgments of experts using a series of data collection and analysis techniques interspersed with feedback. Iteration allows the participants to refine their views in light of the progress of the group’s work from round to round. The purpose of this Delphi group was to establish consensus about the importance of the evaluation dimensions and indicators among the local stakeholders.

Evaluation dimensions are the key areas to be considered in the evaluation framework to assess CMHC regarding structure, inputs, process, outputs, outcomes and/or other features. Experts were asked to respond to potential CMHC evaluation dimensions that were
previously identified through literature reviews and site visits to three CMHC systems in Hidalgo, Mexico; Leon, Nicaragua and Santiago, Chile.

The participants were contacted by e-mail. They received a booklet containing instructions, a questionnaire with dimensions and indicators to be rated. Each dimension was clearly defined and a summary of the rational to include it was provided. There were three rounds. The circulated document consisted primarily of the list of preliminary dimensions of CMHC based on the literature review, site visits and previous feedback, including definitions, with instructions to modify them or to indicate whether they are adequate. After each round, the facilitator provided an anonymous summary of the experts’ inputs from the previous survey as part of the subsequent survey. In each subsequent round, participants were encouraged to review the anonymous opinion of the other panelists and consider revising their previous response. Each participant had to rate the importance of each dimension to be included in the framework (considering relevance, feasibility, etc.) on a scale from 1 (not at all important for the evaluation) to 9 (essential to be included in the evaluation). Median scores and ranges were calculated. Participants were allowed to explain their answers and provide suggestions for other dimensions to be considered. The results were summarized by the researcher. The summary of the results was sent back to the participants inviting them to review and re-rank them in light of the discussion. Individual approval / agreement for a dimension was considered when the rating was 7 or more. Consensus was assumed when at least 80% of respondents agreed on a dimension.

Final core dimensions and a set of indicators related to them were identified by the researcher and included in the framework.

4. Final consultation process to refine the evaluation framework and discuss issues of feasibility in each research site. This included conducting individual meetings with local authorities (3-4 per site – including the heads of the CMHC systems) and group meetings with 12 to 20 key stakeholders per site. The results of previous steps and a preliminary idea of the evaluation framework were presented and discussed. This stage provided inputs for the
final definitions of evaluation dimensions and for the identification of appropriate indicators, as well as recommendations to implement the evaluation framework. Fostering the face validity of the final product was achieved.

The following areas were consulted when visiting the three sites:

- Strengths and barriers perceived by local actors to conducting an evaluation of CMHC (e.g. cultural, organizational)
- Perception of local actor as to the potential benefits of conducting an evaluation of CMHC in their context
- Openness of local decision makers to supporting an evaluation of CMHC and to using its results
- Existing economic and human resources to effectively implement the evaluation framework
- Availability of required data to evaluate CMHC
- Existing routine measurement systems
- Recommendations to build upon current capacity and to successfully address the existing challenges in order to be able to implement the evaluation framework in the local context
- Opportunities for integrating the evaluation framework for CMHC and required information with other evaluation systems that are already in place

5. Finalizing the evaluation framework.

Based on the results of previous research steps, the final version of the evaluation framework of CMHC in Latin America was prepared, including an implementation plan. The selection of specific examples of indicators for the dimensions and domains was part of this step. Technical discussion with the PhD Advisory Committee and a final review of the literature regarding evaluation frameworks and health services indicators were conducted to finalize the evaluation framework.
Members of the Expert Committees were open to be consulted during the research process to provide feedback about the draft of the evaluation framework and concrete suggestions to improve it, according to their local reality and perspectives.

**Phase III. Knowledge translation strategy.**

It was essential to have a comprehensive knowledge exchange plan of the research findings of this study in order to effectively facilitate their use for future effective interventions. A knowledge translation process was implemented aimed to reach the research sites as well as the academic community and other stakeholders. Special attention was given to the potential implications of this study for CMHC in Canada.

There are different models for knowledge translation. In this case, the researcher considered a comprehensive knowledge translation approach (Bennett & Jessani, 2011; CIHR, 2004; CIHR, 2008) in a dynamic ongoing cycle. It included the synthesis and ethically-sound application of knowledge—within a complex system of interactions among researchers and users—to accelerate the capture of the benefits of research for people through improved CMHC in Latin America.

What was critical in this particular study was to implement active knowledge exchange strategies by putting researchers and policy makers together at the earliest possible point. A close engagement of decision-makers at the front end and throughout the project was required. It was also necessary to share the findings to the community networks to facilitate its use as a potential tool to address mental health challenges.

Special efforts were made at all stages of the project to make research results accessible to various audiences through resources such as reports, face-to-face meetings and presentations. As well, efforts were made to arrange for articles and features in the local mass media (radio, television, and newspapers).
The knowledge exchange plan included: (1) A communication strategy was established among the researchers and the authorities of the three research settings early in the process; (2) A research report was written emphasizing the intended audience (mainly authorities and health teams in the three research sites authorities, as well as national health authorities), and the method of disseminating the study results. The replicability of methodology and results of the study will be also shared with audiences that are not directly related to CMHC since the study’s approach may be relevant in evaluation of other areas of health services (e.g., infectious diseases, cardiovascular issues); and (3) A special poster presentation in Canada will be held in May 2013 in Ontario; academics, researchers and decision makers are invited to discuss the results and their future implications.
Figure 4. Summary of the research design.
**Timeframe**

**Phase I: Creation of advisory committees for developing the evaluation.** (November 2010 – March 2011)

**Phase II: Developing the evaluation framework.** (November 2010 – March 2013)

1. Comprehensive literature review. (December 2010 – May 2011)

2. Environmental scan in each site. (December 2010 – May 2011)


4. Final consultation process to refine the evaluation framework and discuss issues of feasibility in each research site. (April 2012 – July, 2012)

5. Finalizing the evaluation framework. (August 2012 -March 2013)

**Phase III: Knowledge translation / exchange strategy.** (December 2010 – April 2013).

**Ethical Considerations**

Balancing the potential value of research findings against the potential harm to the research participants represents an important dilemma for health science research. While there was little risk of potential harm (physical, emotional and/or social) to participants in this study, special measures were taken: (1) to ensure confidentiality so that respondents would not be treated differently by the health organization as a result of their responses; (2) to reaffirm that participation was voluntary and that no negative consequences would result for those who decide not to participate; (3) to offer assurance that respondents could skip any question if they did not want to answer it, as well as to refuse to complete the questionnaire; (4) provision of information to the participants about the organizations that are carrying out the research (which in this case was the University of Toronto) and also the researcher’s name;
and (5) sharing of a final report of the research study results with the participants so they
would be able to use them for local improvements. This would be a benefit for them.

Privacy and confidentiality were especially preserved. There were no consequences for not
responding. Written informed consents were obtained from the participants after the aims and
objectives of the study had been explained, as indicated in the previous section.

The scientific relevance and the real value of this study have been sufficiently explained in
this thesis and there are many reasons it is necessary. In particular, it is important to note that
the stigma of mental illness is also an issue of social injustice (Corrigan, 2005), so this study
ultimately seeks to contribute to decreasing social injustice through improving health care for
people with mental illness and/or addictions. Special efforts were also taken in order to reach
high standards of scientific validity of this study, which is also a requirement for ethical
research.

The thesis research proposal was submitted to the corresponding Institutional Ethical Review
Board in advance in Canada. This study was approved by the Health Sciences Research
Ethics Board at the University of Toronto (protocol #25852). It was also approved by two
other Institutional Ethical Review Boards out of Canada at the Servicio de Salud
Metropolitano Sur Oriente, in Santiago, Chile, and at the Universidad Nacional Autónoma de
Nicaragua-León, in León, Nicaragua. The Secretary of Health, in Hidalgo, Mexico, was
consulted about the local standards/requirements for obtaining ethics approval before the
research was conducted. They indicated that a local ethical approval was not needed because:
(1) they recognized the already existing approval by the Ethics Board at the University of
Toronto as an appropriate standard that follows international ethical guidelines/requirements
for this kind of studies; and (2) the implementation of the proposal in Hidalgo had the
approval of the head of the Secretary of Health in Hidalgo.
Chapter 3

Paper #1:
Theoretical and Methodological Basis for Evaluating Collaborative Mental Health Services in Latin America
Theoretical and Methodological Basis for

Evaluating Collaborative Mental Health Services in Latin America

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Abstract

Mental health (MH) is a major public health challenge worldwide. Primary health care provides a unique opportunity to address MH problems. Approaches to shared or collaborative mental health care (CMHC) have been implemented in many countries to strengthen the accessibility and delivery of MH services in primary care. However, there are not well-defined frameworks to evaluate CMHC models. It is necessary to advance in the development of an appropriate evaluation framework in order to foster the effectiveness of CMHC in Latin America.

The purpose of this article is to identify, contextualize and discuss relevant health services research approaches, theory and evaluation models for the development of such an evaluation framework.

Methods: A comprehensive literature review informed a critical analysis of relevant theories and alternative methods to be considered in the development of the framework.

Results: Specific health services research frameworks are discussed in the context of evaluating CMHC. Two theoretical perspectives - collaboration theory and systems theory - and three evaluation models- realistic, developmental and collaborative - are analyzed in terms of their relevance. Methodological implications are identified.

Discussion: An appropriate evaluation framework for CMHC in Latin America needs to reflect theoretical and contextual considerations, as well as relevant evaluation approaches and methods, including key dimensions and attributes/variables, core indicators, and recommendations for implementation. The framework should address the full mandate of CMHC and consider important areas of care and support, including interface with the rest of the health system and other sectors as well.

Key words: Evaluation / Collaborative Mental Health Care / Latin America / Primary Care / Mental Health / Addiction / Quality Improvement / Health Services Research
INTRODUCTION

Approaches to shared or collaborative mental health care (CMHC) are being implemented worldwide to strengthen the accessibility and delivery of mental health services in primary health care settings, reduce stigma and support recovery through interdisciplinary and inter-sectoral collaboration (Gask et al., 1997; Ivbijaro, 2012; WHO, 2010; WHO, 2012). There is promising evidence regarding the effectiveness, cost-effectiveness, and generalizability of specific CMHC initiatives (Craven & Bland, 2006; Dewa et al., 2009; Gilbody et al., 2006; Simon, 2008; van Orden et al., 2009; Wren et al., 2012).

For the purpose of this article, CMHC involves providers from different specialties, disciplines and sectors offering complementary services and mutual support to ensure that individuals receive the most appropriate and cost-effective mental health services, mainly in primary care. Those services follow high standards of quality and cover the full range, from health promotion and early detection to diagnosis, treatment and recovery support (Gagné, 2005).

There are different strategies for implementing CMHC in practice (Bower & Gilbody, 2005; Kates et al., 2011; Pincus, 1987). This may involve shared clinical and informatic tools, closer working relationships between mental health and primary care and, many times, a case manager with specialized training to support the care plan. These collaborative working relationships require a common understanding of goals and roles, effective and ongoing clinical communication, and joint decision-making. CMHC models are based on the concept that systems change is required to improve care (Williams & Manning, 2008).

Some of the barriers and opportunities for effective CMHC are very context specific, such as the type of population served, the local organization, and the availability of funding. Those unique conditions are likely to require context-specific solutions (Cristofalo et al., 2009). Some other challenges appear to be more universal, such as discontinuity of care, stigma, and communication difficulties between primary care and specialized mental health agencies (WHO & WONCA, 2008).

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2 In this article, the term “mental health” refers to mental, substance and concurrent disorders, as well as the positive aspects of mental health.
Evaluation is key to fostering ongoing processes and outcomes of collaborative care initiatives, enabling performance reporting across jurisdictions and over time, and assessing the attainment of goals established both for primary care and mental health, as well as for the broader health system renewal (Longo 2012; Sapag & Rush, 2012). An appropriate and feasible evaluation framework is essential in: (1) strengthening mental health services in terms of access, quality of care and impact on population health status, including mental health; (2) enhancing management to better use local resources; and (3) fulfilling transparency and accountability requirements. Nevertheless, a comprehensive evaluation framework for CMHC has not been developed globally nor in Latin America (Kates et al., 2008; PAHO, 2009).

Mental health and substance use issues represent a significant public health problem in Latin America (PAHO, 2012; Rodriguez et al., 2009; UNODC, 2012). By 2002, psychiatric and neurological conditions accounted for an estimated 22.2% of Disability-Adjusted Life Years in Latin America (Kohn et al., 2005). A number of social and environmental determinants affect the growing prevalence of mental health problems in the region (Breilh, 2008) including social inequities (ECLAC, 2012; ILO, 2012; Ortiz-Hernández et al., 2007); ethnocultural diversity (Montenegro & Stephens, 2006; PAHO, 2004); natural disasters; stigma and discrimination toward people with mental health problems (Acuña & Bolis, 2005; Michels et al., 2006; Stuart et al., 2012); and trauma and violence, including armed conflict and political violence (Norris & Kohn, 2009), gender-based violence (Gaviria & Rondon, 2010), and maltreatment of children (ECLAC & UNICEF, 2009).

There has been an important shift in mental health care in Latin America in recent decades. In the 1970s psychiatric care was structured mostly around custodial care centered in asylums far from urban areas (Alarcon & Aguilar Gaxiola, 2000). In the mid-1980s an important sociopolitical change took place in the region with the restitution of democratic systems, which favored the restructuring of the mental health services and the review of applicable legislation. Since the beginning of the 1990s, a process of mental health reform directed to protecting human rights and promote community-based and integrated mental health services has been taking place in the region (PAHO, 1990; PAHO, 2005; PAHO, 2010). Nevertheless, much more needs to be done to address the mental health needs of the population in Latin America (Caldas de Almeida & Horvitz-Lennon, 2010; PAHO, 2009).
Over the last 10 years in Latin America, CMHC has increasingly been seen by authorities and community members as a fundamental and critical part of their public health care and delivery systems (Roses, 2005). The new efforts from WHO and PAHO, in particular, the *Strategy and Plan of Action on Mental Health for the Americas* (PAHO, 2009) are supporting the development of CMHC services in the region. CMHC is being emphasized in most countries, and now there is a special interest in identifying the gaps between what is demonstrated as effective and what is funded/practiced as CMHC.

However, a national and/or regional comprehensive performance evaluation framework for CMHC systems has not been developed in Latin America. Such a framework would form a necessary foundation for the development of consistent indicators and data collection for ongoing quality improvement and accountability processes. Health services research frameworks and theoretical considerations are fundamental to define the most appropriate evaluation strategy to be applied in the specific context of Latin America.

A research study aimed at developing a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC is currently being implemented (*Figure 1*). The purpose of this paper is to identify, contextualize and discuss relevant health services research approaches, theory and evaluation models for the development of such an evaluation framework (*Figure 2*).

**METHODS**

This article is based on a critical analysis of existing literature about the topic of interest. Databases searched include: Medline, Pub Med, EMBASE, CINAHL, PsycINFO, ERIC, SciELO, Social Sciences Abstracts, The Cochrane Library, and Google. Key words used were: *primary health care; primary care; general practice; mental health; mental health services; substance abuse; addiction services; collaborative mental health care; shared care; primary mental health; evaluation; evaluation framework; evaluation theory; evaluation model; Latin America*. Relevant publications of international agencies and governments were also identified. Cumulatively, the search covered 1985-2012.
The analysis of the literature aimed at identifying practical implications for developing an evaluation framework for CMHC in Latin America and addressing the following questions: What are the most relevant health services research approaches and theoretical foundations on which to build an evaluation framework for CMHC in Latin America? What are some innovative evaluation approaches with potential value for developing the framework? What are the main methodological considerations for the development of the evaluation framework?

RESULTS

The findings are presented in three sub-sections: (1) health services research frameworks; (2) theoretical perspectives; and (3) evaluation models.

1. Health Services Research Frameworks Relevant for Collaborative Mental Health Care.

Health services research is a “multidisciplinary field of inquiry, both basic and applied, that examines the use, costs, quality, accessibility and delivery, organization, financing, and outcomes of health care services in order to increase knowledge and understanding of structure, processes, and effects of health services for individuals and populations” (Institute of Medicine, 1995). In particular, evaluation assesses how well services and programs, which have been developed and implemented, have done in achieving desired objectives (Aday et al., 2004), and provides knowledge about the value of programs that can be used to ameliorate the social problems to which they are relevant (Shadish et al., 1991).

Evaluation has evolved in terms of defining how program efforts and outcomes have been valued; how evaluators justified different kinds of knowledge identified or created by the evaluation process, and how studies have been conducted in order to impact on policies and actions for social change (Bowling, 2009). In order to think about alternatives and key elements for evaluating CMHC, four complementary health services research frameworks are briefly visited. They are focused on overall quality of care, health policy, mental health services, and primary care, respectively.
Donabedian (1980, 1988, 2005) proposes a model to analyze quality of care, including three factors: structure, process, and outcomes. *Structure* refers to the setting in which care is delivered including adequate facilities and equipment, qualification of care providers, administration structure, and operations of programs. *Process* describes how structure is put into practice and care is provided in terms of appropriateness, acceptability, completeness or competency, such as specific treatments. *Outcomes* focus on results of processes and end points of care, such as improvement in function, recovery or survival.

The framework of Aday et al. (2004) provides a useful approach for applying health service research in evaluating health policy. Health policy is crucial in terms of how the health system is organized and how it is working. The *structure*, composed of the delivery system, the population at risk and the environment, is interrelated with the level of access (utilization and satisfaction) as well as health risks, which are considered *process*. *Outcomes* are the final health and well-being results at the individual (patients) and population levels (community). For Aday and colleagues, the criteria of *effectiveness*, *efficiency* and *equity* provide a broad perspective for assessing the performance of health systems.

The mental health matrix, designed by Thornicroft and Tansella (1999) emphasizes the need for simplicity and provides a conceptual framework for planning and evaluating mental health services with two dimensions: the geographical and the temporal. The geographical includes three levels: (1) country/regional (system), (2) local, and (3) patient. The temporal dimension has three phases: (1) inputs, (2) process, and (3) outcomes. Using these two dimensions a 3-times-3 matrix is constructed in order to introduce critical issues of mental health services for measurement purposes. This framework suggests that mental health services should be primarily organized at the local level in order to better focus policies and resources and that even when outcomes are the most important aspect of service evaluation, they can only be interpreted in the context of their prior phases: inputs and processes. The authors invite users of their framework to adjust it to their own situation.

Finally, Broemeling et al. (2006) proposes a specific framework to measure primary care performance. It focuses on the importance of evaluating the linkages between the sector’s contexts, inputs, activities, outputs and outcomes using a comprehensive data
collection strategy. It is a population-based, multi-level, and longitudinal approach that has two main dimensions: effectiveness and efficiency, in line with the previous frameworks.

There is not a comprehensive evaluation framework for CMHC. However, there have been some concrete efforts to advance in developing indicators for CMHC. For example, Shield et al. (2003) identified a generic set of quality indicators for primary care mental health services that reflect a multi-stakeholder perspective and can be used for facilitating quality improvement in England. In Canada, Waraich et al. (2006) conducted the study “Continuous Enhancement of Quality Measurement (CEQM) in Primary Mental Health Care: Closing the Implementation Loop” aimed at achieving that goal through building pan-Canadian consensus on a set of quality measures.

Implications for Evaluation: There is no one “gold standard” for assessing CMHC. The focus of an evaluation may vary depending on which basic question needs to be answered, e.g., How well has the CMHC been implemented? (process evaluation), Has the desired change been achieved? (outcome evaluation), If the change has been achieved, to what extent can it be attributed to CMHC? (impact evaluation). It is essential to evaluate the linkages between the sector’s contexts, inputs, activities, outputs and outcomes. This, in turn, will require a comprehensive data collection strategy and the development of information systems that recognize the connections between primary health care, the other levels of the health system and other sectors. Effectiveness, efficiency and equity should be a priority when assessing the performance of CMHC. It is also necessary to identify the stage of development of CMHC initiatives (initial, implementation or established) and to see them as dynamic systems with a trajectory of development and change over of time.

2. Theoretical Perspectives on Collaborative Mental Health Care.

While there are no specific theoretical models behind the development of CMHC, some theoretical and conceptual frameworks are particularly relevant. Based on the guidelines of Glanz, Rimer, & Viswanath (2008) and McGuire (1983) and their suitability to CMHC, two theoretical perspectives are particularly important: Collaboration Theory and Systems Thinking.
2.1. Collaboration theory: **Collaboration**, in the context of health care, can be defined as a “dynamic, transforming process of creating a power sharing partnership for pervasive application in health care practice, education, research, and organizational settings for the purposeful attention to needs and problems in order to achieve likely successful outcomes” (Sullivan, 1998; p 6). It has different dimensions (Ashburner, 2002): (1) the level at which collaboration takes place, and its purpose; (2) the parties to the collaboration and their boundaries; (3) the context that affects the collaboration and its effectiveness, including variables such as culture and power; (4) co-ordination, including hierarchy, rules, authority; and (5) formality or permanence of the arrangement.

There has been an evolution in the theoretical understanding of collaboration (Styles, 1984; Weiss, 1985). The theory/concept of **collaborative advantage** (Huxham & Macdonald, 1992; Huxham & Vangen, 2005) provides a useful “guiding light” for the purpose of collaboration: to gain real advantage from collaboration, something has to be achieved that could not have been achieved by the organizations acting alone. On the other hand **collaborative inertia**, captures what happens very frequently in practice: the output from the collaboration is insignificant or imperceptible, the rate of output is slow, or the process to achieve success is extremely painful. The theory of collaborative advantage suggests finding the right balance between collaborative and individualistic work.

Collaboration can be of benefit by opening up access to different resources, such as knowledge and skills, reducing uncertainty, and bringing better-quality solutions to improve health outcomes and the use of resources. However collaboration also has a potential downside (Nolan & Badger, 2002): it can put extra pressure on individuals and organizations and can be time-consuming. There is also a risk that the focus can shift to the process away from the purpose.

There are two levels of analysis that are particularly important when the focus is on collaboration theory to address a complex issue, as is the case in CMHC: inter-professional (D'Amour D et al. 2005) and inter-organizational (Alter & Hage, 1993; Gray, 1989).

Inter-professional collaboration theory (D'Amour et al., 2005) identifies some key aspects: the dynamic established between professionals is as important as the context of collaboration; collaboration needs to be understood not only as a professional endeavor, but
also as a human process; professionals will collaborate if the effort is based on the notion that it will be good for clients and for themselves; and leadership may play an important role.

Inter-organizational relations theory (Alter & Hage, 1993; Gray, 1989) focuses on how organizations work together and is based on the premise that collaboration among organizations results in addressing complex issues more effectively than can be done by one organization. One three-stage model of network development is used to explain how inter-organizational relations evolve over time, proposing a continuum from informal to formal linkages (Buterfoss et al., 2008): (1) exchange or obligation networks, represents a basic collaboration maintained by few individuals, (2) action or promotional networks, where organizations share and pool resources to fulfill a particular goal; and (3) systemic networks where organizations are formally linked and are jointly producing services or goods over the long term.

**Implications for Evaluation:** Beyond the pros and cons of collaboration (Hayes et al., 2012) that have already been discussed, it is important to tailor collaboration theory to the reality of situation in the present case, CMHC. In particular, special consideration needs to be provided to some key practical characteristics of collaboration in primary care settings which can lead to improving the quality of care (Lanham et al., 2009) including trust, openness to new ideas and multiple perspectives), heedfulness (when individuals pay attention to their specific tasks at hand, as well as to the task of the larger group), respectful interaction, and communication effectiveness, among others.

**2.2. Systems thinking:** According to this theoretical approach, programs or interventions occur within a complex environment where structures and relationships are interactive and dynamic. Systems are highly sensitive to initial conditions, so small changes can make a major difference -the “butterfly effect”- (Gladwell, 2000). Facilitating system change is not easy and requires persistent, incremental changes in order to maintain stability, while minimizing disruption, as well as to consider unintended consequences in formulating a strategy. *Systems thinking* encompasses ecological models and incorporates system dynamics and complexity theory approaches (Norman, 2009; Trochim et al., 2006).
It is important to note that a local CMHC is a system in its own right and that this system is embedded within organizations, communities and a larger social context (Adam et al., 2012; Glouberman et al., 2006). In particular, the concept of “complex adaptive systems” (Dooley, 1997) needs to be explored for its implications for CMHC (Martin & Sturmberg, 2008). Complex adaptive systems (CAS) encompass the following characteristics (Olney, 2005): (1) they feature an entangled web of relationships among many internal and external agents and forces; these influences cause constant change in an unpredictable, nonlinear manner; (2) CAS are self-organized: patterns of behaviour emerge through complicated relationships, influences and feedback loops inside and outside the system, that can be shaped, but not forced; (3) CAS do not move predictably toward an end goal; (4) communication is heaviest at the boundaries of a CAS; (5) system-wide patterns of behaviours can be observed; (6) feedback loops (they carry information, material and energy) are the mechanisms for change in a system; and (7) patterns of behaviour may repeat themselves at different levels of a system and across systems.

In recent years there have been progress in integrating system thinking to evaluation work (de Savigny & Adam, 2009; Gladwell, 2000; Olney, 2005; Trochim et al., 2006), especially in situations where rigorous rethinking, reframing, and unpacking complex realities, and explicit assumptions are required (William & Imam, 2007). There is, as yet, no clear consensus in terms of what a systems evaluation theory would look like, what kind of evaluation it would be, or whether it would have generally accepted taxonomies. However, there is a preliminary basis to form taxonomies linking systems concepts to concrete evaluation situations (Cabrera & Trochim, 2006; Williams & Imam, 2007).

**Implications for Evaluation**: Systems thinking offers a unique and very useful perspective to improve the relevance and utility of evaluation of CMHC, understanding primary care as a dynamic component of the health system and conceptualizing CMHC as a complex adaptive system. Systems thinking can provide a way forward for operating an evaluation framework for CMHC in real-world settings and helping to reveal the underlying key characteristics and relationships of the CMHC system (de Savigny & Adam, 2009). One of the risks is that the evaluation becomes extremely complex and not sufficiently focused. Some stakeholders may dismiss systems thinking as too complicated or unsuited for any practical application.
regarding CMHC. Systems concepts and approaches can be used with other evaluation frameworks according to the circumstances.


Three innovative evaluation models, which are theory-based, were examined for their potential value for developing an evaluation framework for CMHC in Latin America.

3.1. Realistic evaluation was developed from the philosophical perspective of critical realism (McEvoy & Richards 2003), taking into account the dynamic environment within which complex interventions take place. The aim of the evaluation is not to demonstrate simply that the intervention works, but to understand how it works and what the links are between context, mechanisms and outcomes. It understands causality in terms of generative mechanisms; causal relationships are not straightforward, as contextual factors can modify outcomes: mechanisms should be in the right context to produce the expected outcomes (Pawson & Tilley, 1997; Pawson, 2002).

The Context–Mechanism–Outcome (CMO) model proposed by Pawson and Tilley (1997) provides useful guidance to identify or test the premise upon which a particular program is based. The causal power of an initiative lies in its underlying mechanism (M). Whether this mechanism is actually triggered depends on context (C). A given policy or intervention is liable to activate multiple mechanisms with divergent outcomes (O) and similar outcomes may, in principle, be generated through varying mechanisms.

Implications for Evaluation: Following the logic of ‘realistic evaluation’, the evaluative question will not be ‘does CMHC work?’ Rather, the evaluation might explore the possible connections between contextual conditions (i.e. specific characteristics of the public health system, organizational and institutional contexts) and the ‘mechanisms’ developed in the field resulting from the interactions between the actions of the collaboration and the reactions of the target group. Realistic evaluation will encourage one to explore relationships between the context in which the CMHC is being developed and refined, plus the mechanisms
necessary for its operation and the outcomes. The use of the CMO model would also illuminate why a CMHC approach may work in some situations but not in others.

