Innovations in People-Centered Care for Chronic Conditions

Chile's Story of Integration of Mental Health and Noncommunicable Disease Services at Primary Healthcare

Policy Note

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Foreword

This policy note has been prepared by the World Bank to document how Chile is driving an innovative response towards non-communicable diseases (NCDs) and the integration of mental health (MH) into primary healthcare (PHC) as one of the multiple steps to achieve the universalization of PHC. Chile's proactive approach to addressing these health challenges presents valuable lessons and insights for other countries and initiatives. This report identifies successful interventions and strategies that support PHC strengthening and enhance overall network coordination. It offers information and suggestions to other nations on effective strategies for PHC development, recognizing that it will require culturally appropriate policy adjustments.

With the support of teams from the Ministry of Health (MoH), Chilean Municipalities, and members of the Academia, the World Bank has been able to systematize successful initiatives and programs. Several meetings and interviews were conducted to recognize Chile's PHC status and organization; its innovative programs and implementation initiatives; and their main qualities and remaining challenges.

Chile's proactive approach towards NCDs and mental health integration in PHC exemplifies its commitment to advancing population health and well-being. The experiences and lessons learned from Chile can serve as a useful source for other countries facing similar challenges. By sharing this knowledge, we aim to promote collaboration and dissemination of better practices that can contribute to the advancement of PHC globally.

It is with great pleasure that we introduce this document, which highlights the critical importance of primary health care (PHC) improvements in addressing non-communicable diseases (NCDs) and mental health (MH) challenges. This report proposes seven key dimensions that can be addressed to promote NCDs and MH intervention and integration in PHC:

The need for strengthened intersectoral work and coordination. Health challenges, particularly those related to NCDs and MH, are multifaceted and require collaborative efforts from various sectors.

The crucial role of coordination between mental health and NCD initiatives. Their interconnectedness presents an opportunity to develop integrated strategies that improve health outcomes.

Ministry of Health´s support and collaboration. It is the responsibility of governments and health authorities to provide the necessary leadership, resources, and policy frameworks that enable effective implementation.

Establishing a legal framework that supports intersectoral work. Legal frameworks provide the necessary structure and guidance to ensure that policies and programs are implemented effectively, resources are allocated efficiently, and accountability mechanisms are in place.

Academia's decisive role. Academia plays a pivotal role in advancing evidence-based practices and driving innovation in healthcare.

Finally, to monitor progress and evaluate the impact of interventions. The report highlights the significance of developing robust mental health and NCD indicators. These indicators serve as essential tools for tracking the effectiveness of policies, identifying gaps, and making informed decisions. This process is emphasized by securing a systematic process to facilitate the implementation of PHC improvements.

The World Bank expresses its sincere gratitude to the Ministry of Health, municipalities, and academia for their invaluable contributions and cooperation throughout the preparation of this report. It is through the commitment and collaboration of governments, health authorities, academia, and various stakeholders that we can strengthen the potential of PHC in addressing the challenges of NCDs and mental health.

The World Bank will continue to work tirelessly to assist client countries in improving and strengthening Public Health and Health Services and the pursuit of universal Primary Health Care. And will also continue developing technical guidance to help the promotion of efficient evidence-based health policies and innovative and replicable best practices.

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Abbreviations and Acronyms

CAPREDENA	National Defense Pension Fund
CECOSF	Community Family Health Centers
CES	Health Care Centers
CESFAM	Family Health Care Centers
CISAUC	Center for Health Innovation Áncora UC
COSAM	Community Mental Health Center Management.
CRS	Health Reference Centers
DIPRECA	Provisional fund for the Carabineros police force
DIVAP	Ministry of Health's Primary Health Care Division
ECICEP	Comprehensive Person-Centered Care Strategy
ESMA	Outpatient Psychiatry and Mental Health Team
FONASA	National Health Fund
FONDECYT	National Fund for Scientific and Technological Development
GDP	Gross domestic product
INE	National Institute of Statistics
ISAPRE	Private health insurance companies
MACEP	Multimorbidity Person-Centered Care Model
MAIS	Comprehensive Health Care Model,
MH	Mental Health
MOH	Ministry of Health
NCD	Non-communicable diseases
PHC	Primary health care
PSR	Rural Health Posts
SAPU	Emergency Primary Care Service
SAR	High-Resolution Emergency Primary Care Service
SSMSO	Southeast Metropolitan Health Service
SUR	Rural Emergency Service
THE	Total health expenditure
UCHIP	Psychiatric Intensive Care Hospitalization Unit
UHC	Universal Health Coverage
UEPI	Imputed Patient Evaluation Unit
UPFT	Temporary Forensic Psychiatry Unit

Executive Summary

All people aspire to have access to comprehensive, adequate, timely, and quality health services, without any discrimination, as well as quality, safe, effective, and affordable medicines. On multiple occasions, the international community has urged countries to make progress in strengthening Primary Health Care (PHC), as was the case of Alma Ata in 1978, and move towards universal health coverage (UHC). The World Bank recognizes that there are multiple paths toward the achievement of universal PHC and UHC, and supports the efforts made by countries to boost shared prosperity, improve health outcomes, and strengthen resilient health systems. Intending to implement innovative approaches to development, the Bank has accompanied Chile's development process since 1948, with the delivery of the first loans to a non-European country. This commitment has been strengthened over the years by supporting different sectors, including the health sector. Recently, the World Bank has worked on various initiatives to support the country in coping with the impact of the COVID-19 pandemic and developing public policies that contribute to the lives of Chileans.

In recent decades, and supported by prudent macroeconomic policies, sound institutions, and its rule of law, Chile experienced a substantial reduction in income poverty and an expansion of the middle class, accompanied by improving average health outcomes. Quality of life has improved, and its epidemiological and demographic profile has changed significantly toward greater life expectancy due to a general reduction in mortality and a decline in fertility. However, non-communicable diseases (NCDs) have eclipsed infectious diseases as the leading cause of mortality, thus, impacting the national morbidity profile. This epidemiological transition has required the adaptation of the health care system and the strengthening of health services and benefits, intending to move from curative medicine to a preventive approach.

Chile has a system that, in terms of efficiency and results, has positioned itself among those with high performance in Latin America, but it still exhibits significant inequalities in how this right is exercised as well as challenges to improve the performance of the health system[1]. In 2005, the country addressed this equity issue with the implementation of a health reform known as Universal Access with Explicit Guarantees (Acceso Universal con Garantías Explícitas, AUGE), being one of the first countries in Latin America to develop an explicit health coverage scheme[2] to ensure access, opportunity, financial protection, and quality healthcare services for 56 priority health problems –currently expanded to 87—, which was a key milestone in the country's progress towards UHC. The reform emphasized the key role of PHC in the implementation of the AUGE and a model centered on disease prevention and health promotion. Since then, the universalization of PHC has been considered by Chile´s Ministry of Health as one of the central steps of the path of the Chilean health system toward UHC.

Besides, over the last three decades, there has been an effort to integrate mental health (MH) services into the global health network and to coordinate primary health care with specialized mental health teams. This allowed the system to move away from the psychiatric hospital

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[1] World Bank (2016).
[2] World Bank (2013).

model and promote PHC Centers' relevance in MH interventions[3]. To accomplish this, referral, and flows systems between PHC and MH specialized center (such as COSAM) have been created, together with mental health consultancy and broader coordination with other sectors[4]. The same orientation towards care integration has been developed in NCD´s assessment trough comprehensive interventions of multimorbidity. The People-Centered Comprehensive Care Strategy for the Promotion, Prevention, and Management of Chronicity in the Context of Multimorbidity (ECICEP) strategy has been implemented since 2019 throughout the entire health network to strengthen the promotion, prevention, treatment, and rehabilitation with a focus on multimorbidity.