One potential pitfall of this evaluation model is that mechanisms and outcomes require careful validation if they are to be linked (Gill & Turbin, 1999). In that sense, it might be easier to propose plausible CMO configurations than collecting valid data for them, particularly where resources are limited as is the case in CMHC.

3.2. Developmental evaluation (Patton, 2008, 2010), a sub-type of utilization-focused evaluation, is useful in innovative settings for situations where goals are not pre-set, but rather evolve as learning occurs (Patton 1994; Patton, 2008; Patton, 2010). There is a need to conceptualize interventions and theories of change beyond the current dominance of linear logic models. It is an option specifically geared to evaluations in complex dynamic systems where an innovation is taking place and where uncertainty is part of the reality (Westley et al., 2006). The premise is that evaluations should be judged by their utility and real use.

Innovative initiatives, like CMHC, are characterized by a state of continuous development and adaptation, and face unpredictable conditions. Developmental evaluation supports organizations in their efforts to adapt to emergent and dynamic realities, as in the case of CMHC. It is not the typical improvement evaluation and does not render overall judgments of effectiveness because there is a learning process of development still far from a “best practices” model than can be replicated in one community after another. The evaluation process includes asking evaluative questions, using evaluation logic and gathering real-time data to guide program or organizational development. It is focused on learning and adaptation and the evaluator works closely with the program team of collaborators.

Implications for Evaluation: This evaluation approach is very appropriate in the context of CMHC where there is a need for ongoing adaptation and model development in a context of complex nonlinear dynamics in the respective organizations and communities. One of the cautions with this approach is the risk of crossing the line from rendering judgments to offering advice. At the same time, this is a new evaluation approach with a limited history of application that seeks to address issues of complexity that might be considered confusing or complicated.
3.3. Collaborative evaluation (Dowling et al., 2004) is a type of participatory evaluation that refers to any kind of cooperation between the evaluator and the evaluated or those affected, ranging from answering questions or digging up records, to complete ownership of the evaluation. The key assumption here is that substantial participation by major stakeholders is fundamental to good evaluation practice (Fitzpatrick, 2012). The precise extent of participation can and does vary. Empowerment evaluation (Fetterman et al., 1996; Fetterman & Wandersman, 2007) may be considered as one extreme of collaborative evaluation. It uses evaluation concepts, techniques and findings to help program participants evaluate themselves and their program to improve practice and foster self-determination.

Different studies suggest that the validity and usefulness of the final product of an evaluation is improved by the inclusion of different perspectives: clients, families, community, other partner agencies and providers, among others (Fitzpatrick, 2012). However, despite the benefits of involving stakeholders, it is important to define the extent and type of stakeholder involvement in developing the evaluation framework, particularly since meaningful engagement can extend the evaluation timeline.

Implications: Collaborative approaches might be very appropriate for evaluating CMHC in Latin America, given the importance of partnerships, and collaboration in general, in the implementation of CMHC and considering the importance of engaging stakeholders in the evaluation process aimed at a sustainable process of improvement. Collaborative evaluation might yield greater (external) validity because it will reflect the different perspectives of all the key stakeholders in the policy/program/project.

Perhaps the strongest criticism against this evaluation approach is its potential lack of objectivity because of participants’ bias. Maximizing stakeholder participation in the process of evaluation can sometimes limit the kinds of questions that can be addressed; delay or reduce the chances of any transparent and accountable decision being reached; and confuse the lines of democratic accountability. The key question here is if collaborative valuation would meet evaluation standards and under what conditions (Donaldson et al., 2010). The challenge of using this approach would be how to balance meeting the standards of both use and accuracy. Rather than being a specific evaluation strategy, the collaborative evaluation
approach may be a potential component of dissemination strategy within a given setting/jurisdiction wishing to incorporate the CMHC into their work.

*Table 1* summarizes some key considerations for developing an evaluation framework for CMHC in Latin America.

**DISCUSSION**

Evaluation of CMHC is a critical challenge in Latin America (Razzouk, 2012). This article concludes that a comprehensive and holistic evaluation framework for CMHC in Latin America must consider existing health research evaluation approaches and theories, and a clear understanding of the context particularities and system complexities. All the discussed models have some pros and cons; an eclectic strategy, taking the best of each of them, seems to be the best way to inform the development of an evaluation framework for CMHC in Latin America. A right balance between program theory and methodological rigor is essential to evaluate “real world” complex systems in order to facilitate learning and promote sustainable quality improvement (Sridharan & Nakaima, 2011).

*Figure 3* articulates some of the main implications identified for the development of such an evaluation framework. Evaluation research involves defining a design that is appropriate for a specific situation and context (Patton, 2010). An evaluation framework should be applicable to evaluate different prototypes of CMHC in Latin America in the future, with the necessary contextual adjustments. This flexible evaluation framework should reflect the full mandate of primary care and all the functions regarding mental health services. Measurement must consider important areas of care, including interface with the rest of the health system and other systems. Needs, structure, process, inputs, outputs and outcomes (short-mid-long term) should be considered, as well as key dimensions and attributes/variables, and core indicators.

A comprehensive approach (Adam et al., 2012) should integrate qualitative and quantitative methods in an appropriate design following the standards of professional evaluation practice (JCSEE, 1994; Stufflebeam & Shinkfield, 2007). Any method used to evaluate complex collaborative care models will have pros and limitations. Quantitative
methods represent probably the most dominant evaluation strategies (Punch, 2005). With an expanded use of qualitative research (Liampittong Rice & Ezzy, 1999) in health service investigations, mixed-methods or multi-method research has the potential for rigorous, methodologically sound studies in primary care. When used in combination, both quantitative and qualitative data yield a more complete analysis and complement each other (Creswell at al., 2004; Creswell & Plano Clark, 2011).

There are some evaluation challenges regarding CMHC (Bickman et al., 1995; Kennedy & Griffiths, 2003), including: (1) the complexity and variability of CMHC; (2) the lack of explicit goals to implement CMHC in many cases; (3) limited resources; (4) a lack of an evaluation culture in many mental health and primary care settings; and (5) political instability in many countries, among other factors.

A successful implementation of an evaluation framework in primary health care will depend on the interaction of multiple factors, including measure characteristics, implementation strategies, promotional messages, resources, the intended adopters, and the intraorganizational and interorganizational contexts (Addington et al., 2010). All those elements need to be considered when developing an evaluation framework for CMHC. The identification of the main evaluation focus and questions from the beginning, as well as the consideration of previous experiences for defining evaluation dimensions and indicators for CMHC (e.g. Shield et al., 2003; Waraich et al., 2006) will be essential to guide the development and implementations processes.

This article raises some potential limitations, including: (1) the topic of study is broad and quite unexplored; (2) there is some lack of consensus regarding definitions of terms in the fields of CMHC and health services research; (3) it may be expected that many CMHC initiatives have not been published; and (4) the selection of discussed theories and methodological approaches may be biased by the criteria authors used to include them instead others.

This paper provides a strong theoretical and methodological foundation for developing an evaluation framework for CMHC in Latin America. However, a further understanding of the context is necessary to research how these theories and methodologies may be appropriate or not for specific regional and community realities. A mix methods study in different sites (prototypes of CMHC) in the region would be the natural next step to have
inputs about evaluation needs, vision for developing an evaluation framework and feasibility issues. In addition, a Delphi group with experts (Barsley et al., 2005; Haggerty et al., 2009) would be useful to identify main areas of consensus, as well as disagreements about the importance and feasibility of evaluation dimensions to include in the framework.
References  (Pending final formatting – depending on the choice of journal)


ECLAC (Economic Commission for Latin America and the Caribbean). (2012). *Social panorama of Latin America 2012*. Santiago, Chile: ECLAC.


Figure 1. Development and Implementation of an Evaluation Framework of Collaborative Mental Health Care in Latin America.
Figure 2. Summary of Research Phases and Methods.

**Identifying Conceptual Basis of the Evaluation Framework**

*Literature Review*
- Critical analysis of main theories regarding CMHC, and alternative evaluation models and methods

**Understanding Local Needs and Context**

*Environmental scan* (in each site):
- Document review
- Key informant interviews
- Focus groups
- Survey

**Drafting and Prioritizing of Evaluation Dimensions**

*Delphi Method*

**Confirming and Validating the Evaluation Framework**
- *Site visits* (local meetings and preparation of implementation plan considering feasibility issues)
- *Refining the evaluation framework* (based on findings and final feedback)

Note: Shaded is the data presented in this paper.
Table 1. Key Implications for Developing a Comprehensive Evaluation Framework for CMHC in Latin America based on Health Services Research Frameworks, Theoretical Perspectives, and Evaluation Models.

<table>
<thead>
<tr>
<th>Health Services Research Frameworks</th>
<th>Theoretical Perspectives</th>
<th>Evaluation Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Potential focuses: Needs, structure, process, inputs, outputs and outcomes (short-mid-long term)</td>
<td>Collaboration</td>
<td>Realistic</td>
</tr>
<tr>
<td>• Effectiveness, efficiency and equity are critical</td>
<td>• Collaboration / Partnership (e.g. collaborative structures / richness of collaboration / referral and contra-referral system)</td>
<td>• Links between context, mechanisms and outcomes</td>
</tr>
<tr>
<td>• Comprehensive (from mental health promotion/prevention to treatment and rehabilitation).</td>
<td>• Communication is essential</td>
<td>• Capture an “emerging model of causal relationships”</td>
</tr>
<tr>
<td>• Reflect the full mandate of primary care and all the functions regarding mental health/addiction services.</td>
<td>• Continuity of care</td>
<td>• Address implementation issues: Logistics, Feasibility, Barriers &amp; Opportunities</td>
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<tr>
<td>• Focus on quality of care</td>
<td>• Survivor/Consumer participation</td>
<td>Developmental</td>
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<tr>
<td>• Inclusion of main dimensions and core indicators</td>
<td>System Thinking</td>
<td>• CMHC and evaluation of CMHC are transformative</td>
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<tr>
<td>• Follow ethical and quality standards</td>
<td>• Capacity to respond to emerging needs / incorporate evolving evidence</td>
<td>Collaboration</td>
</tr>
<tr>
<td>• Understanding of context is essential</td>
<td>• Sensitive to diversity</td>
<td>• Prevent Potential Biases</td>
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<tr>
<td>• Policy considerations</td>
<td>• Openness to innovation</td>
<td>• Consider the participation of health providers and clients</td>
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<tr>
<td>• Mixed methods may be more appropriate</td>
<td>• Leadership may play a critical role</td>
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</table>
Figure 3. Building an Evaluation Framework for CMHC in Latin America.

Comprehensive Evaluation Approach

Key Aspects
- Evaluation Questions
- Definition of Indicators
- Methods
- Design
- Checking Feasibility
- Implementation
- Results / Knowledge Exchange

Meeting Evaluation Standards

“Hidden” Essential Aspects of CMHC
- Collaboration (e.g. collaborative structures / richness of collaboration / referral and contra-referral system)
- Capacity to respond to emerging needs
- Openness to innovation
- Leadership / Governance
- Services for vulnerable/special populations
- Protection of Human Rights
- Cultural factors
- Survivor/Consumer participation
- Others

INPUTS
- Legislation/Policy
- Financing
- Structure of CMHC / Structure of the Health System & other Sectors
- Human Resources
- Equipment
- Information system
- Medications
- Others

NEEDS / EXPECTATIONS
- Population needs and characteristics
- Specific Mental Health / Addiction conditions
- Determinants
- Others

PROCESS
- Accessibility
- Utilization
- Quality of Care
- Continuity of care
- Appropriateness of care
- Others

OUTPUTS
- Type and Quality of Services / Activities (MH promotion & prevention, screening, treatment, rehabilitation)
- Acceptability
- Adherence rates
- Reduce of risky behaviours
- Strengthened protective factors
- Safety
- Others

OUTCOMES
- Overall health / wellbeing
- Mental health
- Equity
- Development
- Quality of life / functioning
- Satisfaction
- Responsiveness
- Others

Context / Broader System & Sub-Systems / Dynamic Change / Patterns of Behaviours Over Time
Chapter 4

Paper #2:
Collaborative Mental Health Services in Primary Care Systems in Latin America: Contextualized Evaluation Needs and Opportunities
Collaborative Mental Health Services in Primary Care Systems in Latin America: Contextualized Evaluation Needs and Opportunities

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Abstract

Primary health care offers a unique opportunity to address the existing mental health treatment gap. Collaborative Mental Health Care (CMHC) is being emphasized in most countries, including in Latin America. However, there are not well-defined frameworks to evaluate CMHC. This article presents and analyzes the identified Latin American evaluation needs, as well as some implementation challenges and opportunities, perceived by local key health care leaders and professionals regarding the development of a CMHC evaluation framework.

Methods: This multi-site research study used an embedded mixed methods approach. It took place in three public health networks in Mexico (Hidalgo), Nicaragua (Leon) and Chile (Santiago). Local stakeholders were invited to participate: decision-makers in key informant interviews, front line clinicians in focus groups, and other stakeholders through a survey. A purposive sampling method was used to recruit participants. The analysis was conducted within-site and then across-sites. The three data sets were triangulated.

Results: A total of 22 semi-structured interviews, three focus groups and 27 questionnaires (52% response rate) were conducted in the three sites. Participants recognized a strong need to evaluate different areas of CMHC in Latin America, including access, types and quality of services, human resources, and outcomes, among others, both in mental disorders and addiction. A priority was to evaluate collaboration within the health system, including the referral system. Issues of feasibility, including the weaknesses of information systems, were also identified.

Conclusion: Local stakeholders strongly supported the development of a comprehensive evaluation framework for CMHC in Latin America. That framework must consider the characteristics of the local context and processes of changes within it.

Key words: Evaluation / Collaborative Mental Health Care / Latin America / Primary Care / Mental Health / Addiction / Mixed Methods/ Health Services Research
INTRODUCTION

Latin America is facing the challenges of a growing epidemic of mental health issues representing 22% of the burden of disease (Kohn et al., 2005). At the same time, this region has been a global leader in both building health systems with a strong primary health care base (Roses, 2007), and delivering community mental health services (Rodriguez, 2010). CMHC in Latin America is being emphasized in most countries and new efforts from WHO and PAHO, in particular, the recently approved Strategy and Plan of Action on Mental Health for the Americas (PAHO, 2009), are supporting those initiatives.

Mental health\(^2\) represents an important public health challenge that requires a comprehensive and community oriented response (WHO, 2012). Primary health care (PHC) offers a unique opportunity to provide better mental health care (WHO-WONCA, 2008). Although there are different approaches to Collaborative Mental Health Care (CMHC) being implemented to reduce the existing mental health treatment gap (WHO, 2010) there is no national or state/provincial comprehensive evaluation framework for CMHC systems and it is urgently needed (Sapag & Rush, 2012). However, there has become a special interest in identifying the gaps between what is recognized as working well and what is practiced as CMHC (Hayes et al., 2012).

Evaluation is the “systematic assessment of an object’s merit, worth, probity, feasibility, safety, significance and/or equity” (p. 13, Stufflebeam & Shinkfield, 2007). Evaluating complex interventions –such as CMHC- requires a deep understanding of the context (Campbell et al., 2007) and its needs (McLeod, 2011). The tendency to impose from the ‘top-down’ beliefs has been challenged in recent years (Chen, 2010).

The idea of working closely with stakeholders and evaluation users in identifying their needs and supporting them in defining what to do with the evaluation results is essential in modern collaborative evaluation strategies (Bryson et al., 2011; Fitzpatrick, 2012; O’Sullivan, 2012). Mixed methods research offers appropriate alternatives for health services research, including primary care (Creswell et al., 2004). These approaches are particularly relevant for this study and offer a modern perspective to support the appropriate development of an evaluation framework for CMHC in Latin America.

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\(^2\) For the purposes of this article, the term “mental health” includes mental, alcohol and substance use disorders.
There is no general agreement on a definition of “need” in mental health services evaluation (Holloway, 1994; Thornicroft et al., 1996). A need represents a gap between “what is” and “what should be” (Witkin et al., 1995). There is a distinction between “needs” and “wants”/ “desires” (Doyal & Gough, 1984) (“something people are willing to pay for”) and demands (“something people are willing to march for”) (McKillip, 1987). Failure to attend to the needs and perspectives of stakeholders may be a serious limitation when designing and implementing an evaluation (Bryson et al., 2011). The identification of the need-related aspects of a problem may help to specify the conditions and actions necessary to respond to the problem (DePoy and Gilson, 2003), which in this case is evaluation of CMHC in Latin America.

A systematic research effort to identify needs (needs analysis or needs assessment) can be highly beneficial in developing an evaluation framework for CMHC. Needs assessment and analysis are particularly useful when considering an innovative evaluation in primary care (Jiménez Villa, 2007). They focus on the future, or what should be done, rather than on what was done. According to McKillip (1998) a needs assessment allows identifying the most important needs and if any of the needs conflict with others, as well as the level of agreement or disagreement among target groups about the relevance and importance of those needs.

It is equally important when developing an evaluation framework for CMHC to examine a full range of feasibility issues and potential ways to address them appropriately (Adam et al., 2012). Evaluation may be undermined by issues of acceptability, compliance, intervention delivery, recruitment and retention, among other factors (Craig et al., 2008). In order to deal with the complexity of systems, an evaluation has to be based on a deep understanding of the context, which helps in determining whether observed effects are indeed related to the intervention (CMHC in this case) and why (de Savigny & Adam, 2009).

This article presents and analyzes the identified evaluation needs, as well as some implementation challenges and opportunities, perceived by key health care leaders and professionals regarding the development of an evaluation framework in three CMHC systems located in Mexico, Nicaragua and Chile. This research component is a critical first step of a larger initiative that will develop a feasible and meaningful evaluation framework of CMHC at the district or municipal level in Latin America. This current study asks the following research questions:
(1) What are the main mental health challenges in the context of Latin America and how does the local CMHC address them?

(2) Considering the particularities of the context of Latin America, what are the evaluation needs perceived by local key health care leaders and professionals regarding the development of a CMHC evaluation framework aimed at informing decision-making processes and improving primary health care in the region at the district or municipal level?

(3) What are some of the main challenges and potential solutions to consider in the implementation of an evaluation framework for collaborative mental health care in Latin America?

CMHC is defined in different ways. For this study in Latin America, we defined CMHC as involving providers from different specialties, disciplines or sectors working together to offer complementary services and mutual support to ensure that individuals receive the most appropriate and cost-effective mental health service and mainly in primary care. It considers high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery (Gagné, 2005).

METHODS

This is a multi-site research study that used an embedded mixed methods approach (Creswell, Plano Clark, et al., 2003) (Figure 1). Three local health networks in the public sector in Latin America were purposively selected based on the following criteria: characteristics of the served population (e.g., rural/urban, levels of poverty, presence of indigenous communities); characteristics of the health care system (e.g., local CMHC approaches); geographical realities (Mexico, one country from Central America, and one country in South America); and feasibility criteria (e.g., local commitment of collaboration and availability of resources). The sites were: (1) the Secretaría de Salud (Secretary of Health), State of Hidalgo, Mexico; (2) the Sistema Local de Atención Integral Salud
(SILAIS) (Local System of Comprehensive Health Care), in the district of León, Nicaragua\(^3\); and (3) The Servicio Metropolitano de Salud Sur-Oriente (SSMSO) (South East Metropolitan Health District), Santiago, Chile. Table 1 presents a summary of key characteristics of the research sites.

**Data Collection**

Data was collected at the three research sites between December 2010 and April 2012 and included (a) key informant interviews and three focus groups and (b) an online survey for other key stakeholders related to the CMHC system (Table 2).

**(a) Key informant interviews and focus groups.** Twenty-two semi-structured key informant interviews were conducted, which included six to nine in each site. Interviews included: (1) the health directors of the local health networks; (2) the mental health coordinator or CMHC coordinator of the local health networks; and (3) one to three other key informant(s) who had key roles in CMHC, according to the context. In addition, one focus group was conducted per site. The participants (6-12 per site) were clinicians and managers from different professions working in CMHC, mainly in primary care. A purposive sampling method was used to recruit participants. Specifically, the “snowball” recruitment technique was used, where the main local contact helped in suggesting potential participants.

An interview guide was developed beforehand to ensure that all areas of interest were covered. The interviews were conducted in Spanish. Most of the questions were open-ended. The participants signed a consent form before participating in the interviews or focus groups. The interviews and focus groups were audio-recorded and then transcribed for the analysis (the researcher also took notes).

**(b) Survey.** Other key stakeholders related to the CMHC system, including mental health and substance use services, social welfare, corrections, NGOs, etc., depending on the

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\(^3\) This component of the study counted with the collaboration of the Universidad Nacional Autónoma de Nicaragua-León.
context. 27 participants responded (overall response rate=54%): 9 from Mexico, 8 from Chile and 10 from Nicaragua. The stakeholders and respondents were defined during the site visit, as a result of the environmental scan, and the questionnaires were completed online, in Spanish, using SurveyMonkey after they provided consent. The questionnaire included closed and open-ended questions, giving special attention to CMHC system issues.

**Analysis:** The data was analyzed within-site and across-sites. NVivo 9 Software was used for the analysis of the qualitative component and IBM SPSS Statistics 20.0 for the quantitative items. The analysis of qualitative data considered a framework analysis approach (www.natcen.ac.uk/) (Richie & Spencer, 1994) using a priori codes (pre-defined categories) and also inductive codes according to emerging categories. Main areas of consensus and disagreements among local stakeholders about the features of an evaluation framework for CMHC in Latin America were identified. A SWOT (strengths, weaknesses, opportunities and threats) analysis framework (Skinner, 2002) regarding an evaluation of CMHC in Latin America helped also to guide the analysis. Descriptive statistics were used for the analysis of the survey quantitative data.

Analyses of the three data sets—emanating from interviews, focus groups and the survey—were triangulated. As a research technique, triangulation helps to offset shortcomings in the analyses of multiple data sets and to corroborate findings (Creswell & Plano Clark, 2011).

In addition to the mentioned sources, local reports regarding mental health and substance use population needs, local health systems, CMHC, and others, were reviewed to accomplish the established research aims.

**Ethics:** The study was approved by the University of Toronto’s relevant Research Ethics Board. It was also approved by other Institutional Ethical Review Boards at the research sites (out of Canada) when necessary. Special efforts were implemented in order (1) to ensure confidentiality so that respondents would not be treated differently by the health organization
as a result of their responses; and (2) to reaffirm that participation was voluntary and that no negative consequences would result for those who decided not to participate.

RESULTS

The findings are presented in four sub-sections: (1) Understanding community context, including mental health and substance use at the population level, the local CMHC system response, as well as existing evaluation initiatives; (2) Evaluation and information needs; (3) Vision of an appropriate evaluation framework for CMHC in Latin America; and (4) Implementation considerations. Because, there were many commonalities among the research sites, the information from the three of sites is presented integrated. However, differences among them are also identified as appropriate.

Collaborative Mental Health Care in Context

Mental health and substance use issues at the population level

According to the participants, the most important mental health problems in their communities are: mood and anxiety disorders; schizophrenia; and personality disorders. Phobias, attention deficit, and hyperkinetic disorders were also identified as relevant, but were cited less often. Participants identified alcohol, tobacco, marihuana, cocaine (cocaine hydrochloride, crack and coca paste), inhalants and some prescription medications (e.g. benzodiazepines and amphetamines) as the main substances of abuse. Mental illness and substance issues were identified as equally relevant.

Participants gave particular attention to violence in different forms, including violence against women, mistreatment of children, politically related violence, gang violence and violence in the school (e.g. bullying). Participants pointed out the relationship between violence and drug use. Respondents in all three sites, but particularly in Leon, considered suicide and suicidal behaviour among youth as requiring urgent attention.

“Suicide is another public health problem. We are dealing with a relatively young population, between 15 and 20 years of age.” (Nicaragua, interview)
“...they attempt suicide, some succeed, if not, they escape into smoking, drinking and taking drugs. Most importantly, this young and vulnerable population does not have the support of family or friends.” (Nicaragua, interview)

Somatic symptoms related to mental health issues are particularly relevant and participants noted that patients tend to present multiple physical complaints that may be hiding mental health problems. Concurrent substance use and mental disorders were also mentioned as challenges faced by the health services.

“...normally out of every ten patients ....that have an addictive illness, no matter what substance they are addicted to....seven of them have a psychiatric co-morbidity.” (Mexico, interview)

There was consensus that social environmental factors such as poverty, income inequalities, unhealthy relationships, housing problems, war and natural disasters are determinants of mental health and substance use problems.

There is some debate about whether to include epilepsy in the scope of mental health issues. It is classified as a mental health problem in Mexico and Nicaragua, but in Chile it is dealt with by neurological services.

In all three sites stigma toward people with mental health and/or substance use problems is said to be associated with the worse prognosis as it limits seeking care and promotes isolation. .

“the phenomenon of mental illnesses is still seen as a stigma, as a punishment, as a source of shame and so people always try to deny that they have this problem or try to hide those who are sick.. We have found people who have suffered absolute violation of their human rights, practically confined to an inhuman life, chained down or hidden away so there was no contact between them and the outside world.” (Mexico, interview)

Survey results also support that finding: 50% or more of the respondents in the three sites indicated that stigma and discrimination against people with mental health and/or addiction problems are of high or very severity in their communities.
The local CMHC system response: Current progress and activities

Participants in the three countries highly value CMHC, but reported different experiences in developing their health systems in that regard, which is reflected in the interviews, focus groups and survey.

Hidalgo has been developing the “Hidalgo’s Mental Health Model” since the 1980s. In 2000 the old Psychiatric Hospital was closed and Villas and two halfway houses were opened in the city of Pachuca. They have an explicit approach to address mental health and substance use problems in the State, with an emphasis on primary care. However, they reported some challenges in terms of implementation.

“…there is a mental health care model in which there are trained personal. There is an infrastructure, not the most ideal or the most adequate, but there is an infrastructure. There is a range of medications. There are actions or interventions by age groups: for children there is short attention span; for adolescents, the identification of eating disorders; for adults, depression, psychosis, are the main ones. And all of this is directed at health promotion and prevention.” (Mexico, interview)

The SSMSO in Santiago has a strong history of developing community mental health services and more recently a Family Health Model is being implemented in primary care. Explicit protocols are in place for addressing specific mental health issues in primary care and guiding referrals within the health network.

“…before we operated like a unit apart, as a mental health unit where there was this team that was more closed in one way or another. It received referrals from the rest of the health team. With the development of the family health model, this team effectively is incorporated within the sectors and is more crosscutting, working for a defined population. It no longer simply receives referrals but rather has intake, makes spontaneous consultations and people go there directly and ask for an appointment with a doctor, social worker or psychologist and with this there is a flow.” (Chile, interview)

In Leon, the emphasis is on implementing the Modelo de Salud Familiar y Comunitaria - MOSAFC⁴ - and facilitating universal access to care. Mental health is considered part of holistic health and there is less consensus in terms of the need to develop explicit conceptualizations and services regarding CMHC.

⁴ Family and Community Health Model.
“…what strengths do we have? Comprehensive care for people. It is a matter of seeing them and all the problems that they have. But our weakness is that we do not have qualified persons to work in primary care.” (Nicaragua, interview)

There is clear agreement in the three sites regarding the importance of fostering access to mental health and addiction services, with an emphasis on primary health care, in the continuum from health promotion to rehabilitation and recovery. The support for families facing mental health challenges was considered to be limited and health services should do more efforts to integrate and provide care to them. Gender-based services targeting particular groups, such as pregnant women, were identified as a priority, as well as community outreach services.