This note has been prepared by the World Bank to document how Chile is driving an innovative response towards NCDs and mental health integration as one of the multiple steps to achieve the universalization of PHC. The Bank recognizes that there are many policy alternatives to universal PHC and therefore does not endorse a specific path or model. The main purpose of this note is to serve as a global public good, useful to other countries and initiatives. With the support of teams from the Ministry of Health (MoH), municipalities, and academia, the Bank has been able to systematize the initiatives and programs described in this note. Several meetings and interviews were conducted to recognize Chile's PHC status and implementation, its main qualities, and remaining challenges.

The report identifies successful interventions and strategies that support PHC strengthening and overall network coordination on which MoH can advocate for, support, and implement in the short to medium term to address PHC's main gaps. The innovative strategies come from different areas of knowledge and all of them are aimed to improve Chile´s health outcomes.

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[3] Minoletti (2018).
[4] Minoletti (2018).

Chile in perspective

Country Context

Chile's geography is unique in the world. Its tricontinental territory spreads across the western and southern edge of South America, with a continental and insular total area of 756,770 km^2; including Easter Island in Oceania and stretching south to Antarctica (1,250,000 km2). Its territory consists of the Altiplano and Atacama Desert in the north, the Andean Cordillera occupying the east; the Coastal Cordillera ranging to the west, the Central Valley in between, and the Patagonia that extends to the south, reaching Tierra del Fuego[5].

Chile is a unitary republic with a political-administrative structure based on three territorial government levels. It is divided into 16 administrative regions, 56 provinces, and 346 municipalities. While the Executive Branch is headed by the President of the Republic, the Legislative Power lies in the National Congress, and the Judicial Power is headed by the Supreme Court. Each one of the regions is led by a Regional Governor, who is democratically elected by popular and direct suffrage. Additionally, the 56 provinces are headed by a Provincial Presidential Delegate, appointed by the President of the Republic. At the local level, each municipality has a Mayor and a Municipal Council whose members will depend on the amount of population that inhabits their territories.

Chile's population experienced substantial growth during the twentieth century, and although it continues to grow, but at a slower pace, it is aging rapidly. Chile's population reached 17,574,003 registered inhabitants in 2017 (INE, 2017), where 51.1% were women, and 87.8% resided in urban areas. Comparatively, with previous censuses carried out in the country, the growth rate showed stagnation, reaching only 1.0% in 2017[6]. The average age of the population is 34 years, slightly higher in women (35 years), compared to men (33 years)[7]. The drop in mortality, followed by the birth rates drop, positions the country in an advanced phase of the process of demographic transition[8][9]. This has had an impact on the Health System and the type of programs and responses it must manage, including the necessity to rethink public policy for an adequate response[10][11][12]. A new Census is scheduled for 2024 and, to date, the National Institute of Statistics projects a total population of 19.96 million people.

Chile has become an important destination for the regional refugee and migrant population[13]. Migration to Chile increased significantly; while in 2017 4.4% of the resident population was born abroad, by 2021, estimates indicated that this would represent 7.5% of the total population of the country, reaching 1,482,390 people. Two-thirds of the foreign

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[5] Fifth Biennial Update Report (BUR5, MMA2022).
[6] Ministry of Health of Chile (2018).
[7] Ibidem.
[8] Ibidem.
[9] Ibidem.
[10] Villalobos (2017).
[11] Leiva et al. (2020).
[12] Ministry of Health of Chile (2018).
[13] World Bank (2023)

population comes from three countries: Venezuela, Haiti, and Peru –30%, 12.2%, and 16.6% respectively[14]. This phenomenon has been more intense in northern regions of Chile, such as Tarapacá and Antofagasta[15].

Chile has been one of Latin America's fastest-growing economies in recent decades, thanks in part to a solid macroeconomic framework, an open trade regime, and a business-friendly environment. The Chilean economy grew at a dynamic average pace of 5.4 percent since 1985, but in recent decades there has been a noticeable slowdown. As a HIC, it has achieved a gradual socioeconomic development with an estimated GDP per capita of US $ 15,923.4 in 2018. It is the world's largest producer of copper and mining is one of the main activities of its economy, along with livestock, agriculture, and tourism. Before the arrival of COVID-19, Chile experienced a substantial decrease in poverty, positioning itself as one of the countries with the lowest incidence of poverty in Latin America, and a significant expansion of the middle class. The population living on less than US$6.85 per day (2017 Purchasing Power Parity [PPP])—a standard poverty metric used in international comparisons—dropped from 29.9 percent in 2006 to 7.5 percent in 2017. During the same period, the middle class increased from just over a third of the population (31%) to almost two thirds (57.5%)[16]. However, despite significant improvements in poverty reduction through social policy, high inequality, and low social mobility remain a challenge, with a Gini coefficient of 0.44 in 2020.

In 2015 the country allocated the equivalent of 7.7% of its GDP to the health sector. Of these, 46.1% corresponded to public expenditure and 33% to out-of-pocket spending. Health expenditure per capita was US$ 1877[17]. The sustained increase in the budget allocated to health has been reflected in the significant improvement in indicators such as life expectancy, infant mortality, and healthcare coverage[18]. The non-extreme poverty in 2015 was at 8.1% and extreme poverty was 3.5%, and between 2003 and 2014 the average income of the poorest 40% of the population increased by 4,9%, compared to a 3.3% increase for the population as a whole.[19] In the field of labor participation, a sustained increase in women is reported, by 2000 it was 35% while in 2013 it increased to 47.7%[20]. The average schooling reached 10.8 years in 2013, however, there are marked differences between urban and rural areas, which impact quality of life[21]. Urban drinking water coverage nationwide reaches 99.9%, sewerage 96.7%, and wastewater treatment 99.9%. These services have contributed to important improvements in the living conditions of the population, including the reduction of deaths and diseases attributable to water, sanitation, and hygiene, particularly in children under 5 years of age[22].

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[14] Estimates as of December 2021 from the National Institute of Statistics and the Department of Foreign Affairs and Migration.
[15] Ministerio de Salud de Chile (2018).
[16] World Bank (2021).
[17] PAHO (2017).

[18] OECD (2020).
[19] PAHO (2017).
[20] Ibidem.
[21] Ibidem.

[22] World Bank (2021).

Chile is a country with abundant natural resources but is particularly sensitive to the effects of climate change. Chile meets at least seven of the nine vulnerability criteria listed by the UNFCCC, and according to the latest report of the Intergovernmental Panel for Climate Change (IPCC) about the changes expected due to climate change, the mega-droughts that continue to affect the central region of the country since 2010 are partially associated to global warming. Increasing wildfires in central and southern Chile, exacerbated by extreme temperatures and megadrought, have also increased and are a major source of concern. The country has committed to protecting the environment through its NDC as part of the Paris Agreement, including a commitment to achieve addressing most polluting activities in the country, such as power generation, transportation, and mining, and to a GHG emission budget not exceeding 1,100 MtCO2eq between 2020 and 2030, aiming to achieve carbon neutrality by 2050.