“… very vulnerable sectors are children and older adults and so it is necessary to put more emphasis on these two populations, without leaving others aside. There we have an important sector, which is women at the productive age…. It is also important to strengthen services to attend to men given that men do no participate in preventive actions but rather curative ones.” (Mexico, interview)

Some of the challenges of CMHC identified in the three sites were lack of financial resources and training of health professionals, limited access to psychotropic medications in primary care, difficulties in the referral and contra-referral system, as well as insufficient information systems and evaluation. These limitations were said to affect access and quality of care.

Existing Evaluation Initiatives

Participants in all sites indicated that there is growing interest in evaluation, but a lack of comprehensive evaluations. Most of the experience is with high level monitoring using representative indicators. The problems were said to start with weak health information systems, where the mental health component is underdeveloped. In recent years, efforts have been made to include mental health in information systems and the arrival of electronic clinical records in some PHC centres is considered an opportunity to advance in this area. The main focus of their evaluation is processes, specific programs/services (e.g. depression program in Chile, or CAPs\(^5\) in Nicaragua) and/or the individual performances of health services.

\(^5\) CAP=Centro de Atencion Psico-Social (Centre of Psycho-Social Care).
workers. Clinical supervision (e.g. by psychiatrists going to PHC) is considered to be an ongoing quality control/evaluation strategy.

Identified Evaluation Needs

All participants considered it important and necessary to evaluate CMHC.

{the evaluation is} “very useful because it will allow us to identify what lies beyond our vision of the iceberg, everything that is down below, certainly it will allow us to reorient ourselves in decision-making.” (Mexico, interview)

A broad variety of needs were identified:

“... we have to go from the gaps in meeting needs to the quality of attention. I believe we have advanced in extending coverage, in the provision of services. But what is this attention like and is this attention really effective, these are the questions we haven’t answered.” (Chile, interview)

Six main themes of needs emerged: population needs, access, human resources, processes of care, impact, family involvement and support, and others.

First, a profile of the population needs in each location was said to be essential to evaluate CMHC. This includes having a clear sense of the dynamic epidemiological situation (e.g. trends in the prevalence and incidence of the main mental health/addiction conditions and co-morbidity) and information about environmental and social conditions at the population level. In addition, this profile needs to include specific descriptions of CMHC users, including socio-demographic and diagnostic information.

“We need to know the epidemiological situation that allows us to identify risk groups..., but we also require more information regarding the determinants.” (Mexico, interview)

Second, participants believe that having a clear picture of access to CMHC is a priority area to be included in an evaluation framework. Key identified subthemes were availability, accessibility (e.g. geographic), affordability (e.g. free of charge), and acceptability of services. They expressed interest in the availability of appropriate services and equitable
access to quality of care regarding mental health and addiction conditions, with an emphasis on PHC and how well existing services match client needs.

“not everybody have access to a diagnosis neither to medications.” (Nicaragua, interview)

“because of the geography of our State, it may be that somebody living in a remote area faces access to care issues…. Costs of services for patients, even when they are very low, may represent a barrier for some families.” (Mexico, interview)

**Human resources** were consistently identified as a critical dimension to evaluate in CMHC. The type and number of professionals in relation to the population size and needs was seen as a priority area. There was strong interest in assessing competencies to address mental health and substance use issues, mainly in PHC. In addition, the evaluation of self-care practices was recommended:

“mental health service is required at the institutional level, a mental hygiene. There is a lot of burnout.” (Mexico, interview)

**Processes of care** were mentioned as being relevant to an evaluation, in terms of what happens to patients once they access care, the quality and appropriateness of available services, as well as the options, barriers and opportunities that patients face when navigating CMHC. Participants noted the importance of assessing both clinical and non-clinical services (e.g. health promotion). More than just focusing on specific events, the evaluation should assess the overall process of care and its results. This implies paying special attention to the referral and contra-referral systems, the level of adherence to treatment, and why people continue with treatment or not. Having a system approach (e.g. identifying secondary and tertiary level services and the interconnections among the different levels of care) was also identified as a priority.

“Continuity in health care... there could be an emphasis on results, what happens to people that have depression that go a health centre at six months, a year, two years.” (Nicaragua, interview)
Health professionals and decision-makers agreed on the importance of measuring the impact of CMHC results, including reduction of symptoms, improvements in quality of life, social reintegration, etc. but thought that this was not necessarily the most important component of a framework. In particular, they were interested in assessing the perceptions of results, including overall satisfaction from the users’ perspectives.

**Family involvement and support** was also mentioned as relevant for an evaluation.

“How can we evaluate the levels of participation of the family? Because I feel the family support network is a determining factor in treatment of this kind.” (Hidalgo, interview)

“... how does the family see mental health in its health context? Probably the family does not see it as an illness but rather the family thinks that illness is dengue fever or something like that. We have to see if the population perceives mental health as something important.” (Nicaragua, interview)

Participants considered **other relevant dimensions** that should be included in an evaluation framework: how CMHC integrates ethno-cultural (e.g. indigenous populations / rural-urban / alternative local practices), equity, and human rights approaches.

“They [indigenous people] do not use the medical facilities of the Ministry of Health. Their first contact with health problems is the traditional healer or traditional doctor.” (Nicaragua, interview)

“I don’t know if today we know whether there is an equity focus or if there is a focus on gender, and when I talk about the evaluation I am speaking beyond access, beyond opportunity, I am talking about how much we concern ourselves with the individual.” (Chile, interview)

“More than other health problems mental health problems have to do with human rights. And human rights have to do with being human beings and having the right to be treated as one and not as merchandise.” (Nicaragua, interview)

Finally, some respondents considered it relevant to include existing information systems (e.g. what is required to be registered locally, what are indicators are presently used and how appropriate are they) in the evaluation framework. The quality of clinical facilities was also
mentioned as important, but few participants focused on the importance of equipment (e.g. availability of psychometric tests).

**Vision of an Appropriate Evaluation Framework for CMHC in Latin America**

The majority of the research participants (e.g. survey, interviews and focus groups) at the three sites fully supported the idea of having a comprehensive evaluation framework for CMHC in Latin America and attached a similar high level of importance to the following potential components: needs, structure and inputs, process of care, CMHC products and short-term outcomes, long-term outcomes and impact. They also valued the idea of including other less traditional components like openness to innovation and capacity to respond to changes. For example, all the survey respondents indicated that an evaluation framework is either important or very important and highly support a comprehensive approach (Table 3). In particular, their evaluation needs ranged from understanding population needs to implementing services and outcomes in primary care. They included the following areas: health promotion, prevention, early recognition & diagnosis,

“...it should be as integral as possible: the capacities of different health care professionals that participate; the real collaboration among institutions and organizations; the health care delivery capacity...” (survey)

Survey respondents identified concrete benefits from having an evaluation framework including: informing decision-making processes; supporting the search for funding; tailoring CMHC according to needs; improving the quality of care; and orienting the system to positive mental health and quality of life results. In particular, respondents mentioned the importance of the framework to foster management of the limited existing resources for CMHC. Participants of interviews and focus groups also identified same kind of benefits.

**Implementation Considerations**

The heads of the three local health networks expressed their commitment to a CMHC evaluation framework. Other participants in the three sites identified some level of openness
on the part of local authorities to support a CMHC evaluation framework, but also have some reservations about using it.

“I think that in the discussion there is willingness, but this has to be compared to the reality.” (Chile, focus group)

Interview and focus groups participants thought it is perfectly feasible to have one evaluation framework for the Latin America Region, but indicated that it would need to be adjusted to local realities. Using a similar evaluation framework would facilitate learning from other experiences and provide benchmarks.

“I believe that we need a common evaluation framework. A framework that has main common elements and that then also considers the particularities of each reality.” (Chile, interview)

Table 4 summarizes the main strengths and barriers/weaknesses to implement a CMHC evaluation in the three research sites, according to interviews, focus groups and survey.

Overall, participants identify opportunities for implementing an evaluation framework and a positive momentum to advance in that regard:

“I think there are strengths to develop it, there is a lot of willingness. It is an urgent topic...There is a great need to be able to intervene and I believe that is feasible.” (Nicaragua, interview)

Two critical considerations were identified by respondents regarding the feasibility of implementing an evaluation framework:

- Fear of evaluation: “is the fear of being evaluated and of being made another focal point of the evaluation. People hear “evaluation” and they panic. Or they are afraid or they start thinking what are they going to evaluate in me, are they going to classify me, are they going to call into question my participation and activities, what I am doing as a health professional.” (Mexico, interview)

- Resistance to change: “making new things equal implies expending a little more energy and it there that we get somewhat stuck all of a sudden.” (Nicaragua, interview)
In addition, participants indicated that an evaluation should be accompanied by capacity building with respect to how to conduct it, as well as by appropriate economic and human resources to effectively implement it. They also remarked on the importance of building/strengthening an information system to foster the availability of data required to evaluate CMHC.

DISCUSSION

The results of this study provide valuable information from three local realities regarding the development and implementation of a meaningful evaluation framework for CMHC in Latin America. Such an evaluation framework has not been developed and is urgently needed. There are high levels of interest among decision-makers, clinicians, and other stakeholders in having it.

According to the findings, an evaluation should be comprehensive, including a focus on processes and outcomes, but also responsive to other values-based aspects, including culture, diversity, gender, and human rights. The importance of capturing the voice of clients and family members in the evaluation and assessing how their CMHC expectations are addressed was also recognized as critical. Therefore, modern health services research approaches (Aday et al., 2004) can be used, but considering the particularities of the region (Breilh, 2008; Montenegro & Stephens, 2006; Rodriguez et al., 2009) and the active participation of local stakeholders and users when evaluating (Haggerty, 2011; O’Sullivan, 2012).

Along with a strong support for the development of a comprehensive evaluation framework for CMHC in Latin America, there is a clear call for addressing the existing variety of CMHC systems/approaches and levels of implementation in different territories with the necessary flexibility. This is consistent with existing literature (Abel et al., 2012; Othieno et al., 2013). The inclusion of core and optional evaluation dimensions, as well as a set of indicators from where to choose according to each reality, seems to be an appropriate strategy in this regard. That would prevent losing the strength of having a common comprehensive framework that different jurisdictions may use.
Access to CMHC was recognized as a priority dimension to consider in an evaluation framework. This is in line with the available information regarding existing gaps of mental health services (WHO, 2010; WHO, 2011). There are many places where mental health services are extremely limited (PAHO, 2009; WHO, 2009). Availability of services becomes an essential area to measure, but other aspects of access such as accessibility and affordability should be also assessed (Shengelia et al., 2003).

This is the first study of its kind in Latin America and has methodological strengths. It covers the core characteristics of a mixed methods approach (Creswel & Plano Clark, 2011) in a rigour way and links qualitative and quantitative data in the context of a comprehensive design to address the stated research questions.

Nevertheless, there are limitations. Some difficulties arise from the complexity of CMHC and different understandings of key concepts related to CMHC. It may have been difficult for research participants to make practical applications of heretofore-unexplored concepts. A special effort was made to explain to all the participants with sufficient details what the CMHC research focus was and to clarify questions and concepts when needed. The consideration of theories regarding system thinking and complexity (Trochim et al., 2006) may be useful for a next step in the development of the evaluation framework.

Each data collection method (interviews, focus groups, and survey) has limitations (Bowling, 2009; Bridget Somekh & Lewin, 2011). To minimize the potential impact of these limitations, several data sources were considered, along with rigorous and systematic collection methods, appropriate analysis of data and a mixed methods approach. For instance, a note of caution is needed when analyzing and interpreting quantitative data from the survey to other stakeholders. The sample size is small and the non-response rate for the overall survey was relatively high. In addition, some respondents sent back partially completed questionnaires. However, in the context of purposive sampling in a mixed-methods study the size of the sample is less relevant (but still important) than in quantitative research. Then, these data should be carefully interpreted in the context of the overall study. Triangulation of data from different sources may help to prevent validity threats.

In addition, social desirability bias is a potential limitation in this kind of study (Lee & Sargeant, 2011). Stakeholders might be not critical about their own challenges in designing and implementing an evaluation framework for CMHC. This might help to create an “ideal”,
but unfeasible evaluation framework. The following measures helped to prevent this issue: protection of confidentiality; an in-depth exploration of agreements and disagreements; and a focus on practical needs and perspectives rather than theoretical questions.

Needs are likely to be dynamic and change over time and may vary according to individual perceptions, interpretations, and values and differing circumstances (Doyal et al., 1984). Identifying needs is relevant for developing and evaluating health services and CMHC, in particular. The evaluation framework must consider all the aforementioned factors, as well as the local context and change within it. The framework should be applicable to evaluate different prototypes of CMHC in Latin America in the future, with the necessary contextual adjustments (Cristofalo et al., 2009).

To progress in designing the evaluation framework for CMHC, existing relevant theoretical models (Glanz et al., 2008) and methodological considerations need to be analyzed in the context of the identified needs and feasibility issues in the Latin American context. One critical aspect of developing the framework will be the definition of its main dimensions and core indicators. These require agreement on content, applicability in the framework and validity in the real world of health care. They should be evidence-based, reproducible and relatively easy to collect. A Delphi group with regional experts would be a natural next step to identify the main areas of consensus and disagreement.

This study represents an opportunity to strengthen health services and evaluation research to support innovative policies, while enhancing social inclusion and multi-stakeholder participation in decision-making related to health care improvements. The development of a feasible and needs-based evaluation framework for CMHC may facilitate public accountability and contribute to improve access and quality of care for people who suffer mental illness and/or addiction problems. A framework is key in evaluating the ongoing process and outcomes (Thornicroft & Tansella, 1999) of collaborative care initiatives, enabling reporting of many dimensions of performance across jurisdictions and over time, and assessing the attainment of goals established both for primary care and mental health/substance use, as well as for renewal of the broader health system.
References (Pending final formatting – depending on the choice of journal)


Figure 1. Summary of Research Phases and Methods.

**Identifying Conceptual Basis of the Evaluation Framework**

*Literature Review*
- Critical analysis of main theories regarding CMHC, and alternative evaluation models and methods

**Understanding Local Needs and Context**

*Multi-Site Mixed Methods Study*
- Document review
- Key informant interviews
- Focus groups
- Survey

**Drafting and Prioritizing of Evaluation Dimensions**

*Delphi Method*

**Confirming and Validating the Evaluation Framework**

- *Site visits* (local meetings and preparation of implementation plan considering feasibility issues)
- *Refining the evaluation framework* (based on findings and final feedback)

Note: Shaded is the data presented in this paper.
Figure 1. Embedded Mixed Methods Design.
Table 1. Overview of the Three Research Sites and Country Context.

<table>
<thead>
<tr>
<th>Research Sites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary of Health of the State of Hidalgo, Mexico</td>
<td>A decentralized health network that provides services to the “open” population of the state. This state, divided in 13 health jurisdictions and 84 municipalities, has a population of 2,396,201 inhabitants, 53.1% of them living in rural areas. More than 320,029 speak a native language. In 2002 the Psychiatric Hospital was replaced by community services “Villa Ocaranza”. There are 467 primary health care centres, 13 hospitals and specialized care units, including services for addiction (e.g. UNEMEs) and mental health (Villa Ocaranza). Advances primary mental health is provided at 84 Núcleos Básicos en Salud Mental (within primary care centres) and 3 Modulos de Salud Mental2.</td>
</tr>
<tr>
<td>Leon Local Integrated Health System (SILAI), León, Nicaragua.</td>
<td>One of the 17 SILAI in Nicaragua, situated in the North-West of the country. It is part of the Ministry of Health and works in coordination with the National Health Program (2010) which gives a strong role to primary health care. It serves the Leon Department that has a population of about 441,308 inhabitants, including indigenous groups (e.g. Subtiaba) in 138.03 km², with rural and urban areas distributed in 10 municipalities. Services are provided with a strong emphasis on primary care. There are 10 centres and other smaller units for PHC; one Centro de Atención Psicosocial (CAPS) – Centre for Psycho-Social Care- that provides ambulatory mental health care with a community approach, and ; one general hospital and no mental health hospitals3.</td>
</tr>
<tr>
<td>South East Metropolitan Health District, Santiago, Chile.</td>
<td>One of biggest of the 29 Health Districts in Chile. It provides public services in the context of 3 sub-networks and 7 municipalities in the South East area of the Chilean capital under the umbrella of the Ministry of Health. There are 1,500,651 inhabitants (22.6% of the metropolitan population) in the assigned territory and around 76.5% of them have public insurance5. Mental health services follow a community network based approach. There are about 40 primary care centres (e.g. CESFAMs), 7 specialized community mental health facilities (COSAMs), 3 specialized mental health outpatient facilities (CRS and CDT), one mental health hospital (El Peral), and mental health beds within the general hospital6.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countries7</th>
<th>Mexico</th>
<th>Nicaragua</th>
<th>Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population in 2010 (millions)</td>
<td>112.3</td>
<td>5.9</td>
<td>17.1</td>
</tr>
<tr>
<td>Poverty Rate % (year)</td>
<td>47.4 (2008)</td>
<td>44.7(2009)</td>
<td>15.1 (2009)</td>
</tr>
</tbody>
</table>

2 Based on the information collected during the site visit on Dec 2010.
3 Based on the information collected during the site visit on Feb 2011.
6 SSMSO. Plan de Salud Mental 2011, SSMSO [2011 SSMSO Mental Health Plan]. Santiago: SSMSO.
<table>
<thead>
<tr>
<th>Provision of Health Services</th>
<th>Political Organization of the territory</th>
<th>Life expectancy at birth (years) (2010)</th>
<th>Infant mortality rate (per 1,000 live births)</th>
<th>Budget for health as a % of the GDP</th>
<th>Budget for Mental Health (% of Health Budget)</th>
</tr>
</thead>
</table>
| Segmented health system with four components: public institutions for uninsured population (e.g. Servicios Estatales de Salud -SESA-, IMSS-Oportunidades, social security institutions (IMSS, ISSSTE, Seguro Popular de Salud -SPS), and the private sector.  
Mainly public. The public sector is made up of the Ministry of Health (65% of coverage), the medical services of the Army of Nicaragua and the National Police Force, and the Nicaraguan Social Security Institute (INSS). The country offers a national health policy that promotes a multisectoral approach to dealing with health issues. In 2007 the country started the implementation of the Family and Community Health Model (MOSAFC) | The Federal Distric plus 31 states, 2638 municipios | 96.6 | 98.6 | 21 \(^{11}\) (80% of it for Psychiatric hospitals) | 1 \(^{12}\) (91% of it for Psychiatric hospitals) |
| Provisioned health care services | 15 departments, 2 autonomous regions, 153 municipalities | 74.5 | 79.0 | 5.41 \(^{10}\) (2009) | 2,1413 (33% of it for Psychiatric hospitals) |
| Provisioned health care services | 15 regions, 53 provinces, 346 communes | 79.0 | 7.9 (2008) | 8.3 (2009) | 2,1413 (33% of it for Psychiatric hospitals) |
| Provisioned health care services | | | | | |

9 Wordl Bank.  
Table 2. Summary of the data collection process.

<table>
<thead>
<tr>
<th>Research Site</th>
<th>Individual Interviews</th>
<th>Focus Groups</th>
<th>Survey Questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>9</td>
<td>1 (n=12)</td>
<td>9</td>
</tr>
<tr>
<td>Nicaragua</td>
<td>6</td>
<td>1 (n=7)</td>
<td>10</td>
</tr>
<tr>
<td>Chile</td>
<td>7</td>
<td>1 (n=6)</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>3</td>
<td>27</td>
</tr>
</tbody>
</table>

Specific Characteristics of Interviews Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Type</th>
<th>Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles</td>
<td>Health director (e.g. Secretary) of the district/municipality and/or the person who represents that authority</td>
<td>5 (22.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 2</td>
</tr>
<tr>
<td></td>
<td>Mental health coordinator or CMHC coordinator of the district/municipality</td>
<td>7 (31.8%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 3</td>
</tr>
<tr>
<td></td>
<td>Other key informants who are involved in CMHC, according to the context</td>
<td>10 (45.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 2</td>
</tr>
<tr>
<td>Profession</td>
<td>Physicians (Psychiatrist and non Psychiatrists)</td>
<td>16 (72.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 4</td>
</tr>
<tr>
<td></td>
<td>Psychologists, Social Workers and Nurses</td>
<td>6 (27.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 3</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>13 (59.1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 4</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>9 (40.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua: 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chile: 3</td>
</tr>
</tbody>
</table>
Table 3. Perceived Importance of Evaluating Different Features of CMHC. Results from the Survey of Stakeholders in Mexico, Nicaragua and Chile. Means, standard deviations and ranges.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Needs (e.g., mental health/addiction characteristics and needs of the population in context)</th>
<th>Structure (e.g., infrastructure, organization, components and units of services) and Inputs (e.g., human resources, equipment, costs)</th>
<th>Process of Care (e.g., access, care practices from health promotion to treatment and rehabilitation, continuity of care, etc.)</th>
<th>Products and Short Term Outcomes (e.g., number of attentions, number of screenings.../ reduction of symptoms)</th>
<th>Impact Outcomes (e.g., mental health, overall health, quality of life, equity)</th>
<th>Others (e.g., openness to innovation, capacity to respond to changes, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mexico (answered by n=8) Mean: 4.63 SD: 0.70 Range: 3-5</td>
<td>4.63 0.48 4-5</td>
<td>4.75 0.43 4-5</td>
<td>4.38 0.86 3-5</td>
<td>4.38 0.70 3-5</td>
<td>4.25 0.83 3-5</td>
</tr>
<tr>
<td></td>
<td>Nicaragua (answered by n=9)</td>
<td>4.44 0.50 4-5</td>
<td>4.33 0.47 4-5</td>
<td>4.78 0.42 4-5</td>
<td>4.22 0.42 4-5</td>
<td>4.44 0.50 4-5</td>
</tr>
<tr>
<td></td>
<td>Chile (answered by n=7)</td>
<td>4.43 0.49 4-5</td>
<td>4.29 0.70 3-5</td>
<td>4.71 0.45 4-5</td>
<td>4.71 0.45 4-5</td>
<td>4.71 0.45 4-5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.50 0.58 3-5</td>
<td>4.42 0.57 4-5</td>
<td>4.75 0.43 3-5</td>
<td>4.42 0.64 3-5</td>
<td>4.50 0.58 3-5</td>
</tr>
</tbody>
</table>

Note: The scale goes from 1 (very low importance) to 5 (very high importance).
Table 4. Main Identified Strengths and Barriers for Implementing an Evaluation Framework for CMHC.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Mexico</th>
<th>Nicaragua</th>
<th>Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Local collaboration</td>
<td>- Family and Community health model</td>
<td>- Long experience of developing Community Mental Health</td>
</tr>
<tr>
<td></td>
<td>- Local universities</td>
<td>- Inter-institutional work</td>
<td>- Strong public Primary Care</td>
</tr>
<tr>
<td></td>
<td>- Existence of a “Norma Oficial Mexicana” to guide clinical care</td>
<td>- Interest on evaluation</td>
<td>- Local collaboration</td>
</tr>
<tr>
<td></td>
<td>- Ongoing training</td>
<td>- Local collaboration</td>
<td>- Local universities</td>
</tr>
<tr>
<td></td>
<td>- Local human resources</td>
<td>- Ongoing training</td>
<td>- Ongoing training</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Committed local human resources</td>
<td>- Local human resources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Barriers / Limitations</th>
<th>Mexico</th>
<th>Nicaragua</th>
<th>Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- Weak culture of evaluation</td>
<td>- Weak culture of evaluation</td>
<td>- Weak culture of evaluation</td>
</tr>
<tr>
<td></td>
<td>- Lack of time</td>
<td>- Lack of time</td>
<td>- Lack of time</td>
</tr>
<tr>
<td></td>
<td>- Risk of “penalizar” (“punishment”)</td>
<td>- Lack of training in evaluation</td>
<td>- Potential initial barrier at the front line (related with the fear of changing)</td>
</tr>
<tr>
<td></td>
<td>- Lack of local capacity for analysis</td>
<td>- Risk of “penalizar” (“punishment”)</td>
<td>- Limited information systems</td>
</tr>
<tr>
<td></td>
<td>- Limited information systems</td>
<td>- Lack of local capacity for analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Limited information systems</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5

Paper #3:
Evaluation Dimensions for Collaborative Mental Health Services in Primary Care Systems in Latin America: Results of a Delphi Group
Evaluation Dimensions for Collaborative Mental Health Services in Primary Care Systems in Latin America: Results of a Delphi Group¹

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Jan Barnsley

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Numbers of tables and numbers of figures: 3 tables, 1 figure and 1 appendix

¹ This article is ready for submission.
Abstract

There are not well-defined frameworks to evaluate Collaborative Mental Health Care (CMHC) in primary care systems.

**Purpose:** This article presents the results of a Delphi group to identify the dimensions of an evaluation framework for CMHC in Latin America.

**Methods:** First, a literature review and environmental scans were conducted in Mexico, Nicaragua and Chile to identify preliminary dimensions of an evaluation framework for CMHC in the Latin American context. Subsequently, a Delphi process was implemented with 26 experts from Latin America and Canada to identify main areas of consensus, as well as disagreements, about the importance and feasibility of the evaluation dimensions. Iteration allowed the participants to refine their views as they evolved over the course of three rounds of consultation.

**Results:** Participants validated 40 evaluation dimensions. They strongly endorsed a comprehensive evaluation framework for CMHC in Latin America, based on needs, inputs, processes, outputs and outcomes relevant for the local context. Panelists indicated that mental health promotion/prevention, early detection, as well as treatment and support for recovery should be included. Access for CMHC as well as user satisfaction, human resources, community orientation, and collaboration were some of the dimensions with the highest support. Low consensus was found in terms of feasibility, suggesting that specific contextual characteristics are critical for being able to evaluate a particular dimension of CMHC in a particular setting.

**Conclusions:** This study represents a solid foundation for developing an evaluation framework for CMHC in Latin America. It also contributes to overall quality improvement in primary care.

**Key words:** Delphi Method / Evaluation Framework / Mental Health / Addiction / Primary Care / Latin America / Collaborative Care
INTRODUCTION

Primary health care provides a unique opportunity to address needs of clients with common mental health problems, such as depressive and anxiety disorders, and substance use at different levels of severity (Ivbijaro, 2012; WHO & WONCA, 2008). Integrating and fostering mental health services in primary health care capitalizes on the longitudinal relationships, frequent routine contact, opportunity to screen for mental and substance use disorders, and the potential to reduce stigma (Gask et al., 1997).

Collaborative mental health care (CMHC) approaches have been recognized as a critical component to foster health systems and primary care performance worldwide (Bower & Gilbody, 2005; Starfield, 1998; WHO, 2012) including the Americas (PAHO, 2009). Some efforts have been made regarding evaluation of primary care and family medicine in Latin America (Citlin, 2006; Escorel et al., 2007; Haggerty et al, 2009). However, there are not well-defined models to evaluate CMHC either worldwide or in Latin America (Sapag & Rush, 2012).

Mental health (including substance use and concurrent disorders) is a major public health challenge in Latin America, representing about 22% of the global burden of disease (PAHO, 2012; Rodriguez et al., 2009). Approaches to CMHC have been implemented in Latin-American countries to strengthen the accessibility and delivery of mental health services in primary health care settings through interdisciplinary/inter-sectoral collaboration (Khenti et al., 2011; Siskind et al., 2010).

Fostering evaluation will support the process of decision-making and resource allocation (Patton, 2010; Rush, 2003), aimed at improving the results of CMHC in Latin America. A framework is key in evaluating the ongoing process and outcomes (Aday et al., 2004) of collaborative care initiatives, enabling performance reporting across jurisdictions over time, and assessing the attainment of goals established both for primary care and mental health/addiction, as well as for broader health system renewal. However, a comprehensive performance evaluation framework for CMHC systems has not been developed in Latin America. It is necessary to further develop an appropriate and feasible evaluation framework to support decision-makers and their organizations involved in CMHC in: (1) enhancing mental health services in terms of access, quality of care and impact on population health
status; (2) fostering management to better use local resources; and (3) fulfilling transparency and accountability requirements.

Evaluation dimensions are the key areas to be considered in the evaluation framework to assess CMHC regarding structure, inputs, process, outputs, and/or outcomes, for example, vision about CMHC, financing and governance, human resources, facilities, information system, organization of services/practice, existing services in CMHC. One of the main challenges for addressing this task is how to agree on what dimensions should be included in the evaluation framework, given the variety of perspectives and stakeholders involved in CMHC (Hermann et al., 2004).

A research study aimed at developing a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC is currently being implemented. Figure 1 summarizes the main research steps and methods of the study. As part of it, this article presents the results of a Delphi group with experts to identify main areas of consensus, as well as disagreements, about the importance and feasibility of evaluation dimensions.

A Delphi group is a systematic and interactive research technique to collect and distill the judgments of experts about a complex issue. In particular, it is used in areas where there is uncertainty or lack of empirical evidence (Murphi et al., 1998). The use of Delphi consensus in health services research is well recognized (Fink et al. 1984).

This research is critical in order to provide relevant information and key recommendations that can guide advocacy, policy and planning for improving CMHC. For the purpose of this research study, CMHC involves providers from different specialties, disciplines or sectors working together to offer complementary, high quality and cost-effective mental health services mainly in primary care, from health promotion and early detection to diagnosis, treatment and recovery (Gagné, 2005).
METHODS

The study used a modified Delphi technique with three rounds and took place during 12 weeks (December 2011 to March 2012). Experts were asked to respond to potential CMHC evaluation dimensions that were previously identified through literature reviews and site visits to three CMHC systems in Hidalgo, Mexico; Leon, Nicaragua and Santiago, Chile. This approach was considered appropriate because the literature published already suggested a number of potentially suitable dimensions and site visits allowed a further exploration in the real context.

A purposive “snowball” sampling method was used to recruit participants. The starting point for the recruitment process was based on information available at the Pan-American Health Organization and existing academic contacts of the researchers in the Region. Four Committees at the regional and local levels were created at the beginning of this research: one Regional Expert Evaluation Committee (8 members) and three local Committees in the research locations in Mexico (5 members), Nicaragua (5 members) and Chile (8 members). They were experts in the area of mental health, primary health care, evaluation and/or CMHC in Latin America. All the members of the Committees (26 people, in total) were invited to participate in the Delphi Group.

The questionnaire was piloted in Spanish (e.g., proper wording, ambiguities, vagueness) by six professionals with characteristics similar to those of the panel members. Then the participants were contacted by e-mail in Spanish. They received a booklet containing instructions, a questionnaire with 35 dimensions of CMHC to be rated, including definitions. Each participant had to rate the importance and the feasibility of each dimension to be included in the framework on a scale from 1 (not at all important/feasible for the evaluation) to 9 (essential to be included in the evaluation). Participants were allowed to explain their answers and provide suggestions for other dimensions to be considered. In the last round, the participants were also invited to provide examples of indicators. Participant consent was determined by completion of the questionnaire. This study was approved by the Health Sciences Research Ethics Board at the University of Toronto (protocol #25852).

After each round, median and mean scores and measures of statistical dispersion were calculated and an anonymous summary of the qualitative experts’ inputs from the previous survey was prepared by the researcher. In each subsequent round, participants received the
summary of results of the previous one and were encouraged to review them and re-rank the dimensions in light of the discussion. Individual approval / agreement for a dimension was considered when the rating was 7 or more. Consensus was assumed when at least 80% of respondents agreed on a dimension. Ratings were analyzed using IBM SPSS Statistics 20 software.

RESULTS

All 26 panelists participated in the three rounds (100% response rate). Regarding demographic characteristics (Table 1), participants were from six Latin American countries and Canada\(^2\) and 57.7% were women. The majority of respondents (57.7%) were medical doctors, but other key health professionals relevant for CMHC were part of the panel, including psychologist, nurses and social workers. About 15% had a PhD. Most of the participants worked in health services, as health managers (46.15%) or clinicians (26.92%), and about a quarter (23.08%) had academic employment as the main responsibility. All of the participants had demonstrated experience in the areas of primary care, mental health, and/or health services research and evaluation.

Qualitative results supported the incorporation of the initial 35 dimensions in an evaluation framework for CMHC in Latin America, and highlighted the need for a comprehensive approach rather than focusing on one evaluation area (e.g. process vs. results). Five additional dimensions were suggested by the participants in round one, and were subsequently rated in the following rounds. Appendix 1 presents the dimensions and their operational definitions. Some participants indicated that a few of the ranked potential dimensions for the evaluation framework might be considered as sub-dimensions or key activities rather than dimensions. Few panelists provided specific comments for clarifying or fostering the original statements.

The experts reached high levels of consensus over the three rounds. Levels of agreement improved with each round and ratings were skewed toward the high end of importance and feasibility.

\(^2\) The two panelists from Canada had long experience working in Latin America.
 In terms of importance (Table 2), the 40 dimensions had levels of agreement of 80% or more in round three and medians equal to or greater than seven. Forty five percent of the dimensions reached 100% of consensus in the final round. The dispersion of answers decreased as the panel progressed, from an average interquartile rate of 1.23 in round one to 1.06 in round three. The top-three important dimensions were *access* (mean=8.88), *community orientation* (mean=8.79), and *protection and promotion of human rights* (mean=8.88). On the other hand, the three dimensions ranked at the bottom of the importance list, but still highly supported, were *delivers annual public account of the work done*, *efficiency / productivity*, and *policies related to access to psychotropic medicines*.

In terms of feasibility (Table 3), the final round identified consensus for just two dimensions: *community orientation* (consensus %=84.6; mean=7.54) and *human resources training & capacity building* (consensus %=82.6; mean=7.48). Those two and *implementation of mental health/addiction clinical meetings and human resources training* (mean=7.39) were the top three of the list. At the bottom of the ranking were *equipment* (mean=6.09), *investment/expenditure* (mean=5.92) and *innovation capacity* (mean=5.79). The median for the forty dimensions varied from 6 to 8. The dispersion of answers was much higher than in the case of importance and it also decreased between rounds, from an average interquartile rate of 2.36 in round one to 1.41 in round three.

An analysis by subgroup based on the type of Expert Evaluation Committee (Regional, Mexico, Nicaragua or Chile) was explored. No relevant differences were observed.
DISCUSSION

This modified Delphi study included key experts in the field and strongly supported developing a comprehensive evaluation for CMHC in Latin America. Mental health promotion/prevention, early detection, as well as treatment and support for recovery should be included. Low consensus was found in terms of feasibility, indicating that specific contextual characteristics are critical for being able to evaluate a dimension of CMHC in a particular setting.

The main purpose of this Delphi process was not necessarily to reduce the number of items, as they were previously identified as promising in research site visits and in the literature. The panel was critical in establishing the face validity of a potential set of performance measures to be considered in different contexts within Latin America (Addington et al., 2012; Dickey et al., 2006) and identifying issues of feasibility. Even with forty dimensions reaching consensus as being important to include in the framework, qualitative findings suggested that there was some level of redundancy, so some dimensions may be refined and organized in broader categories.

The list of dimensions represents a useful starting point for further work to develop an evaluation framework for CMHC in Latin America. Future steps will include the refinement of operational definitions, re-grouping dimensions under themes and defining key indicators and data sources for measurement. The set of dimensions is more detailed than some other evaluation frameworks, bringing a more comprehensive and integral approach to evaluation, in line with what local stakeholders have suggested. However, based on feasibility each province or health district may want to decide the final dimensions to choose in order to evaluate their CMHC system. An evaluation framework should clearly offer advice in terms of which are core dimensions and which are optional, balancing the need of flexibility with the possibilities to benchmark and compare with other places.

The findings endorsed the idea of developing an overall evaluation framework based on needs, inputs, processes, outputs and outcomes relevant for the local context, in line with Broemeling et al. (2006), Donabedian (2002), and Knudsen & Thornicroft (1996). In addition, the findings suggest the need to include another set of attributes that are less ‘traditional’ in health services evaluation but critical for the success of CMHC; e.g. protection and promotion of human rights (e.g. measuring stigma/discrimination in primary...
care), collaboration, continuity of care, participation of survivor/consumers, and leadership, among others.

One of the goals of collaborative mental health care is to increase access to mental health services by providing these services in primary health care settings. This may involve providing services directly (where the individual is seen) or indirectly (case reviews), formally or informally, as well as innovative strategies such as telemedicine. (Kates et al., 2006) Access was ranked as the most important evaluation dimension to be included in the framework, according to the final round of the Delphi. This vision is also supported by the literature regarding CMHC. For instance, Kates et al. (2006) indicate that a key goal of CMHC is to increase access to mental health services in the context of primary health care, which involves addressing potential barriers to access with an emphasis on underserved or high need populations. These barriers include: (1) lack of resources (human resources, funding, time, interest, and tools); (2) limited knowledge and skills; (3) stigma and discrimination regarding people with mental health issues; (4) language and culture; and (5) geography. Access was also identified as a priority in a recent study, based on a Delphi and aimed at developing an evaluation framework for primary health care in Latin America (Haggerty et al., 2009).

The low level of consensus identified in terms of feasibility is critical for decision making regarding which evaluation dimensions should be integrated or not in the framework. Even when Latin American countries and settings have several common aspects, CMHC faces specific challenges regarding the specificity of the context. Other studies have identified some differences among settings regarding: (1) level of implementation of CMHC; (2) availability and quality of information; (3) willingness to participate in evaluation studies; and (4) human and financial resources to implement the evaluation, among others. Hence, it may be appropriate to be flexible in terms of what dimension each local health system decides to include or not in the evaluation plan, guided by a proposed overall evaluation framework for CMHC in Latin America.

This study has some limitations. The sample of panelists does not include experts from all countries of Latin America and the opinions of panelists may not be necessarily equally relevant to all places in the Region. Most of them come from three countries (Mexico, Nicaragua and Chile), so that may be a source of bias. However, their high level of
expertise, as well as their representation of CMHC from clinical practice to management and research, provides a solid foundation for the results. Many of them have experience working in different countries of the Region, beyond their location. The number of panelists is within the norm for Delphi studies (Turoff & Linstone, 2002).

Another limitation may be the absence of community members and people with mental health and/or substance use issues on the panel (Nelson & Wilfrid, 2004). At this point, the focus was on the perspective of health professionals and researchers. A future step for developing the evaluation framework may consider consultation with consumer/survivors.

There are also some inherent limitations regarding the use of the Delphi technique (Donohoe et al., 2012), such as (1) judgments of a small sample of panelists may not be representative; (2) tendency to ameliorate extreme positions and push a middle-of-the-road consensus; (3) extensive commitment of time for participants; (4) some lack of standards in terms of how to define consensus; and (5) internet accessibility challenges.

However, Delphi is considered a well established method of harnessing the opinions of a diverse group of experts on practice-related problems (Powell, 2003), and has been broadly used in health services evaluation (Boulkedid, 2011). There is experience also with Delphi in primary care (Barnsley et al., 2005; Campbell et al., 2000; Haggerty et al., 2007), in mental health services (Turton et al., 2010), and in CMHC (Shield et al., 2003).

In this study, special efforts were taken to ensure high standards of methodological quality (Boulkedid et al., 2011), including: (1) a rigorous selection of participants; (2) promoting commitment of participants to facilitate a high response rate during the entire process; (3) ensuring anonymity; (3) providing a comprehensive synthesis of previous rounds to the panelists; (4) considering the importance of both agreements and disagreements; and (5) preventing biasing the communication during the process.

There is very little published on evaluation of CMHC worldwide and even less in Latin America. This study represents a foundation for developing an evaluation framework for CMHC, but also a concrete methodological advance in this field that may be useful for fostering primary care and mental health services.
References  


Figure 1. Summary of Research Phases and Methods.

**Identifying Conceptual Basis of the Evaluation Framework**

*Literature Review*
- Critical analysis of main theories regarding CMHC, and alternative evaluation methods

**Understanding Local Needs and Context**

*Environmental scan* (in each site):
- Document review
- Key informant interviews
- Focus groups
- Survey

**Drafting and Prioritizing of Evaluation Dimensions**

*Delphi Method*

**Confirming and Validating the Evaluation Framework**

- *Site visits* (local meetings and preparation of implementation plan considering feasibility issues)
- *Refining the evaluation framework* (based on findings and final feedback)

Note: Shaded is the data presented in this paper.
Table 1. Demographic Characteristics of 26 Participants of the Delphi.

<table>
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<tr>
<th>Characteristic</th>
<th>No. (%) of participants</th>
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<td>Physician (Public Health)</td>
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</tr>
<tr>
<td>Mental Health Clinic</td>
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Table 2. Importance Scores of Experts on Evaluation Dimensions. Ranking by median (first criteria) and mean (second criteria) in Round 3.

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<td>Family Approach</td>
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<tr>
<td>Dimension</td>
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<td>25 Services Organizational Structure</td>
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N=Number of subjects        SD=Standard Deviation        Med=Median        Min=Minimum        Max=Maximum        % C= Percentage of Consensus        IQR=Interquartile Range

Note: Dimensions 5, 31, 32, 28 and 40 were added by participants during Round 1.
Table 3. Feasibility Scores of Experts on Evaluation Dimensions. Ranking by median (first criteria) and mean (second criteria) in Round 3.

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<th>Mean</th>
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<th>Max</th>
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<th>IQR</th>
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<td>Capacity to Respond to Emerging Needs</td>
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<td>6.54</td>
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<td></td>
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<tr>
<td>26</td>
<td>Information Systems and Monitoring and Evaluation Practices</td>
<td>25</td>
<td>6.52</td>
<td>1.5</td>
<td>7</td>
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<td>9</td>
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<td>28</td>
<td>Treatment and Rehabilitation Services</td>
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<td>6.5</td>
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<td>7</td>
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<td>9</td>
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<tr>
<td>29</td>
<td>Integration of Physical Care and Mental Health / Addiction</td>
<td>24</td>
<td>6.5</td>
<td>1.4</td>
<td>7</td>
<td>3</td>
<td>9</td>
<td>54.2</td>
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</tr>
<tr>
<td>30</td>
<td>Access to Consultancies and External Supervision (*)</td>
<td>24</td>
<td>6.38</td>
<td>1.7</td>
<td>7</td>
<td>1</td>
<td>9</td>
<td>62.5</td>
<td>1.25</td>
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<td>31</td>
<td>Access</td>
<td>25</td>
<td>6.32</td>
<td>1.5</td>
<td>7</td>
<td>2</td>
<td>9</td>
<td>64</td>
<td>1</td>
</tr>
<tr>
<td>32</td>
<td>Results/Outcomes at the Individual and Population Level</td>
<td>23</td>
<td>6.17</td>
<td>1.8</td>
<td>7</td>
<td>3</td>
<td>9</td>
<td>52.2</td>
<td>1.5</td>
</tr>
<tr>
<td>33</td>
<td>Policies related with Access to Psychotropic Medicines</td>
<td>23</td>
<td>6</td>
<td>2.1</td>
<td>7</td>
<td>1</td>
<td>9</td>
<td>56.5</td>
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</tr>
<tr>
<td>34</td>
<td>Delivers Annual Public Account of the Work Done in CMHC by the Authority to the Served Population</td>
<td>24</td>
<td>6.58</td>
<td>1.6</td>
<td>6.5</td>
<td>4</td>
<td>9</td>
<td>50</td>
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<tr>
<td>35</td>
<td>Technical Quality</td>
<td>24</td>
<td>6.08</td>
<td>1.6</td>
<td>6.5</td>
<td>1</td>
<td>8</td>
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<tr>
<td>36</td>
<td>Efficiency / Productivity</td>
<td>24</td>
<td>6.25</td>
<td>1.8</td>
<td>6</td>
<td>2</td>
<td>9</td>
<td>37.5</td>
<td>1.5</td>
</tr>
<tr>
<td>37</td>
<td>Capacity of First Response in Cases Clinical Mental Health/Addiction Crisis or Urgencies in Primary Care</td>
<td>24</td>
<td>6.13</td>
<td>1.9</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>37.5</td>
<td>1.25</td>
</tr>
<tr>
<td>38</td>
<td>Equipment</td>
<td>23</td>
<td>6.09</td>
<td>1.6</td>
<td>6</td>
<td>2</td>
<td>9</td>
<td>34.8</td>
<td>2</td>
</tr>
<tr>
<td>39</td>
<td>Investment / Expenditure</td>
<td>25</td>
<td>5.92</td>
<td>1.9</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>48</td>
<td>2</td>
</tr>
<tr>
<td>40</td>
<td>Innovation Capacity</td>
<td>24</td>
<td>5.79</td>
<td>1.3</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>25</td>
<td>1.25</td>
</tr>
</tbody>
</table>

N=Number of subjects  SD=Standard Deviation  Med=Median  Min=Minimum  Max=Maximum  % C= Percentage of Consensus  IQR=Interquartile Range

Note: Dimensions 2, 3, 30, 33, and 34 were added by participants during Round 1.

<table>
<thead>
<tr>
<th></th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Access</strong>: possibility to receive needed mental health services in primary health care (PHC) in a timely manner and when required, considering also the various barriers and potential facilitators of such access. The profile of the range of available services is also important and if it covers the needs of the population with regard to mental health / addictions, including, for example, throughout the life cycle.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Community Orientation</strong>: services integrate the community perspective and work with the community in a manner appropriate to the needs of mental health / addiction.</td>
</tr>
<tr>
<td>3</td>
<td><strong>Protection and promotion of human rights of people with Mental health problems and/or addictions</strong> in the context of CMHC (for example, to prevent and fight stigma and discrimination / respect decision space / etc.).</td>
</tr>
<tr>
<td>4</td>
<td><strong>Family Approach</strong>: services incorporate the family perspective and/or family interventions, in an appropriate manner to the needs of the persons/patients and families themselves.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Human resources training &amp; capacity building</strong> in the area of CMHC.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Cross-sectoral work</strong>: promote and develop cross-sectoral actions for intervention to address the determinants that affect health and support the rehabilitation and social reintegration processes.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Continuity of care</strong> (the team that provides collaborative services of mental health / addiction in primary care has a continuity in care and performs a longitudinal care in time with regard to persons with mental health and/or addictions needs).</td>
</tr>
<tr>
<td>8</td>
<td><strong>Self-care</strong>: strategies and activities designed to protect and provide care to practitioners working in collaborative mental health services mental health / addiction in primary care.</td>
</tr>
<tr>
<td>9</td>
<td><strong>Human resources</strong> (adequate in number, interdisciplinary profile and competencies, areas of training, etc.).</td>
</tr>
<tr>
<td>10</td>
<td><strong>Collaboration</strong>: in the context of collaborative services of mental health / addiction in primary care, with regard to networking, existence of common objectives and language, communication between different actors and the system devices. Also, in what refers to respect for the strengths and differences, quality and intensity of the collaboration, definition of roles of coordination, existence of structures and systems that facilitate collaboration / agreements on how to work together and decide the ways to perform the key functions of collaborative mental health systems. It also includes the establishment and the maintenance of links with other parts of the health system (primary, secondary and tertiary level) as well as with social services and other sectors to facilitate the coordinated care.</td>
</tr>
<tr>
<td>11</td>
<td><strong>Treatment and rehabilitation services</strong> to address mental health and/or addictions in primary care (profile of services offered, including brief interventions and others; for example, what kind of conditions receive care in PHC). For example, mood and anxiety disorders, violence, up to what severity level primary health care offers services, what kind of specific services are</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
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<tr>
<td>1</td>
<td>offered (e.g., individual treatment, counseling, therapy for couple or family, group therapy, telephone support, etc.) and how are they implemented (for example, what professionals and what type of medications are available, etc.)</td>
</tr>
<tr>
<td>12</td>
<td>Screening / early detection of problems of mental health and/or addictions in primary care (are they adequately implemented in primary care, and what kind of specific services are provided in primary care or when/who references are done, when positive cases are detected).</td>
</tr>
<tr>
<td>13</td>
<td><strong>Referral and contra-referral system</strong> (including primary, secondary and tertiary level, as well as with agencies outside the health system, as to its existence, functioning, waiting lists, etc., in terms of patients with mental health problems / addictions).</td>
</tr>
<tr>
<td>14</td>
<td><strong>Mental health promotion and prevention</strong> (including addiction) initiatives and/or programs (profile, coverage, etc.).</td>
</tr>
<tr>
<td>15</td>
<td><strong>Technical quality</strong>. To what extent services (all kinds, from health promotion to treatment and rehabilitation) are safe and consistent with the standards of excellence recognized in this field; for example, evidence, best practices or promising practices.</td>
</tr>
<tr>
<td>16</td>
<td><strong>User satisfaction</strong> in relation to the services of mental Health / addictions that are provided in primary care (whereas both to external users (people, patients), and internal users (employees that provide services))</td>
</tr>
<tr>
<td>17</td>
<td><strong>Planning and management processes</strong> (to strengthen the development of CMHC; for example, as the system integrates new evidence in their plans).</td>
</tr>
<tr>
<td>18</td>
<td><strong>Policy, regulations, plans and/or protocols</strong> on CMHC (its existence, consistency with other related policies, frameworks, regulatory, etc.).</td>
</tr>
<tr>
<td>19</td>
<td><strong>Equity</strong> (how and to what extent CMHC seeks / achieves access, utilization, quality of care and results, according to the level of need, and without systematic differences according to individual or social characteristics; for example, socio-economic, demographic, ethnic, gender, etc).</td>
</tr>
<tr>
<td>20</td>
<td><strong>Positive leadership capacity</strong> in the system, for the advancement of CMHC in a certain direction and/or integrate relevant and necessary changes in a timely manner.</td>
</tr>
<tr>
<td>21</td>
<td><strong>Information systems and monitoring and evaluation practices</strong> (existing in CMHC; for example, records, computer information systems, integration of information with other levels of care, types of monitoring and assessments carried out and/or perform regularly, etc.).</td>
</tr>
<tr>
<td>22</td>
<td><strong>Services organizational structure</strong> (network of services / where primary care and mental health-addictions are provided / how primary health care and mental health teams are structured).</td>
</tr>
<tr>
<td>23</td>
<td><strong>Mental health and/or addictions needs/issues of the population</strong> (knowledge of them and their consideration in the approach and the practice of CMHC).</td>
</tr>
<tr>
<td>24</td>
<td><strong>Physical infrastructure</strong> (facilities where CMHC is provided).</td>
</tr>
<tr>
<td>25</td>
<td><strong>Investment / expenditure</strong> (economic resources involved to deal with the problems of mental health and addictions in primary health care).</td>
</tr>
<tr>
<td>No.</td>
<td>Key Areas</td>
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<tr>
<td>-----</td>
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<tr>
<td>26</td>
<td><strong>Capacity to respond to emerging needs</strong> in the area of CMHC (patients individually, but also at the population level, for example, situations of disasters).</td>
</tr>
<tr>
<td>27</td>
<td><strong>Capacity of first response in cases clinical mental health/addiction crisis or urgencies in primary care</strong> (e.g., attempt suicide recently, cocaine intoxication, etc.).</td>
</tr>
<tr>
<td>28</td>
<td><strong>Equipment</strong> (availability of tests, medications, etc., relevant to provide CMHC).</td>
</tr>
<tr>
<td>29</td>
<td><strong>Participation of people with mental health and/or addiction issues</strong> in the development of CMHC (e.g., they participate and channels are used to integrate the perspective of the users in planning, monitoring and governance – of the CMHC system).</td>
</tr>
<tr>
<td>30</td>
<td><strong>Integration of physical care and mental health / addiction</strong> in treatment plans for patients attending primary health care.</td>
</tr>
<tr>
<td>31</td>
<td><strong>Implementation of mental health/addiction clinical meetings.</strong></td>
</tr>
<tr>
<td>32</td>
<td><strong>Access to consultancies and external supervision</strong> in CMHC.</td>
</tr>
<tr>
<td>33</td>
<td><strong>Ethno-cultural relevance / diversity</strong> (services and professionals adapt their practices and have relationships that facilitate the adequate care of persons of different ethnic groups (example: indigenous population), cultural or other relevant nature of the population they serve).</td>
</tr>
<tr>
<td>34</td>
<td><strong>Innovation capacity</strong> of CMHC system to develop and/or integrate new processes or practices that strengthen services.</td>
</tr>
<tr>
<td>35</td>
<td><strong>Results</strong> of CMHC at the individual and population level (for example, clinical symptoms and social functioning or, eventually, of morbi-mortality, equity, quality of life).</td>
</tr>
<tr>
<td>36</td>
<td><strong>Use of services</strong> (profile of use - appropriate or not - CMHC).</td>
</tr>
<tr>
<td>37</td>
<td><strong>Social, psychological, environmental and biological determinants</strong> of mental health and addictions in the given context.</td>
</tr>
<tr>
<td>38</td>
<td><strong>Delivers annual public account of the work done in CMHC by the authority to the served population</strong>, the proposed goals and the level of compliance, more than just budgetary outturn. This arises as crucial to assess public accountability.</td>
</tr>
<tr>
<td>39</td>
<td><strong>Efficiency / productivity</strong> (is a function of the contributions of CMHC to the intrinsic objectives taking into account the inputs used to achieve them and how well resources are used to produce the desired results).</td>
</tr>
<tr>
<td>40</td>
<td><strong>Policies related with access to psychotropic medicines</strong> (considering the availability of medicines and trained personnel to use them, not only doctors).</td>
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</tbody>
</table>
Chapter 6

A Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America

This chapter presents and analyzes the final product of this study: the evaluation framework for CMHC in Latin America.

6.1 Introduction

A common definition of an evaluation framework does not currently exist (Kahan, 2008). For the purpose of this thesis, an evaluation framework is defined as a set of principles, procedures and mechanisms to guide effective evaluation of CMHC in Latin America. It provides a conceptual roadmap to guide decision makers at the local level to enable them to optimize changes in CMHC. The framework will also promote evidence-based best practice in CMHC by supporting evaluation efforts that will address critical knowledge deficits and promote excellence in service provision. This framework must consider all the aforementioned factors, as well as the local context, and change occurring within it. It must operate at the district or municipal level and be flexible in order to be the sensitive to diversity (e.g. needs of minorities) and incorporate existing relevant theoretical models of CMHC and program/policy evaluation. A performance measurement approach focusing on the desired quantitative and qualitative outcomes represents a means of determining planned versus achieved results (Health Council of Canada, 2012).

The evaluation framework of CMHC in Latin America is based on the results of a mixed methods study that took place in three CMHC sites in Mexico (Hidalgo), Nicaragua (León) and Chile (Santiago). The data collection process took place between December 2010 and July 2012. The development of the framework included a critical analysis of literature and relevant theories and conceptual frameworks, as well as environmental scans in the three
CMHC settings, involving document review; key informant interviews with decision makers; focus groups with front line clinicians; and a survey to other key stakeholders. In addition, a Delphi process was implemented with experts from Latin America and Canada to identify main areas of consensus, as well as disagreements, about the importance and feasibility of the evaluation dimensions. The information was triangulated. A final consultation process to refine the evaluation framework and discuss issues of feasibility included visiting the three sites and conducting individual meetings with local authorities (3-4 per site – including the heads of the CMHC systems) and group meetings with 12 to 20 key stakeholders per site. This stage provided inputs for the final definitions of evaluation dimensions and for the identification of appropriate examples of indicators. Fostering the face validity of the final product was achieved.