Health Status

Chile's health situation is synthesized through its main health indicators, mortality, morbidity, and risk factors. The health status is differentiated across age, reproduction, and vulnerability[23]. The life expectancy of Chile´s population in 2019 was 80.6 years, being higher in women, with 83.4 years, than in men with 77.9 years. Birth indicators showed that the fertility rate is 1.50, the birth rate is 11.01 (per 1000 inhabitants) and the percentage of professional childbirth care was 99.70%. Between 2000 and 2019, infant mortality in Chile fell from 9.1 to 7.8 (per 1000 live births), which implies a decrease of 14.3%[24]. And in 2020 infant mortality was 5.77 (per 1000 live births)[25]. In the adult population, the mortality rate increased progressively in the different age groups, people between ages 20 to 44 years have a mortality rate of 0.91, the population aged 45 to 64 years had a rate of 4.52 while those between 65 and 79 years had a rate of 19.95[26]. The COVID-19 pandemic impacted mortality indicators with a 25.7% increase in all-cause mortality in 2020 and the first six months of 2021 compared to the average for the years 2015 to 2019[27]. Recent studies have identified an increased NCD-associated number of deaths between 1990 and 2019 [28] in Chile. When 2019 data was analyzed, NCDs were identified as the main cause of death with a total of 97.057 deaths, corresponding to 85.8% of mortality causes in 2019[29]. The number of cancer-associated deaths increased from 26,8% in 2009 to 28% in 2019 [30], constituting Chile´s main

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[23] Source: Chilean Observatory of Public Health. http://www.ochisap.cl/index.php/situacion-de-salud

[24] Portal Salud en las Américas+. Revisado el 6 marzo 2023. https://hia.paho.org/es/paises-2022/perfil-chile#:~:text=Según%20las%20estimaciones%20de%20la,7%20por%20100%20000%20habitantes.

[25] Pan American Health Organization. CORE indicators 2022. https://opendata.paho.org/en/core-indicators

[26] Panorama de la Salud 2021: Indicadores de la OCDE-OECD. Fuente:
https://www.google.com/search?q=Health+at+a+Glance+2021%3A+Highlights+for+Chile&oq=Health+at+a+Glance+2021%3A+Highlights+for+Chile&aqs=chrome..69i5
7j69i60l2.2072j0j15&sourceid=chrome&ie=UTF-8

[27] Panorama de la Salud 2021: Indicadores de la OCDE-OECD. Fuente:
https://www.google.com/search?q=Health+at+a+Glance+2021%3A+Highlights+for+Chile&oq=Health+at+a+Glance+2021%3A+Highlights+for+Chile&aqs=chrome..69i5
7j69i60l2.2072j0j15&sourceid=chrome&ie=UTF-8

[28] GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet 2020; 396: 1204-22.

[29] Martínez-Sanguinetti, María Adela, Leiva-Ordoñez, Ana María, Petermann-Rocha, Fanny, & Celis-Morales, Carlos. (2021). ¿Cómo ha cambiado el perfil epidemiológico en Chile en los últimos 10 años?. *Revista médica de Chile*, *149*(1), 149-152. https://dx.doi.org/10.4067/S0034-98872021000100149

[30] Martínez-Sanguinetti, María Adela, Leiva-Ordoñez, Ana María, Petermann-Rocha, Fanny, & Celis-Morales, Carlos. (2021). ¿Cómo ha cambiado el perfil epidemiológico en Chile en los últimos 10 años?. *Revista médica de Chile*, *149*(1), 149-152. https://dx.doi.org/10.4067/S0034-98872021000100149

cause of death. When comparing this data with the rest of South America, Chile´s cancer-related deaths are the second highest prevalence in the region [31][32], similar to high-income countries such as France, Australia, or Japan[33]. On the other hand, 23.2% of the years of life lost due to disability or death (DALY) are determined by neuro-psychiatric conditions[34]. Almost a third of the population over the age of 15 have suffered a psychiatric disorder in their lifetime and 22.2% have had one in the past year[35]. And only 38.5% of those who have been diagnosed receive any type of mental health service, either from a specialist or a primary care physician[36]. In children and adolescents, the prevalence of any psychiatric disorder is 22.5% (19.3% for boys and 25.8% for girls)[37]. Mental problems and disorders affect to a greater extent people with a lower level of education, youth, and women[38][39][40][41] so it is necessary to address this issue comprehensively and effectively considering health determinants and current public policy.