The literature and input from participants supported the development of a comprehensive and flexible evaluation framework for CMHC in Latin America that should cover the full mandate of primary care and all the functions regarding mental health services. An evaluation framework that reflects a theoretical and contextual basis, as well as relevant evaluation approaches and methods, is presented. It includes five levels (needs, inputs, process, outcomes and ‘core drivers’) and 28 dimensions with their respective domains, as well as examples of indicators and recommendations for implementation.

### 6.2 Scope of the Evaluation Framework

The resulting comprehensive evaluation framework covers the full mandate of primary care and all the functions regarding mental health services, from mental health promotion/prevention to early diagnosis, treatment, rehabilitation, and recovery. The framework reflects a theoretical and contextual basis (e.g. collaboration theory / systems thinking), as well as relevant evaluation approaches (e.g. developmental evaluation) and methods. It includes key levels, dimensions, examples of core indicators, and recommendations for implementation. Those attributes have been carefully selected based on their potential importance and applicability in the real world of CMHC in Latin America.
The framework provides a concrete guideline for having a comprehensive evaluation of CMHC, but it allows for the necessary flexibility to be adapted and implemented according to the contextual reality of each public health network. This will allow the framework to be useful in different settings where a variety of mental health and primary care approaches, as well as models of CMHC, are being developed and are in different stages of implementation (Hollander et al., 2010).

Measurement areas consider important aspects of care, including the interface with the rest of the health system and other systems. Instruments for data collection are not part of this evaluation framework, but examples of indicators are included.

### 6.3. Guiding Principles

The framework is based on a set of underlying values which translate into the following principles that have guided its development and are also critical for its implementation:

- **Context needs and priorities must guide the overall evaluation approach** because of the potential benefit to the population, and their capacity to enhance the performance of CMHC.

- **Community and stakeholder involvement**: community members, health providers and other stakeholders related to CMHC should be identified and consulted, as much as possible, throughout the evaluation process.

- **Ethical and quality standards** must be followed in all the steps of the evaluation, including (JCSEE, 1994; Yarbrough et al., 2011): (1) **Utility** - serve the information needs of intended users; (2) **Feasibility** – be realistic, prudent, diplomatic, and frugal; (3) **Propriety** - conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected by its results; and (4) **Accuracy** - reveal and convey technically adequate information about the features that determine the worth or merit of CMHC.
• *Sensitive to diversity and cultural relevant* (American Evaluation Association, 2011). The evaluation process has to carefully consider the reality of the context and be inclusive and respectful of it. For example, if the CMHC setting serves indigenous populations a deep understanding of their reality and adjustments of the framework to make it relevant will be required.

• *Equity* in terms of how and to what extent CMHC seeks / achieves access, utilization, quality of care and results, according to the level of need, and without systematic differences according to individual or social characteristics (e.g., socio-economic, demographic, ethnic, gender). Equity is essential for the development and implementation of this framework and it is integrated at all the levels and dimensions of the evaluation. Especially important is that the framework has to cover all groups of the community; e.g., prisoners and detainees, ethnic minorities and indigenous populations, disabled persons, homeless, refugees and migrant workers.

• *CMHC and evaluation of CMHC are transformative* and should contribute to positive change and quality improvement. All efforts should be done to ensure translation and dissemination of evaluation findings are applied to practice in a timely and appropriate manner.

• *Life course approach*: Mental health policies, plans and services need to take account of health and social needs at all stages of the life course, including infants, children, adolescents, adults and older adults.

• *CMHC is a dynamic system.*

### 6.4 Evaluation Levels, Dimensions and Indicators

The evaluation framework is organized in five levels: Needs, Inputs, Process, Outcomes and Core “Drivers” of CMHC (Figure 5). Each level encompasses a set of dimensions that contain domains. Examples of indicators\(^1\) are also presented. The framework levels do not

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\(^1\) Based on research results and on the literature regarding health services research and evaluation frameworks. Data collection instruments and sources of data will depend on (1) the selected indicators; (2) the reality of CMHC in a particular setting; and (3) local implementation decisions regarding the evaluation framework. Appendix 6 provides definitions of the evaluation dimensions and domains.
stand alone. They are all inter-related and they must be considered as a whole. Some of the dimensions may be connected with more than one level, but were included just in one level in order to promote simplicity, and prevent redundancy in the framework. Appendix 6 provides definitions for all dimensions and domains used in the framework.

The evaluation framework does not emphasize specific clinical conditions. However, it is recommended to tailor some of the indicators to those conditions that are relevant in the context. The mental health Gap Action Programme (mhGAP) (WHO, 2010) identifies some priority mental health issues (e.g., depression, schizophrenia and other psychotic disorders, suicide, substance use disorders, and mental disorders in children) that should be considered when choosing indicators. In addition, CMHC networks may decide to focus on other target conditions, such as violence or panic disorders, depending on the epidemiological reality they face.

Figure 5 presents a summary of the levels, dimensions and domains of the evaluation framework, and a visual perspective of how they are interrelated.
Figure 5. A comprehensive evaluation framework for CMHC in Latin America: summary of levels and dimensions.
6.4.1 Needs

Needs are related to the nature and scope of the mental health problem(s) that CMHC should be addressing in a particular context, including determinants, risk and protective factors, prevalence and incidence of particular conditions. The “wants” or expressed desires regarding CMHC services at the population level are also considered. (Aoun et al., 2004; Bradshaw, 1994). (Table 4)

Table 4. Evaluation framework: needs level.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>DOMAIN</th>
<th>EXAMPLES OF INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.2 Overall health</td>
<td>Summary of main health problems of the context where the CMHC system operates.</td>
</tr>
<tr>
<td></td>
<td>1.3 Mental health / addiction conditions</td>
<td>Summary of main mental health problems of the context where the CMHC system operates.</td>
</tr>
<tr>
<td>2. Context Related Determinants</td>
<td>2.1 Social determinants</td>
<td>Average household income / Education / Employment rate / Political situation.</td>
</tr>
<tr>
<td></td>
<td>2.2 Natural disasters and other environmental factors</td>
<td>(1) Environmental changes affecting local natural resources. (2) Natural disasters in the last 5 years.</td>
</tr>
<tr>
<td>3. Population Expectations regarding CMHC</td>
<td></td>
<td>Report that summarizes main expectations of the population regarding CMHC services.</td>
</tr>
</tbody>
</table>

6.4.2 Inputs

Inputs include the financial, human, and material resources used for the development of CMHC (Table 5). These inputs must be available and accessible to have an impact on process and outcomes.
Table 5. Evaluation framework: inputs level.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>DOMAIN</th>
<th>EXAMPLES OF INDICATORS</th>
</tr>
</thead>
</table>
| 4. Governance of CMHC   | 4.1 Legislation/Policy/Plans and protocols | (1) Existence of explicit up-to-date and comprehensive set of Legislation/Policies/Plans and Protocols aimed to improve CMHC in the population.  
(2) Population & outcomes focused planning.  
 (1) Analysis of CMHC planned versus implemented activities.  
 (2) Delivers annual public account of the work done in CMHC by the authority to the served population, including the proposed goals and the level of compliance, more than just budgetary outturn. This arises as crucial to assess public accountability.  
 (1) Availability of a summary report that contains data analysis and interpretation based on the local information system (for the most recent year).  
 (2) A set of indicators with targets and annual reporting to inform annual CMHC planning cycles.  
 (3) Availability of clear standards and guidelines for data collection and reporting procedures.  
 (4) Clinical records regarding CMHC, including computerized records, are up to date and summarized.  
 (1) Existence of an ongoing monitoring system to inform CMHC decision making.  
 (2) Critical analysis of evaluations conducted in the previous 2 years regarding CMHC.  
 (3) Percentage of primary health care practitioners that have access to electronic systems to complete their professional tasks.  
 (1) Proportion of CMHC expenditures from the total health expenditures by the government health department.  
 (2) Proportion of CMHC expenditures from the total mental health expenditures by the government health department.  
 (1) Coverage of CMHC services by social insurance schemes. |
| 6. Structure of CMHC /Health System / Network | 7. Human Resources | 7.1 Workforce profile | (1) Number and distribution of health facilities per 10,000 population.  
(2) Description and analysis (e.g., strengths and weaknesses) of the structure regarding CMHC services in a particular setting. |
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<th></th>
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<tbody>
<tr>
<td></td>
<td>7.2 Mental health &amp; addiction competencies</td>
<td>(1) Primary health care provider full-time equivalents (FTEs) per 1,000 patients, by type of primary care provider.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.3 Training &amp; capacity building</td>
<td>(1) % of front line CMHC staff that manages MhGAP protocols.</td>
<td></td>
</tr>
</tbody>
</table>
| | 7.4 Self-care practices | (1) Mental health training for general practice/family medicine team in place.  
(2) On-site mental health worker mentorship of primary health care providers occurs in the practice as part of an ongoing (i.e., not time limited) collaborative care or quality improvement program.  
(3) % of staff that received CMHC training in the last 12 months. |
| 8. Material Resources | 8.1 Facilities | (1) Summary of types and characteristics of facilities where CMHC is provided. |
| | 8.2 Equipment | (1) Summary of types and characteristics of the CMHC equipment. |
| | 8.3 Medications | (1) Proportion of the population with free access in CMHC facilities to at least one psychotropic medicine of each therapeutic category (antipsychotic, antidepressant, mood stabilizer, anxiolytic and antiepileptic medicines) all year long. |

### 6.4.3 Process

This level (Table 6) examines how CMHC is provided in terms of appropriateness, acceptability, completeness or competency. These measurements are typically more of a grey area and are less definite than those obtained through assessing outcomes.
Table 6. Evaluation framework: process level.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>DOMAIN</th>
<th>EXAMPLES OF INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Access</td>
<td>9.1 Availability</td>
<td>(1) % patients having the possibility to directly access general practitioners/teams for CMHC services. (2) Average access time for urgent, emergent and routine services regarding CMHC. (3) CMHC individual assessments or consultations (e.g., by Individual treatments / Different kinds of therapies / Couple or family therapy / Group treatment /Time spent on the telephone / Time spent discussing cases and with whom).¹ (4) A crisis response system is available in each district and includes a plan for 24 hours, 7 days per week services.</td>
</tr>
<tr>
<td></td>
<td>9.2 Geographic access</td>
<td>(1) Journey-time (using public transportation) from every 100 m×100 m grid square to the nearest health facility offering CMHC. (2) Percent of households located &gt; 1 hour travel from the closest CMHC facility.</td>
</tr>
<tr>
<td></td>
<td>9.3 Accommodation</td>
<td>(1) Hours of operation of CMHC services during weekends. (2) Availability of CMHC walk-in services (without previous appointment).</td>
</tr>
<tr>
<td></td>
<td>9.4 Affordability</td>
<td>(1) Is (near) universal financial coverage for CMHC services guaranteed by a publicly accountable body (government, or government-regulated insurer)?</td>
</tr>
<tr>
<td></td>
<td>9.5 Acceptability</td>
<td>(1) Existence of a patient/family charter of rights regarding CMHC that has been endorsed by the appropriate health authority and/or government body. (2) Analytic report of formal complaints. (3) Proportion of patients who report that staff are sensitive to their language and ethnocultural background.</td>
</tr>
</tbody>
</table>

¹ Note: This refers directly or indirectly to the outputs of CMHC (the quantity and quality of activities carried out).
<table>
<thead>
<tr>
<th>10. Comprehensiveness of Care</th>
<th>10.1 Overview of Mix of Services / Activities (Screening / Early detection, Treatment and rehabilitation services, Response in cases clinical mental health/addiction crisis or urgencies in primary care, (4) Treatment and rehabilitation services, (Mental health promotion/prevention)</th>
<th>(1) Summary describing the mix of services - from mental health promotion &amp; prevention to screening, treatment, rehabilitation - provided in CMHC. (2) Comprehensive assessment, intervention plan, and individual progress review is undertaken that considers all domains in the individual’s life as well as his/her support network. (3) Availability of well defined psychosocial interventions in CMHC facilities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2 Integration of physical care and mental health / addiction</td>
<td>(1) Physical health checks for patients with mental health issues when necessary. (2) Evaluation of mental health for patients with chronic physical conditions (e.g. HIV/AIDS, Chronic Low Back Pain).</td>
<td></td>
</tr>
<tr>
<td>10.3 Comprehensiveness regarding Relevant Specific mental health Conditions (e.g. mhGAP)</td>
<td>Use indicators of 10.1 and 10.2, but focusing on specific mental health conditions (e.g. mhGAP).</td>
<td></td>
</tr>
<tr>
<td>11. Continuity of Care</td>
<td>11.1 Informational continuity</td>
<td>(1) Availability of previous critical health information of patients for current CMHC visit (e.g., recent history, results of tests).</td>
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<tr>
<td>---</td>
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</tr>
<tr>
<td>11.2 Management continuity</td>
<td>(1) Case management approach in place. (2) Percentage of primary health care organizations that currently have arrangements with other health care organizations to manage patients together.</td>
<td></td>
</tr>
<tr>
<td>11.3 Relational continuity</td>
<td>(1) Proportion of population with mental health issues who report having a regular CMHC team or professional. (2) Mental health appointment no show rate.</td>
<td></td>
</tr>
<tr>
<td>12. Adherence to treatment</td>
<td>(1) % of patients that follow expected treatment related behaviours at 1, 3, 6 months of CMHC treatment. (2) Contact with patient is made after missed appointment, patient referred to peer support groups).</td>
<td></td>
</tr>
</tbody>
</table>
| 13. Patient Centeredness | (1) % of patients that fully receive patient-centered care in CMHC.  
(2) Risk assessment for self harm.  
(3) Flexible treatment options  
(4) Allow for patient and/or family preferences for treatment. |
<table>
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</thead>
<tbody>
<tr>
<td>14. Family and Community Participation</td>
<td></td>
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</tbody>
</table>
14.1 Family approach  
(1) Family interventions should be offered to families of individuals with schizophrenia who have experienced a recent relapse or have persisting symptoms, and are living with or in close contact with their family. |
| 14.2 Community orientation | (1) Perception of community members about how community needs are being integrated in CMHC plans.  
(2) Existence of explicit processes of community consultation regarding CMHC services. |
| 15. Use of services | (1) Annual rates of use of mental health services per 100,000 population in the local health region, broken out by geography (e.g., rural/urban, health region), socio-demographics (e.g., age, ethnicity, gender), clinical conditions (e.g., mhGAP priorities) and provider setting (e.g., solo general practitioner practice). |
| 16. Appropriateness of Care | (1) % of patients that receive services for mhGAP conditions with at least 90% of compliance to the MhGAP protocols.  
(2) Existence of an ongoing explicit process to assess quality and safety regarding CMHC practices.  
(3) Sentinel events (medication errors).  
(4) Existence of protocol for the management of self/other harms risks. |

### 6.4.4 Outcomes

This level refers to the end points of CMHC, such as improvement in function, recovery or survival. Mental health is determined by numerous factors, many of which fall outside the control of CMHC. For instance, a war or a natural disaster (e.g. earthquake) may have a significant impact on a population’s mental health, and may indeed be more relevant to
explain population’s mental health changes than CMHC itself. Therefore, it is important to find measurable outcomes and indicators that may be captured realistically. (Table 7)

Table 7. Evaluation framework: outcomes level.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>DOMAIN</th>
<th>EXAMPLES OF INDICATORS</th>
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</table>
| 17. Changes in Risk and Protective Factors        |                                           | (1) Level of perceived social support reported by population aged 12 and over, defined as having emotional or informational support when an individual needs someone to listen or to confide in.  
(2) For people aged 18 and over: level of life stress experienced.  
(3) Prevalence of alcohol use/misuse.  
(4) Prevalence of tobacco use. |
| 18. Overall Health and Mental Health              |                                           | (1) Self-rated health by age and gender groups.  
(2) Psychological distress (e.g. using Kessler 10, K10²) - pre-intervention and post-intervention scores on a mental health status assessment tool for every service user.  
(3) Health and mental health assessment of the population served by CMHC. |
| 19. Quality of life / functioning / Recovery / Resilience |                                           | (1) Perceived health related quality of life (e.g. according to SF 12³ or WHO-QOL⁴).  
(2) Social and occupational functioning assessment (e.g., using SOFAS scale⁵) to assess routine functioning.      |
| 20. Overall Satisfaction                          | 20.1 Patient, Family and Significant Others Satisfaction | (1) Percentage of patient population, age 18 and older, who report that the current services offered by the place they go to CMHC meet their needs.  
(2) Percentage of family and significant others who report that the current CMHC services meet their needs. |


20.2 Staff satisfaction
(1) Percentage of staff members who report that their CMHC work meets their expectations.

21. Efficiency / productivity
(1) Number of CMHC consultations per capita per year.
(2) Average consultation length (in minutes) by type of professional and condition.
(3) Number of new referrals from primary care professionals to medical specialists per 1000 listed patients per year.

6.4.5 Core “Drivers” of Collaborative Mental Health Care

Seven dimensions have been identified as critical for evaluating CMHC based on the results of the site visits, the literature review and the Delphi. They are the “drivers” of CMHC. However, they tend to be overlooked. (Table 8)

Table 8. Evaluation framework: core “drivers” of CMHC.

<table>
<thead>
<tr>
<th>DIMENSION</th>
<th>DOMAIN</th>
<th>EXAMPLES OF INDICATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Collaboration</td>
<td>A.1 Inter-Professional team work</td>
<td>(1) Staff’s views on inter-professional team functioning. (2) Assessment of levels of (a) Empowering team dynamics, (b) Productive dialogue, (c) Understanding how to work with diversity, and (d) Appreciation of professional roles.</td>
</tr>
<tr>
<td></td>
<td>A.2 Referral and contra-referral system</td>
<td>(1) Quality of communication and understanding of the respective roles of the primary and secondary services. (2) Strengths, Weaknesses, Opportunities, and Threats – SWOT- analysis regarding referral and contra-referral system.</td>
</tr>
<tr>
<td></td>
<td>A.3 Cross Sectoral Collaboration</td>
<td>(1) Formalized links with government agencies (e.g. Education) and NGOs (e.g. self-help groups). (2) Other services provided by a range of social entrepreneurs.</td>
</tr>
</tbody>
</table>
| B. Capacity to respond to emerging / changing population needs | (1) Analysis of responses to emerging/changing population needs.  
(2) Existence of an explicit system to identify emerging/changing population needs.  
(3) Explicit measures to address emerging/changing population needs. |
|---|---|
| C. Openness to innovation | (1) Examples of innovative ideas emerged from the CMHC setting.  
(2) Analysis of CMHC in the last three years, regarding the development of innovative organizational changes/new ideas. |
| C.1 Generation of Innovative Ideas | (1) Integration of major new technologies to foster CMHC (e.g. electronic records).  
(2) Availability of new treatment approaches for CMHC (e.g., new medications) |
| C.2 Reception of Innovations | (1) Promoting collaborative problem solving and open communication.  
(2) Leadership analysis in the context of CMHC using appropriate leadership framework. |
| D. Leadership | (1) Availability of culturally relevant services that address diversity issues appropriately.  
(2) Participation of Indigenous people in planning and evaluating CMHC. |
| E. Ethno-cultural relevance / diversity | (1) Level and characteristics of stigma/discrimination toward people with mental health issues among CMHC staff.  
(2) Existence and quality of plans and actions to prevent stigma/discrimination regarding people with mental health issues.  
(3) Percentage of patients that declare having been stigmatized by CMHC professionals.  
(4) Pro-recovery oriented practices in place. |
| F. Protection of Human Rights | (1) Level and characteristics of stigma/discrimination toward people with mental health issues at the community level in the context of the CMHC system.  
(2) Number and profile of community agencies focused on human rights protection and promotion in the context of the CMHC system. |
| F.1 Health system context | (1) Level and characteristics of stigma/discrimination toward people with mental health issues among CMHC staff.  
(2) Existence and quality of plans and actions to prevent stigma/discrimination regarding people with mental health issues.  
(3) Percentage of patients that declare having been stigmatized by CMHC professionals.  
(4) Pro-recovery oriented practices in place. |
| F.2 Community context | (1) Number of self-identified consumers and family members on governing, advisory, or planning bodies involved in quality measurement / improvement activities. |
| G. Participation of people with mental health and/or addiction issues | (1) Level and characteristics of stigma/discrimination toward people with mental health issues at the community level in the context of the CMHC system.  
(2) Number and profile of community agencies focused on human rights protection and promotion in the context of the CMHC system. |
| | (1) Level and characteristics of stigma/discrimination toward people with mental health issues at the community level in the context of the CMHC system.  
(2) Number and profile of community agencies focused on human rights protection and promotion in the context of the CMHC system. |
6.5 Methodological Approach for Implementation

The framework advocates a mixed methods approach for evaluation, gathering both quantitative and qualitative data to assess the levels and dimensions of CMHC. These two types of data are complementary. Quantitative data provide breadth by enabling data collection from a large number of participants, and yield numerical estimates of the amount of CMHC activity and impacts. Qualitative data provide a deeper understanding of people’s experiences and identify potential areas of success that were previously unknown. These two approaches help to validate one another through a process known as triangulation (Creswell, 2003). Using both measurement strategies gives more flexibility to explore different CMHC dimensions, considering availability of data and issues of feasibility, thereby, bringing more options to cover all the framework dimensions.

The evaluation information needs to be perceived by stakeholders as trustworthy and relevant for answering their questions. Such evidence can be experimental or observational, qualitative or quantitative, or it can include a mixture of methods. Adequate data might be available (e.g. previous monitoring efforts) and easily accessed, or it might need to be defined and new data collected. Different evaluation research methods may be considered depending on what needs to be assessed and feasibility possibilities, including standardized surveys, individual interviews, focus group interviews, documentation reviews, document audits, and observation.

6.6. Guidelines for Implementation

A key action before using the evaluation framework is to carefully define the Collaborative Mental Health Care (CMHC) system in each particular setting. It is necessary to identify the CMHC system boundaries: the outer limits (context, institutions, and capacities/functions) within which the health system operates. The CMHC definition considered for this framework is broad. Thus, it will be critical that local specifications be provided in terms of which services are included in CMHC and which are not.
Once there is a clear understanding of the CMHC system that will be the “object of evaluation”, the following steps will provide a foundation for the subsequent implementation of the framework.

1. **Engage stakeholders from the beginning**, including those involved in CMHC operations; those served or affected by the program; and primary users of the evaluation. Fostering participation and power-sharing will be essential to increase the local value of the evaluation, as well as improving the evaluation’s credibility, clarifying roles and responsibilities, enhancing cultural competence, helping protect human subjects, and avoiding real or perceived conflicts of interest. A clarification as to why local stakeholders want to conduct the evaluation and what their expectations are, as well as the availability of resources, will be helpful for making decisions regarding implementation.

   Kyle et al. (2006) developed an instrument named *Readiness to Implement Quality Measurement Checklist* to assess an organization’s readiness to do quality measurement of CMHC. It provides a starting point for discussion and planning for implementing an evaluation like this. The instrument encompasses the following elements: stages of planning for quality measurement, the characteristics and promotion of quality measurements, implementation strategies, available resources, staff readiness, operational readiness and external factors. This could be a useful tool at the beginning of the process.

2. **Describe the object of evaluation (CMHC) and identify its main features, including its purpose and place in a larger public health context.** Some information regarding how the program was intended to function (e.g., main objectives and strategies) and how it has been implemented will also be relevant. The use of logic models (Wyatt Knowlton & Phillips, 2013) could be helpful, but they are not absolutely necessary as long as there is a clear description of the CMHC system and its objectives (Hollander et al, 2010).
3. **Define the main focus of the evaluation based on local interests, resources and feasibility.** Local authorities and administrators need to clarify what kinds of decisions they want the evaluation to help them to make before commissioning and designing evaluations. For the evaluators, it is important to know who will use the evaluation results so that they can provide their report and recommendations in an appropriate language, level of technical detail, and form. This will help in deciding if all the levels and dimensions of the evaluation framework will be applicable and if there is a need for adjustments and/or choosing some levels and/or dimensions. This step is essential for planning in advance how the evaluation will be conducted. This is an iterative process and ends when evaluation questions and methods are adjusted to achieve an optimal evaluation plan that facilitates use of the results by primary decision makers.

4. **An evaluation plan needs to be jointly agreed upon. It should include procedures that are practical, politically viable, and cost-effective in a particular setting.** Decisions must be made with respect to who will conduct the evaluation – whether it will be done by a specific individual or team within the CMHC system (internal) or by an external agency/evaluator; and what competencies the evaluators will need. Depending on the size and characteristics of the evaluation, it may be necessary to create a team to undertake the work involved, such as field workers to conduct surveys, competent interviewers for focus groups, a statistician, and a person with an in-depth understanding of CMHC policy and planning who can interpret the results. A Gantt chart should be included.

5. **The evaluation plan should be designed to achieve the intended use by intended users.** The knowledge exchange aspect should be integrated from the beginning.

6. **Collect credible evidence to foster evaluation judgments and the recommendations that follow.** Aspects of evidence gathering like indicators, sources, quality, quantity and logistics typically affect credibility. This step will enhance the evaluation’s utility and accuracy, guide the scope and selection of
information and give priority to the most valuable information sources, and ensure the collection of reliable, valid, and systematic information, which is the foundation of any effective evaluation.

7. **Once data have been collected, analyzed and synthesized, it is the time to identify and justify conclusions by linking them to the evidence gathered and make appropriate comparisons against relevant standards for judgment.** Those standards will be agreed-upon levels set by the stakeholders. The levels may be based on specific objectives and goals of the CMHC system, but also may be related to a previous baseline evaluation or agreements according to the best available evidence and promising CMHC practices. Benchmarking is an option for comparing the performance characteristics of separate, often competing CMHC systems, and intends to enable each participant to improve its own initiative. At the end of this step, concrete recommendations should be identified.

8. **Ensure use and sharing of evaluation results, lessons learned and recommendations.** Providing ongoing training to promote the development of evaluation competencies among CMHC staff could be helpful to foster a culture of evaluation and a learning system.

9. **The principles that guide this evaluation framework should be followed at all stages of the process.**

### 6.7 Conclusion and Final Considerations

This chapter has presented an evaluation framework for CMHC in Latin America that was developed through a multi-site mixed methods study. The comprehensive framework is based on theories, evaluation models and an in-depth analysis of three CMHC community/regional realities in Mexico, Nicaragua and Chile. The framework intends to foster quality
improvement and provides thinking about the key questions that need to be answered to inform the decision-making process in CMHC.

The study gave priority to the relevance of context as an important aspect of CMHC evaluation practice, which is commonly neglected. Examples of how the Latin American context informed the framework are the importance of family and community, the relevance of natural disasters and gender-based and political violence.

Access to CMHC services was identified as the most important dimension by the research participants, so a special emphasis on this was included in the framework.

By combining the results of all the research stages, a conceptual schema has been devised for an effective ‘generic’ evaluation framework, although recognizing that appropriate local adaptation is needed according to the context. While it is important to have some flexibility, it is also essential to have a degree of consistency in evaluation across different settings in Latin America. That will help in having comparable results and for sharing lessons learned in a way that will be useful for multiple settings.

This framework integrates and adapts existing evaluation levels and dimensions that have already been considered in many other initiatives. In addition, it includes a unique level – Core “Drivers” of CMHC – representing a set of dimensions that seem to be less evident or traditional (e.g., collaboration, leadership, openness to innovation), but after triangulation of data research emerged as fundamental for quality improvement of complex and dynamic CMHC systems. This is in line with modern approaches to thinking about systems in evaluating health systems (de Savigny & Adam, 2009) that promote a deeper understanding of the reality, paying special attention to linkages, relationships, interactions and behaviours among the elements of a system and among different interconnected systems. Measuring these overlooked dimensions provides an opportunity to help in positively transforming CMHC in Latin America, in particular, by emphasizing areas that may initially be considered less urgent, but that may be critical to inform effective system change.
This comprehensive framework represents a cycle/model prototype that promotes the integration of quality improvement processes into the regular functioning of CMHC. Performance measurement is based not just on inputs as in earlier models of quality assessment (Hermann et al., 2000), but also represents an opportunity to go deeper in terms of assessing CMHC and understanding its system complexity.