Health System Structure and Features

a. Legal Framework

The current 1980 political constitution of Chile states "The right to health protection", indicating the following State´s duties: The State protects free and equal access to actions for the promotion, protection, and recovery of health and rehabilitation of the individual. It shall also be responsible for the coordination and control of actions related to health. It is the preferential duty of the State to guarantee the execution of health actions, whether they are provided through public or private institutions, in the form and conditions determined by law, which may establish mandatory contributions. And finally, each person will have the right to choose the health system to which they wish to avail themselves, be it state or private.[42]

[31] Martínez-Sanguinetti, María Adela, Leiva-Ordoñez, Ana María, Petermann-Rocha, Fanny, & Celis-Morales, Carlos. (2021). ¿Cómo ha cambiado el perfil epidemiológico en Chile en los últimos 10 años?. *Revista médica de Chile*, *149*(1), 149-152. https://dx.doi.org/10.4067/S0034-98872021000100149

[32] GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet 2020; 396: 1204-22.

[33] GBD 2019 Diseases and Injuries Collaborators. Global burden of 369 diseases and injuries in 204 countries and territories, 1990-2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet 2020; 396: 1204-22.

[34] Ministerio de Salud. Estudio de Carga de Enfermedad y Carga Atribuible. Santiago, Chile: MINSAL; 2007.

[35] Vicente, Benjamín, Saldivia, Sandra, de la Barra, Flora, Melipillán, Roberto, Valdivia, Mario, & Kohn, Robert. (2012). Salud mental infanto-juvenil en Chile y brechas de atención sanitarias. *Revista médica de Chile*, *140*(4), 447-457. https://dx.doi.org/10.4067/S0034-98872012000400005

[36] Vicente, Benjamín, Saldivia, Sandra, de la Barra, Flora, Melipillán, Roberto, Valdivia, Mario, & Kohn, Robert. (2012). Salud mental infanto-juvenil en Chile y brechas de atención sanitarias. *Revista médica de Chile*, *140*(4), 447-457. https://dx.doi.org/10.4067/S0034-98872012000400005

[37] Vicente, Benjamín, Saldivia, Sandra, de la Barra, Flora, Melipillán, Roberto, Valdivia, Mario, & Kohn, Robert. (2012). Salud mental infanto-juvenil en Chile y brechas de atención sanitarias. *Revista médica de Chile*, *140*(4), 447-457. https://dx.doi.org/10.4067/S0034-98872012000400005

[38] Vicente P, B., Rioseco S, P., Saldivia B, S., Kohn, R., and Torres P, S. Estudio Chileno De Prevalencia De Patología Psiquiátrica (DSM-III-R/CIDI) (Ecpp). Revista médica de Chile, 2002. 130: p. 527-536.

[39] Vicente, B., Saldivia, S., Rioseco, P., De La Barra, F., Valdivia, M., Melipillan, R., Zúñiga, M., Escobar, B., and Pihan, R. Epidemiología De Trastornos Mentales Infanto Juveniles En La Provincia De Cautín. Revista médica de Chile, 2010. 138: p. 965-973.

[40] Vitriol G, V., Cancino A, A., Florenzano U, R., Ballesteros T, S., and Schwartz P, D. Eficacia y Costos Asociados a Un Tratamiento Ambulatorio En Mujeres Con Depresión Severa Y Trauma Temprano. Revista médica de Chile, 2010. 138(4): p. 428-436

[41] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[42] Decreto 100 de 2005. FIJA EL TEXTO REFUNDIDO, COORDINADO Y SISTEMATIZADO DE LA CONSTITUCION POLITICA DE LA REPUBLICA DE CHILE. 22 de Septiembre de 2005. https://bcn.cl/2f6sk