The implementation of the evaluation framework needs to consider the reality of primary health care and the complexity of mental health issues. There is a strong connection between mental health and illness and other physical health conditions. A key role for primary health care is to integrate mental health and psychosocial interventions into the care for those with physical health problems and attend to the physical health needs of those with mental health issues.

However, mental health conditions may not fit easily or neatly into existing psychiatric diagnostic classifications, and the disability may contribute more to overall primary care morbidity than a diagnostic label (MaGPl Research Group, 2005). That is the setting for CMHC. In addition, the revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V\textsuperscript{6}), which is in its final stage, will imply changes in diagnostic criteria and definition of disorders. The fact that the framework does not strongly emphasize specific mental health clinical conditions is helpful in addressing that complexity. Each CMHC system will find the necessary flexibility to define the clinical conditions on which they prefer to focus based on local needs.

In any case, tailoring the indicators to specific mental health conditions, when appropriate, is useful to obtain more specific information to guide local decision-making. The recommendation to focus on the mental health gap –mhGAP (WHO, 2010)- priority conditions –depression, schizophrenia and other psychotic disorders, suicide, substance use disorders, and mental disorders in children – makes things easier for decision makers because evidence-based interventions and protocols exist and are available in the public sector in Latin American countries. Primary health care professionals in these settings are being

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\textsuperscript{6} Official DSM-V website: http://www.dsm5.org/pages/default.aspx
progressively trained on mhGAP. In addition, CMHC networks may want to include also other conditions, such as violence and panic disorders, according to their reality. Dementia and epilepsy, which are part of the mhGAP initiative, could also be incorporated if they are considered to be under the scope of mental health and CMHC. Some countries address these conditions mainly through neurology services. Thus, each country needs to decide what conditions will be used to tailor evaluation indicators.

The framework does not suggest a randomized experimental design to conduct the evaluation. That could be considered a limitation, as it will restrict the possibility to identify causality in terms of the impact of CMHC in the observed outcomes. However, random assignment is not appropriate for every impact evaluation, particularly in cases of limited generalizability of findings to other populations or when serious logistical or ethical considerations represent barriers for potential beneficiaries to access to services.

One limitation of the evaluation framework is that its development did not directly include the voice of community members and users, which is recommended for mental health initiatives (McCusker et al., 2013). Logistical research challenges did not allow for incorporating community members directly in the research process, including potential difficulties to select an appropriate sample of people with different mental health and addiction conditions, different ages and gender identity, as well as potential issues with confidentiality, etc. However, the overall research process tried to capture the reality of the users to inform the development of the framework by stressing that point during all the stages of the data collection and analysis. A future qualitative research component would be useful to assess the perceptions and inputs of community members and clients regarding the evaluation framework in order to make the framework even stronger.

The implementation of the framework requires local commitment (Addington et al., 2010). Feasibility issues were explored in the research and local stakeholders validated the framework when it was presented in the second visit to the sites. They already identified some barriers and opportunities for successful implementation of the framework and those have been integrated in this paper. However, the evaluation framework has yet to be
implemented. Therefore, a natural next step is to pilot-test the framework in a real setting and make adjustments, if necessary, before applying it on a larger scale. In any case, the idea is to improve the evaluation framework in an ongoing manner. The implementation phase needs to strictly follow JCSEE ethical and quality standards (JCSEE, 1994; Yarbrough et al., 2011) in order to ensure validity.

This framework represents an important effort to implement health service evaluation research in practice based on a comprehensive approach that is relevant for the Latin America context. The expectation of piloting it and promoting an ongoing discussion about this will help in enhancing the evaluation framework in the future, as well as contributing to fostering CMHC systems in the region with significant benefits for the population.
Chapter 7

Lessons Learned (by the Researcher) in Developing an Evaluation Framework for Collaborative Mental Health Care in Latin America

This section addresses the third research question of the study: What are the main lessons learned (by the researcher) in developing an evaluation framework for collaborative mental health care (CMHC) in Latin America aimed at informing decision-making processes and improving primary health care in the region?

In 2004, I was the deputy director of public primary health services in the Municipal Corporation of Puente Alto, in Santiago, Chile. A group of professionals, mainly psychologists, social workers and physicians, were particularly interested in fostering mental health within primary care services in that setting. We jointly agreed on developing a strategy to achieve that goal. There were two key inter-connected components in that strategy: (1) mental health evaluation\(^7\) and (2) mental health planning.

The purpose of the evaluation component was to “contribute in prioritizing, integrating and systematizing mental health actions, in light of our reality, in order to enhance the development of CMHC, considering high quality standards, responding appropriately to health needs of the population in the context of the municipal system of primary care in Puente Alto and its ‘Integrated Family Health Model’”. Essentially, the idea was to have a better understanding of what was happening in terms of CMHC population needs and services in order to develop an action plan that could make a positive difference for the population. The evaluation initiative included the following elements: (1) general demographics characteristics; (2) risks and protective factors; (3) mental health profile of the population; (4) characteristics of service users; (5) new patients / withdrawals, completeness

of treatments and referrals; (6) mental health teams in primary care, including a description of their professional profile as well as of the activities and services they provide; (7) self-care practices of primary health teams; and (8) mental health networks, including collaboration practices among primary care and non-primary care services.

This particular team-based, quality improvement experience in Puente Alto was very positive. The mental health evaluation was key to defining an explicit mental health plan and motivating the staff to move forward. I was really touched by the potential impact that an evaluation could have in improving practices and the overall performance of health systems.

This thesis experience represented a unique opportunity for me to conduct research and to go deeper in understanding the issues of CMHC evaluation and to be able to present a final product – the evaluation framework – that could be relevant to improving care for people with mental health and/or addiction problems. I really believe that the framework can be useful for many people – decision makers, health professionals and others– working in public CMHC systems in Latin America, as I was years ago.

Now, at the end of the process, I review the proposed evaluation framework and identify some important dimensions (e.g., patient centeredness, family and community participation, protection of human rights, participation of people with mental health and/or addiction issues, leadership) that were not considered – at least explicitly - in the experience of Puente Alto. These dimensions appear evident as a result of a systematic research and critical analysis effort. So they represent both an outcome and a lesson learned from my research experience.

However, I can also recognize the value of the evaluation experience we had in Puente Alto and how we were able to focus on areas that are essential for CMHC. It is just an example of what many other people in Latin America are doing every day to improve their health systems with limited existing resources. So, the second lesson that I want to share is the importance of recognizing existing local capacity and building on it in new CMHC evaluation efforts.
I was impressed by the local stakeholders’ high levels of willingness to participate in the research process aimed at developing this evaluation framework. At the beginning, stakeholders in five countries (Mexico, Nicaragua, Guatemala, Panama, and Chile) expressed interest in and commitment to support the research process. Three countries were selected because in those settings the potential participation of local CMHC providers seemed more secure and there were some advantages that would make implementing the research easier. However, my perception is that the study could also have been conducted successfully in the other two settings (Guatemala and Panama) given that there is a tremendous need in this field and not much has been done worldwide and in Latin America, in particular, to address it. In short, this research effort was highly valued by local stakeholders.

In addition, the level of involvement required to design the evaluation framework was probably less demanding than the one required to implement it. This may have facilitated local stakeholders’ participation in this study, but can also be a potential challenge when implementing the evaluation framework (e.g. allocation of resources). Local stakeholders also did not have to deal with the results of an evaluation that asks them to recognize their weaknesses, and make decisions about changes that are not always easy to implement or well perceived by staff or community members.

Finally, I think that this research represented an opportunity for the three sites to foster their local evaluation cultures at the organizational/system levels, which is lacking in many places. Partner organizations had the chance to promote the discussion in this area, as well as to learn more about the topic and their own CMHC system.

This research experience was very satisfactory and provided many positive lessons. A summary of facilitating factors, difficulties, opportunities and threats during the process of developing an evaluation framework for CMHC in Latin America is presented below. A kind of SWOT (strengths, weaknesses, opportunities and threats) analysis framework (Skinner, 2002) was used to synthesize the results of this reflective exercise (Table 9).
Table 9. Developing an evaluation framework for CMHC in Latin America: main lessons learned, facilitating factors, difficulties, opportunities, and threats.

<table>
<thead>
<tr>
<th>General Lessons Learned</th>
<th>• Unique and meaningful research experience that helped me to go deeper in understanding the issues of CMHC evaluation.</th>
</tr>
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<tbody>
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<td>• Satisfaction of delivering the expected final product – the evaluation framework – that could be relevant to improving care for people with mental health and/or addiction problems in Latin America.</td>
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<td>• This research effort was highly valued by local stakeholders.</td>
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<td>• This deep experience allowed me to discover new approaches and perspectives regarding the application of concepts, theories, models and research methods, in order to advance evaluation in real, complex and dynamic settings.</td>
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<td>• Strategies to effectively conduct global health research.</td>
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<td>• Some less traditional or more innovative evaluation dimensions may support quality improvement processes (e.g. patient centeredness, leadership).</td>
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<td>• Concrete ways to avoid and address research difficulties and threats, as well as to build upon existing strengths and opportunities.</td>
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<td>• The importance of recognizing existing local capacity and building on it in new CMHC evaluation efforts.</td>
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<td>Facilitating Factors</td>
<td>• The research process and logistics were carefully and realistically planned at the beginning.</td>
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<td>• Active role of the liaison professionals in the three research sites.</td>
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<td>• The Latin American background of the researcher.</td>
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<td>• Discussion with inputs of the PhD Advisory Committee.</td>
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| Difficulties                        | • Complexity of CMHC and different definitions of key concepts related to CMHC.  
                                           • Differences among mental illnesses and addictions in CMHC models.  
                                           • CMHC professionals, decision-makers and experts are very busy with their multiple responsibilities. |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Opportunities                      | • Advocacy in favour of people that face mental health issues and do not have the services they need.  
                                           • The Latin American/international perspective of this research was valued by the participants as they had the chance to think about and learn from other realities of the region.  
                                           • Apply a mixed methods approach to addressing specific research questions. |
| Threats                            | • Change of authorities.  
                                           • Social desirability bias.  
                                           • Unrealistic expectations at the local research sites about what the research was about. |

**Facilitating factors**

*Research planning:* The research process and logistics were carefully and realistically planned at the beginning. The advice from the research supervisor and committee, based on their previous experience in research implementation in diverse settings, was particularly useful. The active ongoing feedback from the three research sites helped in making the final strategy feasible and meaningful. These elements contributed to managing a major research endeavour that included intense work in three countries, encompassing six visits to the research sites, 30 interviews, three focus groups, three large group meetings, and the analysis of many documents. A key aspect was the explicit identification of research study challenges and mitigating strategies when designing the protocol.
Active role of the liaison professionals in the three research sites: They were essential in ensuring that the research process was appropriate for the sites. Having their agreement and clarifying their role from the beginning was critical. Evaluations such as this can put additional strain on busy people, as they will be asked for their assistance that will take them from their normal responsibilities. The three liaison professionals had extensive work experience in their respective sites. They were very respected and had easy access to authorities, clinicians and other staff members. Those characteristics and their genuine interest in the proposed initiative were of invaluable help to effectively implement the research agenda.

The Latin American background of the researcher: There are many similarities among Latin American countries, for example, a colonial past, political violence, natural disasters, and severe social inequities. Also common to the region are a strong sense of the role of the family in society, the expression of solidarity in facing adversities and enthusiasm for social movements to overcome injustices. Having the experience of growing up in a Latin American country, Chile, and having Spanish as my mother tongue facilitated the research process in terms of (1) communication with local stakeholders and subjects that participated in the research; (2) understanding cultural issues; (3) reaching a better sense of the potential meaning of their words and concepts; and (4) identifying connections among different issues being discussed. This may be particularly relevant for the qualitative component of the study, where the researcher is also viewed as the research instrument.

Discussion with inputs of the PhD Advisory Committee: The process to build the overall structure of the evaluation framework was complex, and considered the use of information from the literature review and the sites visits, as well as from the survey and Delphi panel. I also benefited from discussions with my supervisor and PhD Advisory Committee, in the context of an iterative and developmental process. All those inputs were critical for building and refining the evaluation framework.
Difficulties

*Complexity of CMHC and different definitions of key concepts related to CMHC:* It was sometimes challenging for research participants to describe practical applications of heretofore unexplored concepts. A special effort was made to adequately explain the focus of CMHC research. During the data collection process, explanations and definitions of key concepts and examples of them were reviewed to facilitate a common understanding.

*Differences among mental illnesses and addictions in CMHC models:* It should be noted that although mental health issues, addictions and concurrent disorders were included in this proposal under CMHC, the level of integration of each of these concepts into primary health care in Latin America varies substantially. For example, in some jurisdictions there are barriers to integrate both mental health and addictions, while in others only mental health services or addictions are integrated in CMHC. This was one of the challenges in defining an evaluation framework for CMHC that I had to carefully address during the research process.

*CMHC professionals, decision-makers and experts are very busy with their multiple responsibilities.* Importantly, the success of this research study was based on the participation and collaboration of CMHC people in the different steps of the data collection and feedback processes. I had to do my best in terms of planning and actively communicating with them in order to obtain their commitment to participate. For example, for the Delphi panel, I had to closely monitor the response process and send reminders to respondents to prevent attrition. In the case of the interviews and focus groups, I had to find the best balance between being flexible (e.g., with the starting time when some participants were delayed), and respecting the planned process.

Opportunities

This research represented an opportunity to implicitly advocate in favour of people that face mental health issues and do not have the services they need. The discussion about CMHC evaluation in the three research settings has promoted interest in the active development of
two areas of the health system that tend to be neglected in many places: primary health care and mental health/addiction. Having high-level authorities, front-line staff and a variety of local agencies participating, positioned the issue at the centre of their agendas. The knowledge translation component of the research process has also been critical in this regard. Local stakeholders were able to see concrete research results and discuss how they were relevant for each reality.

The Latin American perspective of this research was something really valued by the participants as they had the chance to think about and learn from other realities of the region. Understanding commonalities and differences among the sites was appreciated. They also felt a sense of importance to be contributing to research with international scope.

Finally, this study represented an opportunity for me to apply a mixed methods approach to addressing specific research questions. That helped me to enhance my confidence in using a variety of methodologies, but also in terms of knowing how to integrate the collection, analysis and interpretation of data from different philosophical origins. The use of triangulation of a variety of data sources as opposed to relying on one avenue of observation gave additional value to this research. I also learned to be critical about the potential benefits and limitations of each data collection method.

**Threats**

*Change of authorities was a potential threat from the beginning:* That might be one challenge that prevented the successful completion of the research process at the site level, as local commitment to conduct the study might change. Having official letters of support from the beginning from each site was helpful to initiate but also to complete the research process. In practice, there were just a few changes in terms of the role or identity of local authorities, and these did not represent a real challenge to implementing the study.

*Social desirability bias:* Stakeholders might not be critical about their own challenges in designing and implementing an evaluation framework for CMHC. This might help to create an “ideal”, but not a feasible evaluation framework. Special efforts to create a safe
environment for participants, protecting confidentiality and promoting a non-judgmental approach, helped in dealing with this potential bias.

**Unrealistic expectations at the local research sites about what the research was about:** For example, participants might have thought that this project was aimed at evaluating what they were doing in CMHC or that the researcher would implement the evaluation framework in the research sites once it had been developed. Making the purpose of the research explicit to the participants helped in preventing these potential issues. It was also critical to have an explicit emphasis from the beginning on being realistic and thinking of a feasible evaluation framework instead of an ideal one.

In conclusion, this research process helped me to strengthen my competencies regarding the application of concepts, theories, models and research methods, in order to advance evaluation in real, complex and dynamic settings. This was a strong hands-on research experience in real settings that invited me to work carefully in the implementation phase in order to avoid and address difficulties and threats, as well as to build upon existing strengths and opportunities. I consider this research study as a unique and great learning experience for all the participants, and of course for me, in particular. I am really happy to have had this opportunity, as well as to have received the continuous supervision and support from my PhD Committee and the University of Toronto, which helped me to have such a wonderful and meaningful research experience.
Chapter 8
Discussion

8.1 Summary of Results

This research study developed a comprehensive evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding CMHC. The process considered a deep understanding of the context, and integrated existing health services research frameworks, theories and specific evaluation models relevant to CMHC. A Delphi panel with experts was key in reaching consensus and identifying disagreements about the evaluation framework dimensions and indicators. A process of consultation with the research sites at the end of the study allowed for refining and finalizing the evaluation framework. A summary of the main results is presented below, based on the three research questions of the study.

Research Question 1: Considering the particularities of the context of Latin America and relevant theories and evaluation approaches, what are the key elements of an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-making processes and improving primary health care in the region at the district or municipal level?

A multi-component, mixed-methods participatory approach was considered to address this question. This kind of strategy has also been used by others in developing evaluation frameworks with positive results. For instance, Vargo et al. (2012) for a quality improvement framework for Children’s Mental Health Services or Addington et al. (2012) for Schizophrenia Treatment Services (2012).
Even when no specific comprehensive evaluation framework for CMHC was found in the literature, concrete efforts to advance in developing indicators for CMHC were identified in places like England (Shield et al., 2003) and Canada (Waraich et al., 2006). In addition, generic health services evaluation approaches, including those of Aday et al. (2004), Broemeling et al. (2006), Donabedian (1988, 2005), and Thornicroft and Tansella (1999) were reviewed and discussed. The exploration of Latin American literature identified evaluation results of specific mental health programs in primary care (e.g., Araya et al., 2012) but not a comprehensive evaluation approach. Three main implications for the development of the framework were found: (1) evaluating the linkages between needs, inputs, processes, outputs and outcomes is essential; (2) making effectiveness, efficiency and equity priorities when assessing the performance of CMHC; and (3) identifying the stage of development of CMHC initiatives (initial, implementation or established) and seeing them as dynamic systems with a trajectory of development and change over of time. Together, these factors would help to advance an evaluation framework for CMHC in Latin America.

Based on predetermined guidelines (Glanz et al., 2008; McGuire, 1983) and their suitability to CMHC, two theoretical perspectives were analyzed: collaboration theory (Hayes et al., 2012) and systems thinking (Trochim et al., 2006). Collaboration is at the heart of CMHC and two types are particularly important: inter-professional collaboration (D'Amour et al., 2005) and inter-organizational relations (Alter & Hage, 1993; Gray, 1989). Systems thinking offers a unique and very useful perspective to improve the relevance and utility of evaluation of health systems (de Savigny & Adam, 2009). CMHC is considered a complex system. Collaboration and systems concepts and approaches can be used with other evaluation frameworks according to the circumstances. Thus, an eclectic approach is suggested for evaluating CMHC.

Three innovative theory-based evaluation models - realistic, developmental and collaborative - were considered for developing an evaluation framework for CMHC in Latin America and the methodological implications of each were identified. The three approaches add value for the development of an evaluation framework of CMHC.
Realistic evaluation (Pawson & Tilley, 1997) aims to provide a clear understanding of the mechanisms that explain how CMHC works. Collaborative evaluation (Dowling et al., 2004) is in alignment with the CMHC principles. The developmental evaluation approach (Patton, 2010) is considered appropriate for CMHC as there is a need for ongoing adaptation and model development in a context of complex nonlinear dynamics and evolving learning systems. These three evaluation models informed the definition of principles and implementation recommendations of the evaluation framework.

The first research visit to the three sites provided inputs regarding the specific Latin American CMHC context based on a mixed methods approach (Cresswell, 2011). Most of the experience in the countries had been with “monitoring” with a few indicators. Local stakeholders strongly supported the development of a comprehensive evaluation framework for CMHC in Latin America that would consider the characteristics of the local context and processes of changes within it. That consideration is consistent with modern evaluation approaches, such as developmental evaluation (Patton, 2010). Participants recognized a strong need to evaluate different areas of CMHC, including access, types and quality of services, human resources, and outcomes, among others, for both mental disorders and addictions. Accessibility is coming to be recognized as critical in addressing existing gaps of mental health services world-wide (WHO, 2012). Thus, access and its different domains were explicitly included in the evaluation framework. Participants mentioned other dimensions that they thought should also be part of the evaluation framework: collaboration (e.g. the referral system), ethno-cultural aspects, equity, and human rights protection. Finally, the importance of capturing the voice of clients and family members in the evaluation, and assessing how their CMHC expectations are being addressed, was also recognized as critical. The conclusions drawn from the site visit were critical for the definition of Level 5 of the evaluation framework: Core “Drivers” of CMHC.

The Delphi Panel supported a comprehensive approach for the evaluation framework that should include mental health promotion/prevention, early detection and treatment and support for recovery. The 40 assessed evaluation dimensions had levels of agreement of
80% or more in round three. The dispersion of answers decreased as the panel progressed. The top three dimensions in importance were “access”, “community orientation”, and “protection and promotion of human rights”. On the other hand, the three least important dimensions, although still highly supported, were “delivers annual public account of the work done”, “efficiency / productivity”, and “policies related to access to psychotropic medicines”. Low consensus was found in terms of feasibility, suggesting that specific contextual characteristics are critical for being able to evaluate a particular dimension of CMHC.

Finally, a knowledge translation and consultation component in each of the sites provided the necessary inputs to finalize the evaluation framework. The framework has five levels containing dimensions and domains. Indicators were included as examples to help in narrowing the evaluation process. As there was clear consensus on the need for a comprehensive approach and all dimensions were considered important, the recommendation is that health networks try to assess all 28 dimensions whenever possible.

**Research Question 2:** What are some of the main challenges and potential solutions to consider in the implementation of an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-making processes and improving primary health care in the region?

The first round of research site visits explicitly explored issues of implementation of the evaluation framework. In addition, the Delphi panel ranked the dimensions according to the perception of feasibility of implementation. The final visit to the sites offered an opportunity for refining the evaluation framework and discussing issues of feasibility.

The heads of the three local health networks expressed their commitment to a CMHC evaluation framework. Overall, participants thought that it was perfectly feasible to have one evaluation framework for the Latin American region, but indicated that it would need to be
adjusted to local realities. Using a similar evaluation framework would facilitate learning from other experiences and progressively provide benchmarks.

Overall, participants identified opportunities for implementing an evaluation framework and a positive momentum to advance in that regard. However, two concerns were identified regarding the feasibility of implementing an evaluation framework: fear of evaluation and resistance to change. In addition, the absence of an evaluation culture and limitations in the existing information systems were also considered as potential challenges. These barriers have been identified in other studies in Latin America (Moreno et al., 2009).

In addition, participants indicated that an evaluation should be accompanied by capacity building with respect to how to conduct it, as well as by appropriate economic and human resources to effectively implement it. They also remarked on the importance of building/strengthening an information system to foster the availability of data required to evaluate CMHC.

Some resources and factors that could be helpful in implementing the evaluation framework were identified, such as the existence of local universities, guidelines regarding quality of care in mental health and primary care, the commitment of human resources and openness to collaboration. The advances in implementing a family and community health model and the existence of strong public health systems were also indicated as assets.

Finally, the Delphi panel yielded variable scores regarding feasibility to implement different evaluation dimensions. The third round identified consensus for only two dimensions: “community orientation” and “human resource training & capacity building”. Those two and “implementation of mental health/addiction clinical meetings” and “services organizational structure” were considered more feasible to evaluate. On the other hand, “investment/expenditure” and “innovation capacity” scored low. The dispersion of answers for feasibility was much higher than in the case of importance. This finding was crucial to recommend a less prescriptive approach for implementing the framework, giving the necessary flexibility to adapt it to what was feasible and needed in a particular context. In
summary, based on feasibility, each province or health district may want to decide the final dimensions and/or domains and/or indicators to evaluate their CMHC system. However, they should explicitly indicate which dimensions were not evaluated and say why. The idea is to help local teams to also think about areas where they do not yet have information and invite them to proactively explore those dimensions in the future.

**Research Question 3:** What are the main lessons learned (by the researcher) in developing an evaluation framework for collaborative mental health care in Latin America aimed at informing decision-making processes and improving primary health care in the region?

In the previous chapter, this question was fully addressed. The study process was a learning experience for the researcher in many ways. A very positive finding was to see that local stakeholders identified the development of an evaluation framework for CMHC in Latin America as a critical need– confirming a key, implicit assumption of this study.

This research represented an open window to develop or foster an evaluation culture at the organizational/system levels that is lacking in many places. Partner organizations had the chance to promote the discussion in this area.

Facilitators, difficulties, opportunities and threats during the process of developing an evaluation framework for CMHC in Latin America were presented in chapter 7.

In summary, this research initiative was an incredible opportunity for the researcher to be involved in a global health endeavour that included the use of multiple methods and the enhancement of analytical and practical competencies that an independent researcher needs to have.
8.2 Strengths and Limitations

Strengths
This study addresses mental health as a critical public health issue (Eaton et al., 2011; Patel, 2012). Mental health is recognized worldwide as a growing problem and there is global consensus regarding the critical role that primary care can play in tackling it (Mohamoud et al., 2012). Various ongoing efforts are in place to develop CMHC in Latin America (PAHO, 2009). However, there is lack of evidence regarding what works and what is not effective in CMHC, and an evaluation framework does not exist. Thus, this initiative represents a step forward in responding to that urgent need. Quality improvement of CMHC can impact the health of people affected by mental health issues, but also enhance holistic care for the whole population. CMHC can play a critical role in preventing stigma/discrimination and promoting recovery-oriented practices.

The methodological approach of the study protocol was very appropriate to accomplish the “ambitious” goal of this project. The consideration of theories, existing health services research frameworks, evaluation models, and context analysis based on three sites were ways to explore the research problem from different perspectives. In addition, a Delphi panel with experts in the field gave more clarity to a topic that is still new, and where no gold standards exist. The eclectic design based on the inclusion of many conceptual and methodological perspectives, and on multiple sources of information, is in line with more novel views of evaluation (Sridharan & Nakaima, 2011), including utilization-focused evaluation (Patton, 2008).

The research approach considered in this study is useful to foster quality of the developed framework in terms of accuracy, utility, feasibility, propriety, and inclusion of stakeholders (Mathison, 2008). The study uses features of multiphase mixed-methods design (Creswell & Plano Clark, 2011). In its combination of quantitative and qualitative elements, mixed methods approach can prove challenging for traditional research paradigms. However, existing literature suggests that mixed methods design is especially appropriate for complex systems (de Savigny & Adam, 2009), such as CMHC. The study follows recommended
standards for quality evaluation (AEA, 2004; JCSEE, 1994; Yarbrough et al., 2011) and uses the strategies suggested by Creswell & Plano Clark (2011, p. 240-241) to prevent potential validity threats in a context of a mixed-methods design.

Another strength of this research is the consideration of context as an essential element in the process of developing the framework. Different studies have demonstrated the importance of the social, cultural and organizational context for implementing changes in mental health services and systems (Aarons et al., 2012). The potential variability of evaluation needs in different settings in Latin America was explored, which helped to make final decisions about the framework. In particular, the differences identified in levels of feasibility suggested that a more flexible framework was required.

Understanding that evaluation should be a continuous practice that needs to be embedded in the CMHC culture is a key assumption that is part of the framework. Developmental evaluation offers, in that context, a very appropriate model. Some experts suggest that developmental evaluation is emerging as the third main type of evaluation as an alternative to formative and summative types (Donaldson et al., 2010). The expectation then is that CMHC systems should apply the framework first in order to create its local baseline, and then continue re-evaluating over a certain frequency (e.g. each two years).

Finally, the knowledge translation strategy of the initiative was an asset and a way to promote a learning process aimed at fostering a culture of evaluation locally. Evaluation processes and results have the potential to encouraging reflections on practices, information sharing, and learning among health professionals and decision makers (Barr, 2000).

**Limitations and Potential Challenges**

However, this study has some limitations that need to be discussed. First of all, the restricted number of research sites, just three, represent a potential threat for external validity and for
the generalizability\textsuperscript{8} of research results (Bratt, 2000). The objective of the study was to develop an evaluation framework for Latin America, and not just for the three sites. Some strategies helped to address this limitation, including: the Delphi panel, the use of advisory committees and the review of literature that covered other countries in the region. These approaches have previously been recommended to foster implementation and outcomes of multisite studies (Dewa et al., 2002).

The selection process of the research sites implies another limitation, as there is some potential that they do not represent the context of Latin American CMHC systems and services. The criteria for defining the study sites were broad, giving some potential space for discrentional selection, as is always the case for non-probabilistic sampling (Fiss et al., 2010). However, purposive samples can be very useful for situations where sampling for proportionality is not the primary concern (Bossert et al., 2002) as in this case.

As mentioned before, the use of multiple theories and methods may be a strength, but is also a source of risk. An oversimplification in connecting theories and using mixed methods may go against the validity and rigor of the study, providing many sources of error. On the other hand, not having included some theories (such as the Diffusion of Innovation Theory; Greenhalgh et al., 2004) may also be criticized. Being aware of that and following the best research and evaluation standards from the beginning contributed to avoiding this limitation to some degree. Eclectic evaluation approaches, as the one considered in this study, are committed to satisfying criteria of technical soundness and then need to be distinguished from pseudo-evaluations (Brouselle & Champagne, 2011; Stufflebeam & Shinkfield, 2007).

The research process did not directly include the perspectives of patients and their families that face mental health and/or addiction conditions; those served or affected by the program (Mathison, 2008), CMHC. A slogan from the South African disability movement, "Nothing about me, without me", was cited before (Leff, et al, 1997) and is relevant for CMHC. As Gaventa (1993) suggested, participatory research "attempts to break down the distinction

\textsuperscript{8} There is an ongoing debate about potential differences between research and evaluation. For some authors, the concepts of validity and generalizability are considered less important, or even inappropriate, when judging the quality of an evaluation (Mathison, 2008).
between the researchers and researched, the subjects and objects of knowledge production, by the participation of the people-for-themselves in the process of gaining and creating knowledge” (p. 34). This was not totally possible owing to resource and logistical constraints. Nevertheless, all possible efforts were made to capture the perspective of patients and their families indirectly and to orient the framework for their benefit. It would be worthwhile to address this limitation in the future by implementing strategies to capture the voice of people with mental health and/or addiction issues and their perspectives regarding evaluating CMHC. For instance, approaching self-help/mutual aid organizations operated by and for people with mental health or addiction problems (Nelson et al., 1998) would be a step in that direction.

The proposed evaluation framework does not include specific benchmarks for comparisons and that may represent a challenge for interpreting the results when the framework is used. For this stage of the process, the researcher considered that published evidence and the baseline at each CMHC system could serve as a good starting point. Hence, more than a limitation, that decision responds to the existing diversity in terms of CMHC practices and progress regarding evaluation of CMHC in Latin America. In the future, as CMHC evolves and more evidence is systematized, more concrete benchmarks can be identified and used. Benchmarking has evolved in the healthcare sector and is now seen as an active process of participation and learning, and as a tool for continuous improvement and support to change (Ettorchi-Tardy et al., 2012). Reflective practices and ongoing processes of measuring performance and receiving feedback allow for learning through comparisons (Pating et al., 2012). One key characteristic of benchmarking is that it should ideally be based on voluntary and active collaboration among several organizations aimed at identifying and applying best practices. CMHC in Latin America represents an opportunity in that regard.

The results of this study clearly support the development of a comprehensive framework rather than a more tailored approach that might be focused on some aspects more than others, for example, processes over outcomes, or children instead of the total population affected by mental health issues. This raises the question of whether the results of this study appropriately reflect the reality or not. If not, the limitation would be that the research study
did not “ensure that the variance was reflected in the trait and not in the method” (Creswell, 1994, p. 174) and did not allow for capturing the real perspectives of participants and their evaluation priorities. However, there are some solid reasons to discard that possibility: (1) the mixed methods approach allowed for approaching the reality from different perspectives, for the purpose of breadth and depth of understanding and corroboration regarding CMHC (Creswell & Plano Clark, 2011); (2) all findings – coming from different data collection methods – consistently indicated the need for a comprehensive approach, suggesting that the findings probably reflect the reality; (3) triangulation of data helps to avoid the hypothesized limitation (Bamberger et al., 2012); (4) the rigor and quality standards that guided all data collection processes (AEA, 2004; JCSEE, 1994; Yarbrough et al., 2011); and (5) existing health services evaluation frameworks and theories (e.g. systems thinking) emphasized the need to be comprehensive instead of being narrow when evaluating programs (de Savigny & Adam, 2009). In summary, it seems that local stakeholders and the findings are well-aligned with what is currently recommended as best practice in evaluation of health services.

A common language for the subject matter of collaborative care is lacking (Peek, 2011), which represents a challenge for all the research in the field of CMHC, as well as for this particular study. For instance, the terms "mental health", "psychosocial," or "collaborative" are stereotypically seen as subjective and defined in many different ways, despite the existence of extensive literature and research (Bergner, 2006). However, some level of conceptual confusion can be expected in the process of developing complex fields (Peek, 2011) such as CMHC. This aspect was carefully considered throughout this thesis, from the research design to data collection and analysis, interpretation of results, and knowledge exchange/translation processes. A glossary of terms has also been included in this thesis to facilitate its better understanding and the identification of significant implications.

The proposed evaluation framework may be considered too broad by some decision makers or even evaluators, a criticism that has been leveled at other evaluative approaches (Sridharan
Nevertheless, the expectation is to be realistic and make the appropriate decisions at the local level in order to implement the framework in a way that maximizes the use of limited resources to achieve meaningful evaluation results (Bamberger et al., 2012).

Finally, the evaluation framework has not yet been tested in this thesis. However, it was not the purpose of this study to fully examine the implementation of the framework. This is research that could be undertaken in the future.

### 8.3 Contributions and Implications for Future Research

This evaluation framework has to be considered as a first step, with the expectation that it will be enhanced in the future based on the results of its implementation and the learning process that will occur. This should be a continuous process. Now that the topic – evaluation of CMHC in Latin America – has been conceptualized, the debate about how to proceed should help in generating new ideas to respond to critical research questions at the regional, country and local levels.

The comprehensive methodological approach of this research study also represents a contribution for the future development of other evaluation frameworks regarding health services and systems, beyond CMHC, in Latin America. There is an urgent need to advance evaluation in different critical areas, including: (1) community care for the elderly involving collaboration between primary care and geriatric services; (2) comprehensive youth-oriented services in primary care; (3) collaborative programs for the prevention and control of HIV/AIDS, viral hepatitis, sexually transmitted diseases, and tuberculosis; and (4) chronic disease prevention and management in primary care. All these programs or approaches

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9 Sridharan & Nakaima (2010) addressed this criticism by (1) explaining why it is important to consider questions of theory, learning, influence, design, methods, dissemination and sustainability in an evaluation; as well as (2) providing concrete steps that should be part of a dialogue in order to make the most of evaluation.
require a strong understanding of collaborations and systems. Therefore, the study design and lessons learned from this research can be of value for evaluating those areas of health services and systems in Latin America.

It was essential to have a comprehensive ongoing knowledge exchange and translation processes (Bennett & Jessani, 2011; CIHR, 2004; CIHR, 2008) in place from the beginning of the initiative. Now, at the end of the research study, special efforts need to be considered in order to effectively facilitate the use of the evaluation framework in real scenarios in Latin America. The focus is on accelerating the capture of the benefits of this research study for people through improved CMHC in Latin America. A strategy for fostering uptake has already been planned and includes the following:

- A book regarding the evaluation framework is being written for intended users, with a practical approach for its use. This English and Spanish document will facilitate the dissemination and understanding of the framework by Latin American health decision makers and professionals. Some copies of the book will be distributed free of charge in the three research sites, but also among national and regional health authorities.
- The research findings and the evaluation framework will be communicated to the Pan American Health Organization, in order to jointly identify approaches to facilitate their use in the region.
- Three academic manuscripts have been prepared for sharing the results through academic journals.
- A poster presentation in Ontario, Canada, will be held in May 2013; academics, researchers and decision makers are invited to discuss the results and their future implications.
- Other knowledge exchange opportunities will be explored in the future such as the annual NIDA International Forum.
The natural next step of this study is the pilot test of the framework, ideally in many locations in Latin America, which will help in terms of (1) evaluating how the framework functions in practice; (2) gathering new evidence from the countries regarding CMHC; and (3) assessing the reality of the information systems and the specific needs for their improvement. Five main challenges and/or opportunities in going forward are discussed below: (1) existing gaps in information systems; (2) evaluation instruments for data collection; (3) the cost of implementing the evaluation framework; (4) evaluation capacity building; and (5) the creation of a network and/or a community of practice aimed at advancing the evaluation.

1. This study has already identified gaps in existing information systems, which represents an urgent call for the countries and CMHC within them to explicitly work on developing/enhancing those systems. The evaluation framework will help them to see what kind of data they have and what kind they don’t. Thus, they should focus on fostering information systems in CMHC.

2. There is also some urgency in terms of developing evaluation instruments when there are no validated ones for the Latin American context (Moreno et al., 2009). For instance, if there is no appropriate instrument to measure Leadership or Governance in the context of CMHC, it would be important to create and validate one that is culturally relevant.

3. The cost of implementing the evaluation framework will be contingent upon the scope and nature of the evaluation activities and measures requested in each particular CMHC setting. However, the future testing of the framework will help in estimating the cost of evaluating specific dimensions and domains of CMHC using different indicators and data collection approaches. The process tailoring the evaluation based on local interests, resources and feasibility is fundamental to facilitate the effective use of the limited resources that may be available for evaluation purposes regarding CMHC.
4. This study also identified a real need in terms of developing local capacity in evaluation (Debelstein, 2003). At the same time, the use of this framework will require professionals with the necessary competencies to conduct the evaluation of CMHC. Thus, an evaluation capacity building initiative would also be a natural next step.

5. The creation of a network and/or a community of practice aimed at advancing the evaluation practices and providing feedback regarding the use of this evaluation framework would be relevant. Experienced scientists, researchers, and community partners would share their knowledge and experience. That approach was identified as a positive step to improving quality of mental health services in primary care in Ontario, Canada (Goering, 2004) and beyond (Patel, 2012).

The proposed evaluation framework is an important effort to implement health service evaluation research in practice, based on a comprehensive approach that is relevant for Latin America. An understanding of the local context, processes of changes, and complexities (Room, 2011) within CMHC systems is essential to its implementation. Piloting the framework and promoting an ongoing discussion about evaluating CMHC will contribute to addressing the ongoing and urgent mental health needs of people in the region. Primary health care represents a unique opportunity to make a difference in that regard.
References


Epidemiología de los trastornos mentales en América Latina y El Caribe.
[Epidemiology of mental disorders in Latin America and the Caribbean]. Washington, DC: PAHO.


CDC (2009). *Centers for Disease Control and Prevention and National Association of Chronic Disease Directors. The state of mental health and aging in America Issue*


Gaventa, J. (1993). The powerful, the powerless, and the experts: Knowledge struggles in an information age. In P. Park, M. Brydon-Miller, B. Hall, & T. Jackson (Eds.), *Voices of change: Participatory research in the United States and Canada* (pp. 21-40). Westport: CT Bergen and Garvey.


Appendices

Appendix 1: Authors’ contributions to papers

Jaime C. Sapag has been the primary author for the three papers included in this thesis. The members of the PhD Committee participated as co-authors. A summary of the contributions of authors in preparing the three papers is presented below:

- Paper 1 (chapter 3): Theoretical and Methodological Basis for Evaluating Collaborative Mental Health Services in Latin America.
  Authors: Jaime C. Sapag and Brian Rush.

  Jaime C. Sapag: (1) Lead the design and implementation of the overall study; (2) developed the main idea of the paper; (3) conducted the literature review and critical analysis of relevant health services research approaches, theory and evaluation models; (4) prepared the first draft of the manuscript and integrated feedback from co-authors in follow-up drafts; (5) reviewed and approved the final version of the paper; and (6) acts as the corresponding author.

  Brian Rush: (1) supervised the design and implementation of the study; (2) provided inputs to refine the main idea of the paper; (3) gave technical support and conceptual advice; (4) provided conceptual advice for the collection, analysis and interpretation of data; and (5) reviewed drafts and approved final version of the paper.

- Paper 2 (chapter 4): Collaborative Mental Health Services in Primary Care Systems in Latin America: Contextualized Evaluation Needs and Opportunities.
  Authors: Jaime C. Sapag, Brian Rush and Lorraine Ferris.
Jaime C. Sapag: (1) Lead the design and implementation of the overall study; (2) developed the main idea of the paper; (3) conducted the data collection and analysis; (4) prepared the first draft of the manuscript and integrated feedback from co-authors in follow-up drafts; (5) reviewed and approved the final version of the paper; and (6) acts as the corresponding author.

Brian Rush: (1) supervised the design and implementation of the overall study; (2) provided inputs to refine the main idea of the paper; (3) gave conceptual advice and technical support for the collection, analysis and interpretation of data; and (4) reviewed drafts and approved final version of the paper.

Lorraine Ferris: (1) provided technical guidance for the design and implementation of the overall study; (2) gave conceptual advice and technical support for the collection, analysis and interpretation of data; and (3) reviewed drafts and approved final version of the paper.

- Paper 3 (chapter 5): Evaluation Dimensions for Collaborative Mental Health Services in Primary Care Systems in Latin America: Results of a Delphi Group.
Authors: Jaime C. Sapag, Brian Rush, Jan Barnsley.

Jaime Sapag: (1) Lead the design and implementation of the overall study; (2) developed the main idea of the paper; (3) performed the data collection and analysis of the Delphi panel; (4) prepared the first draft of the manuscript and integrated feedback from co-authors in follow-up drafts; (5) reviewed the final version of the paper; and (6) acts as the corresponding author.

Brian Rush: (1) supervised the design and implementation of the overall study; (2) provided inputs to refine the main idea of the paper; (3) gave conceptual advice for data collection and analysis of the Delphi, as well as for interpretation of findings; and (4) reviewed drafts and approved final version of the paper.
Jan Barnsley: (1) gave technical guidance for the design and implementation of the overall study; (2) provided conceptual advice for data collection and analysis of the Delphi, as well as for interpretation of findings; and (3) reviewed drafts and approved final version of the paper.
Appendix 2: Topic guide for key informant interviews

TOPIC GUIDE FOR KEY INFORMANT INTERVIEWS

“Developing a Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America.”

Good _____ (morning/afternoon/evening/night).

Mental health (MH-including substance and concurrent disorders-) is a major public health challenge worldwide. Primary health care provides a unique opportunity to address MH problems. Approaches to shared or collaborative mental health care (CMHC) have been implemented in many countries to strengthen the accessibility and delivery of MH services in primary health care settings. However, there are not well-defined frameworks to evaluate CMHC models. There is a special need for an evaluation framework for CMHC in Latin American countries.

Jaime Sapag, a PhD student at the Dalla Lana School of Public Health, University of Toronto, Canada, under the supervision of Dr. Brian Rush, is conducting a study to develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding Collaborative Mental Health Care (CMHC). This research study is based on a critical analysis of literature and relevant theories, as well as the reality of three CMHC systems in Latin America (multiple-case study), involving multiple stakeholders, and aimed at developing and assessing feasibility of an evaluation framework for CMHC in Latin America. There are three research sites located in Mexico, Nicaragua and Chile.

One of the components of this study includes conducting key informant interviews. Three to five suitable key informants are selected in each research site: (1) the health director of the district/municipality (or the person who represents that authority); (2) the mental health coordinator or CMHC coordinator of the district/municipality; and (3) another one to three key informant who are involved in CMHC, according to the context. The purpose of this interview is to (1) Get your perceptions about the main mental health/substance use population needs; (2) Describe the local CMHC system; (3) Identify key players/decision makers; (4) Identify existing evaluation initiatives regarding CMHC; (5) Identify main evaluation needs and potential needs of information for decision makers.

This interview will take about 90 minutes. At the end of the questionnaire, we will ask you for some information about yourself so that we can know more about the different people who have helped us in this study. We will combine your information with that of other people to get a "picture" of the different kinds of experiences and perspectives of our study participants. All responses will be kept completely confidential. We will never present information in a way that could identify individual respondents.

We are not here to share information, or to give you our opinions. Your perceptions and perspectives are what matter. There are no right or wrong or desirable or undesirable answers.
Your participation is completely voluntary. You will not be paid for participate in this study. This interview will be an opportunity to give your opinion. Other than the time commitment, we do not anticipate that this study will pose any other inconvenience/risk to you. You do not have to answer any question you do not want to. You will be always allowed to finish your participation if you feel uncomfortable. Refusing to participate or withdrawing will not involve any penalty or less of benefits which you are otherwise entitled.

We will be taking notes and tape recording the discussion so that we do not miss anything you have to say. There is a lot we want to discuss, so at times we may move us along a bit.

Thank you! Now, let's start.

Questions

CMHC involves providers from different specialties, disciplines or sectors working together to offer complementary services and mutual support to ensure that individuals receive the most appropriate and cost-effective mental health service and mainly in primary care with high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery support (Gagné, 2005).

The initial question:

➢ Today we are here to talk about evaluation of Collaborative Mental Health Care (CMHC). What comes to mind when you think about CMHC in your setting?

A. Identification of main mental health/substance use population needs.

1. Can you, please, provide a description of the general socio-demographic (e.g. age, sex, rural/urban, immigration patterns, ethnicity, religion income, employment) situation of the population served by your primary care centre?
   Probe: Please describe the target population served by your organization.
2. Can you, please, provide a description of the health status of the population served by your institution?

3. What do you think are the most important health needs of the population in the community of _____________________?

4. What do you think are the most important mental health needs of the population in the community of _____________________?  
   Probe: What do you feel as the three top priority mental health and addiction in the community you serve?

5. What do you think are the most important addiction needs of the population in the community of _____________________?

6. Which percentage of the population in the community of _____________________you think has a concurrent disorder (mental illness and addiction)?

7. What is the Stigma related to mental health or addiction at the community level or within your institution/setting centre and if so how does it impact your clients/patients. Please describe (Example: shame or fear of going to clinic to access services).

B. Description of the local CMHC system.

1. Which percentage of the patients/clients in primary care (in your setting) has mental health and/or addiction problems?

2. Can you, please, describe the types of clients/patients with mental health or addiction issues are seen in institution/setting, and in primary care, in particular?

3. What types of mental health and addiction services does your health system/institution provide?

4. What types of mental health and addiction services are most utilized among the population served by your health system/institution?

5. What are the main strengths of your health system in providing mental health and addiction services to clients/patients? and of CMHC services in primary care?

6. What are the main limitations of your health system/institution in providing mental health and addiction services to clients/patients? and of CMHC services in primary care?

7. What are the top three barriers that clients face when seeking addiction or mental health services within primary health care setting?

8. What do you recommend for improving the acceptance of mentally ill people in the primary health care setting?

9. What are the main barriers and challenges to providing effective addiction and mental health services to your population at individual and /or organization level?

C. Identification of key players/decision makers and key collaboration areas.
1. Where do your health system/institution receive clients/patients with mental health or addiction needs from? and primary care?

2. Where do your health system/institution refer your patients/clients with mental health or addiction needs when is needed? and primary care?

   Probe: - What is your referral pathway/process?
   - Do you have an external referral system? If yes, what is the process?
   - Do you have an internal referral system? If yes, what is the process?

3. What is the general decision making processing in your health system/institution overall and in particular as it relates to mental and addiction services?

4. How is the inter-professional team work in the area of mental health and addiction in your primary care context?

5. How is the relationship between primary and the secondary and tertiary health care levels regarding mental health/addictions?

6. How coordinated are primary care and mental health specialists in providing mental health & addiction care for the community?
   Probe: Are roles and activities of primary care providers and mental health specialists’ services clearly defined? Coordinated?

7. How would you describe the collaboration among primary care and mental health specialists in providing mental health & addiction care for the community?

8. How is the relationship of your health systems/institution with other services beyond the formal health system regarding mental health/addictions?

9. Who would you describe the professional relationship among primary care professionals and mental health specialist in your health system?
   Probe: Please, comment on issues of mutual respect and trust.

10. What are the real effects and benefits of collaboration regarding CMHC in your setting?

D. Existing evaluation initiatives regarding CMHC.

1. How are services provided for mental health/addictions evaluated in your setting?
   Probe: Please, provide examples.

2. Is there any evaluation framework in place for mental health/addiction services in primary care?
   Probe: If yes, please describe it and identify main strengths and weaknesses.

3. What approaches to evaluations of CMHC have been used previously in your context?

E. Evaluation and Information Needs.

1. In your opinion, what are the main evaluations needs regarding CMHC in your setting?
2. What is the most relevant information needed to improve CMHC in your setting?

F. Designing an Evaluation Framework for CMHC.

1. How important would you say is to have an evaluation framework for CMHC in your setting?

2. Considering the particularities of your context, what should be the key elements of an evaluation framework for collaborative mental health care in aimed at informing decision-making processes and improving primary health care?

3. What kind of routine measurement systems are feasible to use in your context?

4. Which particularities of your context are most relevant to be considered in developing an evaluation framework for CMHC?

5. What kind of evaluation framework would you like to see for CMHC in your context?

6. What is the existing interest of local stakeholder in evaluating structure, inputs, process, outputs and outcomes for CMHC?

7. What kind of evidence is more useful / needed to inform decision making to improve CMHC in your setting?

8. What are the critical dimensions to be considered in an evaluation framework for CMHC in Latin America?

9. What kind of indicators would you consider in an evaluation framework for CMHC in Latin America?

10. How a cultural appropriate evaluation system should be?

G. Implementation of an Evaluation Framework for CMHC.

1. What are the main strengths and barriers you perceive to conduct an evaluation of CMHC in your context? (e.g. cultural, organizational)?

2. What you perceive as the potential benefits of conducting an evaluation of CMHC in your context?

3. How open are local decision makers to support an evaluation of CMHC and to using its results?

4. What are the existing potential economic and human resources to effectively implement an evaluation of CMHC in your context?

5. What is the availability of required data to evaluate CMHC in your context?

6. What are the main strengths, difficulties (or weaknesses), opportunities and threats to develop an evaluation framework for CMHC in your context?
H. General about the participants.

1. As a __________________ (key decision maker), How relevant do you consider mental health and addiction in your current clinical practice in primary care?
   Probe: Why?

2. Have you had additional training on mental health or addiction, additional to what you received in your main professional training?
   Probe: If yes, please specify.

Closing

- Closing remarks
- Thank the participant
Appendix 3: Discussion guide for focus groups

Discussion Guide for Focus Groups

“Developing a Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America.”

Good morning/afternoon/evening. My name is _______ and this is my colleague _______. Thank you for coming.

Mental health (MH-including substance and concurrent disorders-) is a major public health challenge worldwide. Primary health care provides a unique opportunity to address MH problems. Approaches to shared or collaborative mental health care (CMHC) have been implemented in many countries to strengthen the accessibility and delivery of MH services in primary health care settings. However, there are not well-defined frameworks to evaluate CMHC models. There is a special need for an evaluation framework for CMHC in Latin American countries.

Jaime Sapag, a PhD student at the Dalla Lana School of Public Health, University of Toronto, Canada, under the supervision of Dr. Brian Rush, is conducting a study to develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding Collaborative Mental Health Care (CMHC). This research study is based on a critical analysis of literature and relevant theories, as well as the reality of three CMHC systems in Latin America (multiple-case study), involving multiple stakeholders, and aimed at developing and assessing feasibility of an evaluation framework for CMHC in Latin America. There are three research sites located in Mexico, Nicaragua and Chile.

One of the components of this study is a focus group for clinicians from different professions working in CMHC, mainly in primary care, in ______________ (name of the research site). A focus group is a conversation about a particular topic. The purpose of this focus group is to (1) Get your perceptions about the main mental health/substance use population needs; (2) Describe the local CMHC system; (3) Identify key players/decision makers; (4) Identify existing evaluation initiatives regarding CMHC; (5) Identify main evaluation needs and potential needs of information for decision makers.

We are not here to share information, or to give you our opinions. Your perceptions and perspectives are what matter. There are no right or wrong or desirable or undesirable answers. You can disagree with each other, and you can change your mind. We would like you to feel comfortable saying what you really think. Let’s all try to respect each other’s different cultural values, beliefs and opinions. Everyone is entitled to their own opinions so it is very important that everyone be heard. Please try to talk one at a time so the group hears your opinions. We don’t want to miss what you’re saying. If people start side conversations with their neighbors we miss out on what’s being shared. All of your comments are confidential. What we say in this room stays in this room. Can everyone agree with that?

The focus group will take about 90 minutes. It will ask you about your thoughts, beliefs, feelings, attitudes and experiences regarding people with mental illness. At the end of the questionnaire, we will ask you for some information about yourself so that we can know more about the different people who have helped us in this study. We will combine your information with that of other people to get a “picture” of the different kinds of experiences of our study participants. All responses will be kept completely confidential. We will never present information in a way that could identify individual respondents.
Your participation is completely voluntary. You will not be paid for participate in this study. This discussion group will be an opportunity to give your opinion. Other than the time commitment, we do not anticipate that this study will pose any other inconvenience/risk to you. You do not have to answer any question you do not want to. You will be always allowed to finish your participation if you feel uncomfortable. Refusing to participate or withdrawing will not involve any penalty or less of benefits which you are otherwise entitled.

______ (colleague) will be taking notes and tape recording the discussion so that we do not miss anything you have to say. As you know everything is confidential. No one will know who said what. This is a group discussion, so feel free to respond to us and to other members in the group without waiting to be called on. However, we would appreciate it if only one person did talk at a time. There is a lot we want to discuss, so at times we may move us along a bit.

Now, let's start by everyone sharing their name, what they do in her/his work and how long they've been working in this health system.

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CMHC involves providers from different specialties, disciplines or sectors working together to offer complementary services and mutual support to ensure that individuals receive the most appropriate and cost-effective mental health service and mainly in primary care with high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery support (Gagné, 2005).

The initial question:

- Today we are here to talk about evaluation of Collaborative Mental Health Care (CMHC). What comes to mind when you think about CMHC in your setting?

Issues for focus group exploration:

Note: A SWOT (strengths, weaknesses, opportunities and threats) framework will be used to guide the discussion (Skinner, 2002).
A. Identification of main mental health/substance use population needs.

Some potential questions and/or sub-topics to cover and probes:

- What do you think are the most important health/mental health/addiction needs of the population in the community of _________________________?

- What is the Stigma related to mental health or addiction at the community level or within your community health centre and if so how does it impact your clients.  
  o (Example: shame or fear of doing to clinic to access services).

B. Description of the local CMHC system.

Some potential questions and/or sub-topics to cover and probes:

- Mental health and addiction services provided in primary health care.
- Main strengths/limitations of your CMHC system/institution in providing mental health and addiction services to clients/patients.
- Main barriers and challenges to providing effective addiction and mental health services to your clients/patients at individual and/or organization level.