The Chilean Health System was reformed in 2005 by establishing an explicit health coverage scheme via legislation[43], through the "Health Authority" Law [44] and the GES Law[45] (Explicit guarantees in Health), which defined the premises of the new Chilean health system. Some of the duties include; Formulate policies that allow people to develop healthy lifestyles and conditions for better health, contributing to preventing and controlling the risks of getting sick; Guaranteeing access to health promotion and disease care that is dignified, timely, humane, and of quality care, at the level that the country is capable of granting; Achieving a harmonious development of the health system; Defining clear and uniform norms, obligations and rules for the operation of all agents involved in healthcare; Ensuring and monitoring compliance with regulations, promoting people's rights, resolving conflicts between the parties and administering sanctions, when appropriate.

On July 1, 2005, the Plan for Universal Access to Explicit Health Guarantees came into effect in Chile. It corresponds to a General Regime of Health Guarantees[46]. It provides basic principles of Access, Opportunity in care, Quality, and Financial Protection to certain health problems, for people who are insured by the National Health Fund (FONASA) or ISAPRE (Private Provisional Health Institution). This effort has brought Chile a step closer to the principles of health universality as it guarantees to protect the rights and health of people who are diagnosed with one of the pathologies that are included in this Regime.

Another key element in Chile's health coverage is the Ricarte Soto Law[47]. It is a Financial Protection System for High-cost Diagnoses and Treatments. It grants universal coverage and financial protection to all users of the health insurance systems: FONASA, National Defense Health Provision Fund (CAPREDENA), Police Force Social Security Directorate (DIPRECA), and ISAPRES, regardless of their socioeconomic situation. FONASA as an administrator of the health fund must ensure financial protection, access, and delivery of medicines, medical devices, or food to all users of health systems who meet the requirements established in this law decree[48].

In April 2021 a Mental Health related Law was promulgated, the Law 21.331[49] of "Recognition and protection of mental health user's rights". It sought to recognize and protect the fundamental rights of people with mental illness or mental or intellectual disabilities, especially their right to personal freedom, physical and mental integrity, health care, and social and labor inclusion.

According to the World Bank's 2020 report rare diseases constitute a very high social and financial burden for all health systems, a comprehensive and coordinated approach is

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[43] World Bank. 2020. Estudio del Financiamiento de Tratamientos de Alto Costo en Chile – Ley Ricarte Soto. © World Bank.

[44] Law 19937. MODIFICA EL D.L. Nº 2.763, DE 1979, CON LA FINALIDAD DE ESTABLECER UNA NUEVA CONCEPCION DE LA AUTORIDAD SANITARIA, DISTINTAS MODALIDADES DE GESTION Y FORTALECER LA PARTICIPACION CIUDADANA. 24 February 2004. https://bcn.cl/2f7j5

[45] Ley 19.966. Establece Régimen de Garantías Explícitas en Salud. 03 de Septiembre de 2004.

[46] Ley 19.966. Establece Régimen de Garantías Explícitas en Salud. 03 de Septiembre de 2004.

[47] Ley 20.850. CREA UN SISTEMA DE PROTECCIÓN FINANCIERA PARA DIAGNÓSTICOS Y TRATAMIENTOS DE ALTO COSTO Y RINDE HOMENAJE PÓSTUMO A DON LUIS RICARTE SOTO GALLEGOS. JUNE de 2015

[48] World Bank. 2020. Estudio del Financiamiento de Tratamientos de Alto Costo en Chile – Ley Ricarte Soto. © World Bank

[49] LEY 21331. DEL RECONOCIMIENTO Y PROTECCIÓN DE LOS DERECHOS DE LAS PERSONAS EN LA ATENCIÓN DE SALUD MENTAL. MINISTERIO DE SALUD. APRIL OF 2021.

essential for the stability of health, and social, political, and financial efficiency in the social protection of households[50].

b. *Organization, Financing, and Policy*
i. *General Health System*

Chile has a mixed health system in terms of insurance, as it includes public (FONASA) and private (ISAPRES) insurance, and other specific insurances (DIPRECA, CAPREDENA, and Complementary insurances). Members of the armed forces (Army, Navy, Aviation, and Police Corps) and their families are beneficiaries of health insurance through DIPRECA or CAPREDENA, they are provided care at designated facilities by their providers. This health insurance is financed with general taxes. Occupational health is delivered by three mutuals, in charge of work accidents and occupational disease coverage to affiliated workers[51].