C. Identification of key players/decision makers and key collaboration areas.

Some potential questions and/or sub-topics to cover and probes:

- What is your referral pathway/process?
- Decision making processing in your health system overall and in particular as it relates to mental and addiction services.
- Inter-professional team work in the area of mental health and addiction in your primary care context.
- Collaboration/Relationship of primary care with the secondary and tertiary health care levels and other services beyond the formal health system regarding mental health/addictions.
- Roles and Responsibilities
- Issues of Coordination
- Effects / Difficulties and benefits of CMHC

D. Existing evaluation initiatives regarding CMHC.

Some potential questions and/or sub-topics to cover and probes:

- How are services provided for mental health/addictions evaluated in your setting? 
  Probe: Please, provide examples.
• Existing evaluation framework in place for mental health/addiction services in primary care.

E. Evaluation and Information Needs.

Some potential questions and/or topics to cover and probes:

• In your opinion, what are the main evaluations needs regarding CMHC in your setting?

F. Designing an Evaluation Framework for CMHC.

Some potential questions and/or sub-topics to cover and probes:

• How important would you say is to have an evaluation framework for CMHC in your setting?

• What kind of evidence is more useful / needed to inform decision making to improve CMHC in your setting?

• Key elements of an evaluation framework for CMHC considering the particularities of your context.

• Existing or potential interest of local stakeholder in evaluating structure, inputs, process, outputs and outcomes for CMHC.

• Critical dimensions/ Potential indicators to be considered in an evaluation framework for CMHC.

G. Implementation of an Evaluation Framework for CMHC.

Some potential questions and/or sub-topics to cover and probes:

• What are the main strengths, difficulties (or weaknesses), opportunities and threats to develop an evaluation framework for CMHC in ________ (in Latin America)?

• Potential benefits.

• Support of decision makers.

• Existing and potential economic and human resources to effectively implement an evaluation of CMHC.

• Availability of required data.

Closing
Closing remarks
Thank the participants

Though there were many different opinions about _______, it appears unanimous that _______. Does anyone see it differently? It seems most of you agree ______, but some think that _____ . Does anyone want to add or clarify an opinion on this?

Is there any other information regarding your experience related with CMHC or evaluation of CMHC that you think would be useful for us to know?

Thank you very much for coming this ______. Your time is very much appreciated and your comments have been very helpful.
Appendix 4: Survey for stakeholders

SURVEY FOR STAKEHOLDERS

“Developing a Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America.”

Mental health (MH-including substance and concurrent disorders-) is a major public health challenge worldwide. Primary health care provides a unique opportunity to address MH problems. Approaches to shared or collaborative mental health care (CMHC) have been implemented in many countries to strengthen the accessibility and delivery of MH services in primary health care settings. However, there are not well-defined frameworks to evaluate CMHC models. There is a special need for an evaluation framework for CMHC in Latin American countries.

Jaime Sapag, a PhD student at the Dalla Lana School of Public Health, University of Toronto, Canada, under the supervision of Dr. Brian Rush, is conducting a study to develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding Collaborative Mental Health Care (CMHC). This research study is based on a critical analysis of literature and relevant theories, as well as the reality of three CMHC systems in Latin America (multiple-case study), involving multiple stakeholders, and aimed at developing and assessing feasibility of an evaluation framework for CMHC in Latin America. There are three research sites located in Mexico, Nicaragua and Chile.

One of the components of this study is a survey of key stakeholders related to the CMHC system, including mental health and substance use services, social welfare, corrections, NGOs, etc. The expectation is to survey 10 to 20 participants in each research site. The stakeholders and respondents will be defined during the site visit and the questionnaires will be completed online (or paper questionnaires will be distributed, if needed). The questionnaire includes closed and open-ended questions, according to the visit objectives, giving special attention to system issues of CMHC.

You are invited to participate in this research study by responding to this survey in ______________, 2010/2011. The information you provide will tell us what people are currently doing regarding CMHC and/or evaluation of CMHC, and will be helpful for potential future proposals to improve mental health services within primary care. Your cooperation would help a lot with this important research project and its implications for future action.

The questionnaire should take you about 30 minutes. It will ask you about your experience and thoughts regarding CMHC and evaluation of CMHC. There are no rights or wrong answers to these questions. At the end of the questionnaire, we will ask you for some information about yourself so that we can know more about the different people who have helped us in this study. We will combine your information with that of other people to get a “picture” of the different kinds of experiences of our study participants. All responses will be kept completely confidential. We will never present information in a way that could identify individual respondents.

Your participation is completely voluntary. You will not be paid for participate in this study. This survey will be an opportunity to give your opinion. Other than the time commitment, we do not anticipate that this study will pose any other inconvenience/risk to you. You do not have to answer any question you do not want to. You will be always allowed to finish your participation if you feel uncomfortable. Refusing to participate or withdrawing will not involve any penalty or less of benefits which you are otherwise entitled.
Questions

CMHC involves providers from different specialties, disciplines or sectors working together to offer complementary services and mutual support to ensure that individuals receive the most appropriate and cost-effective mental health service and mainly in primary care with high standards of quality, from health promotion and early detection to diagnosis, treatment and recovery support (Gagné, 2005).

1. How relevant do you consider is mental health and addiction for your organization? (Please, check only one alternative).

1  2  3  4  5
Very Low Importance Very High Importance

Why?
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

2. How important do you consider should be the ideal role of primary care in providing services for people with mental health and/or addiction problems/conditions? (Please, check only one alternative).

1  2  3  4  5
Very Low Importance Very High Importance

Please, explain Why:______________________

3. How important do you consider is the current work of primary care in providing services for people with mental health and/or addiction problems/conditions in your context? (Please, check only one alternative).

1  2  3  4  5
Very Low Importance Very High Importance

Please, explain Why:______________________
4. What do you think should be the role of primary care in addressing mental health and addiction needs of the population?

A. Identification of main mental health/substance use population needs.

1. What do you think are the most important health needs of the population in the community of ________________________?

2. What do you think are the most important mental health and addiction needs of the population in the community of ________________________?

3. How severe is the Stigma related to mental health or addiction in the community of ________________________? (Please, check only one alternative).

1  2  3  4  5

Very Low Severity       Very High Severity

Please, explain:

B. Description of your mental health and addiction services.

1. Which percentage of your patients/clients has mental health and/or addiction problems?

________ %

2. Can you, please, describe the type of clients/patients with mental health or addiction issues you see in institution?

3. What types of mental health and addiction services does your institution provide?

4. What types of mental health and addiction services are most utilized among the population served by your centre?

5. What are the main strengths of your organization in providing mental health and addiction services to clients/patients?

6. What are the main limitations of your organization in providing mental health and addiction services to clients/patients?

7. What are the top three barriers that clients face when seeking addiction or mental health services within primary health care setting?

8. What do you recommend for improving the acceptance of mentally ill people in primary healthcare settings?

9. What are the main barriers and challenges to providing effective addiction and mental health services to your clients/patients at individual and /or system level?
C. Identification of key players/decision makers and key collaboration areas.

1. Where do you receive clients/patients with mental health or addiction needs from?

2. Where do you refer your clients/patients with mental health or addiction needs when is needed?

3. What is the general decision making processing in your organization overall and in particular as it relates to mental and addiction services?

4. How is your relationship with primary health care regarding mental health/addictions? (Please, check only one alternative).

   1  2  3  4  5
   Very Poor  Excellent

   Please, explain Why:______________________

5. How is your relationship with mental health/addiction specialized services? (Please, check only one alternative).

   1  2  3  4  5
   Very Poor  Excellent

   Please, explain Why:______________________

6. In your opinion, How coordinated are primary care and mental health specialists in providing mental health & addiction care for the community? (Please, check only one alternative).

   1  2  3  4  5
   Very Poor  Excellent

   Please, explain Why:______________________

7. How would you describe the collaboration among primary care and mental health specialized services in providing mental health & addiction care for the community?

8. How would you describe your institutional relationship with mental health specialist services in your health system? (Please, check only one alternative).

   1  2  3  4  5
   Very Poor  Excellent

   Please, explain Why:______________________

9. What are the real effects and benefits of collaborations with primary care for you, as an institution, in mental health and addictions?
D. Existing evaluation initiatives regarding CMHC.
1. How are services provided for mental health/addictions evaluated in your setting?

2. According with what you know, Is there any evaluation framework in place for mental health/addiction services in primary care in your context? (please, check only one alternative)
   Yes  No

3. What approaches to evaluations of CMHC have been used previously in your context?

E. Evaluation and Information Needs.
1. In your opinion, what are the main evaluations needs regarding CMHC in your setting?

2. What is the most relevant information needed to improve CMHC in your setting?

F. Designing an Evaluation Framework for CMHC.
1. How important would you say is to have an evaluation framework for CMHC in your setting? (please, check only one alternative)
   1  2  3  4  5
   Very Low Importance  Very High Importance

   Please, explain Why:______________________

2. Considering the particularities of your context, what should be the key elements of an evaluation framework for collaborative mental health care in aimed at informing decision-making processes and improving primary health care?

3. What kind of routine measurement systems are feasible to use in your context?

4. Which particularities of your context are most relevant to be considered in developing an evaluation framework for CMHC?

5. What kind of evaluation framework would you like to see for CMHC in your context?
6. In your opinion, What is the existing interest of local stakeholder in evaluating structure, inputs, process, outputs and outcomes for CMHC? (please, check only one alternative per each item)

1=Very low interest           to           5=very high interest

Structure (e.g...): 1  2  3  4  5
Inputs (e.g....):     1  2  3  4  5
Process (e.g....):  1  2  3  4  5
Outcomes (e.g.):  1  2  3  4  5

Why? __________________   Examples:__________________

8. What would you say are the critical dimensions to be considered in an evaluation framework for CMHC in Latin America?

9. What kind of indicators would you consider in an evaluation framework for CMHC in Latin America?

G. Implementation of an Evaluation Framework for CMHC.

1. What are the main strengths and barriers you perceive to conduct an evaluation of CMHC in your context? (e.g. cultural, organizational)?

2. What you perceive as the potential benefits of conducting an evaluation of CMHC in your context?

3. How open are local decision makers to support the implementation of an evaluation of CMHC? (Please, check only one alternative).

   1  2  3  4  5
   Very Low Openness 3  4  5 Very High Openness

   Please, explain:

4. How open are local decision makers to use the results of an evaluation of CMHC? (Please, check only one alternative).

   1  2  3  4  5
   Very Low Openness 3  4  5 Very High Openness

   Please, explain:
5. What are the existing potential economic and human resources to effectively implement an evaluation of CMHC in Latin America?

6. What is the availability of required data to evaluate CMHC in Latin America? (Please, check only one alternative).

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Please, explain:

7. What are the main strengths, difficulties (or weaknesses), opportunities and threats to develop an evaluation framework for CMHC in Latin America?

H. General about the Participants.

1. How relevant do you consider mental health and addiction in your work? (Please, check only one alternative).

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Please, explain Why: ______________________

2. Have you had additional training on mental health or addiction, additional to what you received in your main professional training? (Please, check only one alternative).

- Yes
- No

Probe: If yes, please specify

3. How willing is your organization to work with patients/clients with any mental illness/addiction? (Please, check only one alternative).

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I. Socio Demographic Questions.

Finally, we ask you some information about yourself. We will combine your information with that of other people to get a “picture” of the different kinds of experiences of our study participants and see the relationships with different types of attitudes.

1. What is your age? (please, indicate the number of years that you have)

   __ __ (years)
2. Which is your sex? (please, check one alternative)

(1) □ Male          (2) □ Female

3. What is the name of the organization you represent?

________________________________________

J. Closing Question.

Considering the types of questions we have asked in this survey, is there anything else you think we need to know and/or you want to say?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

These are all the questions we have for you.
Thank you for all the help you’ve given us today.
Appendix 5: Informed consent form for Delphi Group

INFORMED CONSENT FORM FOR
DELPHI GROUP

“Developing a Framework to Evaluate Collaborative Mental Health Services in Primary Care Systems in Latin America.”

Dear ____________________:

Mental health (MH-including substance and concurrent disorders-) is a major public health challenge worldwide. Primary health care provides a unique opportunity to address MH problems. Approaches to shared or collaborative mental health care (CMHC) have been implemented in many countries to strengthen the accessibility and delivery of MH services in primary health care settings. However, there are not well-defined frameworks to evaluate CMHC models. There is a special need for an evaluation framework for CMHC in Latin American countries.

Jaime Sapag, a PhD student at the Dalla Lana School of Public Health, University of Toronto, Canada, under the supervision of Dr. Brian Rush, is conducting a study to develop a feasible and meaningful evaluation framework to support the ongoing improvement and performance measurement of services and systems in Latin America regarding Collaborative Mental Health Care (CMHC). This research study is based on a critical analysis of literature and relevant theories, as well as the reality of three CMHC systems in Latin America (multiple-case study), involving multiple stakeholders, and aimed at developing and assessing feasibility of an evaluation framework for CMHC in Latin America. There are three research sites located in Mexico, Nicaragua and Chile.

One of the components of this study includes a consultation by Delphi process with experts to assess consensus regarding key dimensions for an evaluation framework of collaborative mental health care in Latin America. Around 15-28 key people from different countries will be considered as one group of experts and will be invited to participate in a Delphi Group to provide feedback about a set of evaluation dimensions, with the idea of identifying the main areas of consensus, as well as disagreements about the importance and feasibility of the evaluation dimensions. A Delphi group is a systematic and interactive research technique to collect and distill the judgments of experts using a series of data collection and analysis techniques interspersed with feedback. Iteration allows the participants to refine their views in light of the progress of the group’s work from round to round. The purpose of this Delphi group will be to establish consensus about the importance of the evaluation dimensions and indicators among the local stakeholders.

The participants will be contacted by e-mail. They will receive a booklet containing instructions, a questionnaire with dimensions and indicators to be rated. Each dimension will be clearly defined and a summary of the rational to include it will be provided. There will be three rounds. The circulated document will consist primarily of the list of preliminary dimensions of CMHC based on the literature review, site visits and previous feedback, including definitions, with instructions to modify them or to indicate whether they are adequate. Some additional questions will be included. After each round, the facilitator will provide an anonymous summary of the experts’ inputs from the previous survey as part of the subsequent survey. In each subsequent round, participants will be encouraged to review the anonymous opinion of the other panelists and consider revising their previous response. Each participant will have to rate the importance of each dimension to be included in the framework (considering relevance, feasibility, etc.) on a scale from 1 (not at all important for the evaluation) to 9 (essential to be included in the evaluation). Median scores and ranges will be calculated. Participants will be allowed to explain their answers and provide suggestions for other dimensions to be
considered. The results will be summarized by the researcher. The summary of the results will be sent back to the participants inviting them to review and re-rank them in light of the discussion. Individual approval/agreement for a dimension will be considered when the rating is 6 or more. Consensus will be assumed when at least 70% of respondents agree on a dimension or question, and the issue will then be dropped from subsequent rounds.

You are invited to participate in this Delphi group, which will take place _______________ (dates). The information you provide will be helpful for potential future proposals to improve mental health services within primary care. Your cooperation would help a lot with this important research project and its implications for future action.

There are no rights or wrong answers to these questions. During the process, we will also ask you for some information about yourself so that we can know more about the different people who have helped us in this study. We will combine your information with that of other people to get a “picture” of the different kinds of experiences of our study participants. All responses will be kept completely confidential. We will never present information in a way that could identify individual respondents.

Your participation is completely voluntary. You will not be paid for participate in this study. This survey will be an opportunity to give your opinion. Other than the time commitment, we do not anticipate that this study will pose any other inconvenience/risk to you. You do not have to answer any question you do not want to. You will be always allowed to finish your participation if you feel uncomfortable. Refusing to participate or withdrawing will not involve any penalty or less of benefits which you are otherwise entitled.

If you decide to participate, please respond this invitation by e-mail to Jaime Sapag (jaime.sapag@utoronto.ca), confirming your informed consent to participate:

I, __________________________, have been informed about this research study, its possible benefits and risks. I hereby agree to take part in this research as a subject. I recognize that I am free to withdraw my consent and quit this project at any time, and that doing so will not cause me any penalty or loss of benefits that I would otherwise be entitled to enjoy.

Then you will receive an e-mail with the instructions for the Delphi Group.

- If you have questions about your rights as research subjects, you may call the Office of Research Ethics, University of Toronto (phone: 416-xxxxxxx).
- If you have questions about the study, you should contact:

  Jaime Sapag
  Health and Behavioural Sciences, Dalla Lana School of Public Health
  Mailing address: 33 Russell Street, Office 4002-C, Toronto, Ontario, M5S 2S1, Canada
Phone: 416-535-8501 ext.6790   Email: jaime.sapag@utoronto.ca

Or

Dr. Brian Rush
Health and Behavioural Sciences, Dalla Lana School of Public Health and Health Systems Research and Consulting Unit, Centre for Addiction and Mental Health.
Mailing address: CAMH, 33 Russell ST. 3rd floor Tower, T304 Toronto, ON M5S 2S1, Canada.
Phone: 416-535-8501   ext. 6625   Email: brian_rush@camh.net

Thank you, very much. Sincerely,

Research Team (Names, Address, Phones, E-Mails, Institutions)

________________(subject’s name) has been informed of the nature and purpose of the procedures described above including any risks involved in its performance. He or she has been given time to ask any questions and these questions have been answered to the best of the investigator’s ability. A signed copy of this consent form will be made available to the subject.

Investigator’s Signature   Date

I, _________________________(subject’s name), have been informed about this research study, its possible benefits and risks. I hereby agree to take part in this research as a subject. I recognize that I am free to withdraw my consent and quit this project at any time, and that doing so will not cause me any penalty or loss of benefits that I would otherwise be entitled to enjoy.

Subject’s Signature   Date

Validated By ________________________________
Approved ______________________
Expires ______________________
Protocol Number ____________
Initials ______________________
Appendix 6: Evaluation framework for CMHC in Latin America: definitions of evaluation dimensions and domains

Needs level

1. Population Needs and Characteristics. Overall profile in terms of demographics, health and mental health of the target population of the CMHC system.
   1.1 General Demographics. Relevant characteristics of a population (e.g. size, growth, density, distribution, vital statistics) and trends.
   1.2 Overall Health. Overview of the situation and trends of priority health problems of the population served by the CMHC system.
   1.3 Mental Health and Addiction Conditions. Overview of the situation and trends of priority mental health, addiction and concurrent issues of the population served by the CMHC system.

2. Context Related Determinants
   2.1 Social determinants. Social, economic, political, cultural and environmental conditions that determine the burden of disease and health inequities. These circumstances, which are shaped by the distribution of wealth, power and resources, are most responsible for health inequities - the unfair and avoidable differences in health status.
   2.2 Natural disasters. Major adverse events affecting health/mental health resulting from natural processes (e.g. floods, volcanic eruptions, earthquakes, tsunamis, and others).

3. Population expectations regarding CMHC. Hopes and wants of the population about CMHC.

Inputs level

4. Governance of CMHC. Oversight role to ensure that the best interests and objectives
of CMHC are being upheld and that accountability and legal responsibilities are appropriately fulfilled.

4.1 Legislation/Policy/Plan and Protocols. Existence of up-dated needs and evidence-based legislation/policies/plans and protocols and their consistency with other related policies, frameworks and regulations.

4.2 Management. Process, comprised of social and technical functions and activities, to ensure the optimal delivery of CMHC according to predetermined objectives.\(^{10}\)

4.3 Information systems. Set of components and procedures organized with the objective of generating information that will improve CMHC management decisions.\(^{11}\)

4.4 Monitoring and evaluation. Monitoring and evaluation practices in place regarding CMHC.

5. Financial Aspects. Features pertained to monetary receipts and expenditures or related to money matters in the context of a CMHC system.

5.1 Expenditures. Economic resources involved in addressing problems of mental health and addictions in the context of CMHC.

5.2 Insurance. Policy that provides financial protection to clients regarding expenses related with CMHC.

6. Service Organizational Structure. Existing CMHC organizations and services where primary health care, mental health and other staff provide care for people in need. The systematic arrangement of various resources, with designated responsibilities and special channels of communication and authority, intended to attain certain objectives.

7. Human Resources. People who staff and operate the provision of CMHC represent the workforce.

7.1 Professional profile. Professional background, location and distribution of the staff.


7.2 Mental health & addiction competencies. Attitudes, knowledge and skills of the workforce to address mental health issues in the context of CMHC.

7.3 Training & capacity building. Enhancing the ability of the workforce to mobilize and develop resources, skills and commitments needed to accomplish CMHC goals.12

7.4 Self-care practices. Strategies and activities designed to protect and provide care to practitioners working in CMHC.

8. Material Resources. Physical elements required to implement and improve CMHC.

8.1 Facilities. Health facilities/building (health centers, dispensaries) where CMHC is provided.

8.2 Equipment. Availability of tests, etc., relevant to providing CMHC.

8.3 Medications. Availability of medicine at CMHC facilities that are appropriate for treating mental health conditions.

Process level

9. Access. The extend to which clients/patients are able to obtain CMHC at the right place and the right time, based on respective needs, considering also the various barriers and potential facilitators of such access.13 The profile of the range of available services is also important and whether they cover the needs of all population subgroups with regard to mental health / addictions. The sub-dimensions are:14

9.1 Availability. The relationship of the volume and type of existing CMHC services (and resources) to the volume of patients and the types of needs.


9.2 Geographic access (accessibility). The relationship between the location of supply of CMHC and the location of clients, taking account of client transportation resources and travel time, distance and cost.

9.3 Accommodation. The relationship between the manner in which the CMHC service-provision resources are organized to accept clients (including appointment systems, hours of operation, walk-in facilities, telephone services) and the clients' ability to accommodate to these factors and the clients' perception of their appropriateness.

9.4 Affordability. The relationship between the user costs of CMHC services and health insurance or deposit requirements and the ability of clients' income to pay.

9.5 Acceptability. The relationship between the attitudes of clients about the personal characteristics and practices of providers and the actual characteristics and practices, as well as provider attitudes about the acceptable personal characteristics of clients.

10. Comprehensiveness of Care. Range of CMHC services available and availability when needed.

10.1 Overview of mix of services / activities. Services and activities provided in the context of the CMHC system

10.2 Integration of physical care and mental health / addiction. Bio-psychosocial holistic approaches of care that address both physical and mental health needs, as well as concurrent disorders (e.g., a patient with diabetes receive support for a depressive episode, if needed; or a patient with schizophrenia receive appropriate treatment for his/her diabetes, if needed).

10.3 Comprehensiveness regarding relevant specific mental health conditions (e.g. mhGAP). Same definitions of 10.1 and 10.2, but applied to selected specific mental health conditions according to the local context of CMHC.

11. Continuity of Care. CMHC services are offered as a coherent and coordinated succession of events (longitudinal care) in keeping with the health/mental health needs and personal contexts of patients. Health care is linked to other services to support successful treatment.
11.1 **Informational continuity.** The use of information about past events and personal circumstances to make current CMHC appropriate for each individual.

11.2 **Management continuity.** A consistent and coherent CMHC approach to the management of a health/metal health condition that is responsive to a patient’s changing needs.

11.3 **Relational continuity.** An ongoing therapeutic relationship between a patient and one or more provider.

12. **Adherence to treatment.** Active, voluntary, and collaborative involvement of the patient in a mutually acceptable course of behavior to produce a therapeutic result.\(^{15}\)

13. **Patient Centeredness** (refers to establishing a partnership among practitioners, patients and their families (when appropriate) to ensure that decisions respect patients’ wants, needs and preferences. This includes ensuring that patients have the education and support they need to make their own decisions and participate in their own care.

14. **Family and Community Participation.** Family and community involvement in planning, implementation and evaluation of CMHC.

   14.1 **Family approach.** Services incorporate the family perspective and/or family interventions, in an appropriate manner to the needs of the patients and families themselves.

   14.2 **Community orientation.** Services integrate the community perspective and work with the community in a manner appropriate to the mental health / addiction needs of the population.

15. **Utilization of Services.** Different types of CMHC services that are used by the population\(^{16}\).

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\(^{16}\) Adapted from: Starfield, B. (2001). Basic concepts in population health and health care. *Journal of Epidemiology and Community Health*, 55, 452-454. doi:10.1136/jech.55.7.452
16. **Appropriateness of care.** The extent to which CMHC services (all kinds, from health promotion to treatment and rehabilitation) meet the health/mental health needs of the entire population, are safe and consistent with the standards of excellence recognized in this field (for example, evidence and best or promising practices).

**Outcomes level**

17. **Changes in Risk and Protective Factors.** Evolution of risks and protective factors regarding mental health at the population level.

18. **Overall Health and Mental Health.** Health and mental health situation in the population served by CMHC.

19. **Quality of life / Functioning / Recovery / Resilience.** Overall wellbeing, functioning and positive health/mental health in the population served by CMHC.

20. **Overall Satisfaction.** Perceptions regarding how CMHC is meeting the needs of individuals/communities by different actors.

   20.1 **Patient, family and significant others satisfaction.**

   **Patient satisfaction.** The extent to which individuals facing mental health issues agree with the nature, volume and quality of CMHC services offered in response to their (expressed) CMHC needs.

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**Family and significant others satisfaction** The extent to which family members and/or significant others of people with mental health issues agree with the nature, volume and quality of CMHC services offered in response to (expressed) needs.

**20.2 Staff Satisfaction.** The extent to which staff members agree with the nature, volume and quality of CMHC services offered in response to (expressed) needs.

**21. Efficiency / productivity.** A function of the contributions of CMHC to meeting intrinsic objectives, taking into account the inputs to achieve them and how well resources are used to produce the desired results. Efficiency is described as obtaining the maximum output from a given input.

**Core “drivers” of Collaborative Mental Health Care**

**A. Collaboration.** Existence of common objectives and language, functional structures, communication and cooperation among different actors and the system devices to facilitate working together to provide effective CMHC.

**A.1 Inter-Professional team work.** Multiple health disciplines with diverse knowledge and skills that share an integrated set of goals and use interdependent collaboration involving communication, knowledge sharing and service coordination to provide effective CMHC.  

**A.2 Referral and contra-referral system.** Pathway and functioning of the referral and contra-referral systems regarding CMHC.

**A.3 Cross-sector collaboration.** Cross-sector links and actions with sectors outside the health system that effectively contribute to addressing the determinants of mental health issues and supporting rehabilitation and social reintegration processes.

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B. Capacity to respond to emerging / changing population needs. How CMHC is prepared and actually responds to emerging / changing population needs (e.g. facing natural disasters, fast immigration processes).

C. Openness to innovation. How the CMHC system develops and/or integrates new processes or practices that strengthen services.

   C.1 Generation of innovative ideas. The capacity to identify and discover novel ideas regarding processes, practices and/or policies with the potential to foster CMHC.

   C.2 Reception of innovations. Openness to receiving, adapting and implementing novel ideas in the context of CMHC.

D. Leadership. Meaningful direction given to the system for the advancement of CMHC in a certain direction and/or to integrate relevant and necessary changes in a timely manner.

E. Ethno-cultural relevance / diversity. Services and professionals adapt their practices and have relationships that facilitate the adequate care of persons of different ethnic and cultural groups (example: indigenous population). They address diversity issues appropriately.

F. Protection of Human Rights. Protection and promotion of the rights of people with mental health issues in the context of CMHC (for example, prevention of stigma and discrimination / respect the decision space / etc.).

   F.1 Health system context. Situations regarding the rights of people with mental health issues that are directly related to CMHC services.

   F.2 Community context. Situations regarding the rights of people with mental health issues that are not directly related with CMHC services.
G. Participation of people with mental health and/or addiction issues. User involvement from the micro-level of individual decision-making to macro-level involvement in service planning and evaluation.\textsuperscript{20}