The National Health Fund (FONASA) is the public financial entity entrusted to collect, manage, and distribute state funds for health in Chile and is in charge of granting protection and health coverage to registered individuals and to all those who lack resources. It is a collective public entity independent of the health risks that a person may present, while the ISAPRES (private entities) is a private health insurance system, currently made up of nine insurers[52] that operate based on differentiated plans with specific rates also considering risk factors or pre-existing health status. The National Health Fund (FONASA) finances the activities of the public network of health providers through four sources: (1) Fiscal contribution that enters through the Budget Law, (2) Resources that come from affiliate contributions, (3) Beneficiaries' co-payment and (4) Current transfers. [53] This fund imposes on its beneficiaries a single standard plan of 7% of their gross income collected in the contributions by the insured but also receives a tax contribution. The provision of services is also mixed, with a network of public hospitals organized into 29 decentralized health services, throughout the 16 regions of the country. Primary health care is administered by the municipalities. The Ministry of Health exercises the governance and regulation of these services, through the articulation of Health undersecretaries, the Institute of Public Health, the Superintendence of Health, and the National Supply Center [54]. According to the results of the 2017 Casen Survey, the distribution of affiliates to health insurance systems in the general population is 78% to FONASA, 14.4% to ISAPRE, 2.8% to the Armed Forces, 2.8% to none, and 2% reports "not knowing/no respond"[55].

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[50] World Bank. 2020. Estudio del Financiamiento de Tratamientos de Alto Costo en Chile – Ley Ricarte Soto. © World Bank
[51] Víctor Becerril-Montekio, Lic en Ec, M en SocI; Juan de Dios Reyes, MC, MSPII; Annick Manuel, MC, MSP. 2011. "Sistema de Salud de Chile". Recuperado de SciELO - Salud Pública - Sistema de salud de Chile Sistema de salud de Chile (scielosp.org)
[52] Superintendencia de salud. https://www.supersalud.gob.cl/664/w3-article-2528.html#:~:text=Las%20Instituciones%20de%20Salud%20Previsional,seis%20abiertas%20y%20tres%20cerradas).
[53] Ministerio de Hacienda: Dirección de Prespuesto. 2013."Sistema Público de Salud, Situación actual y proyecciones fiscales". Recuperado de https://www.dipres.gob.cl/598/articles-117505_doc_pdf.pdf
[54] Universidad del Desarrollo. "Estructura y funcionamiento del sistema de salud chileno: Serie de salud poblacional N°2". 2019. Centro de Epidemiología y Políticas de Salud. Recuperado de https://medicina.udd.cl/centro-epidemiologia-politicas-salud/files/2019/12/ESTRUCTURA-Y-FUNCIONAMIENTO-DE-SALUD-2019.pdf
[55] Ministerio de Desarrollo Social. "Síntesis de resultados en Salud Encuesta CASEN". 2018. Observatorio Social

The Ministry of Health is organized into 5 main entities/institutions[56]. The first one is the **Undersecretary of Healthcare Networks**, its mission is to regulate and supervise the operation of health networks through the design of policies, regulations, plans, and programs for their coordination and articulation. The second one is the **Undersecretary of Public Health**, its mission is to ensure the right to health protection by exercising the regulatory, normative, and oversight functions that the State of Chile is responsible for. The Undersecretary of Public Health is responsible for contributing to the quality of public goods, and access to environmental health policies in a participatory manner, which allows the sustained improvement of the health of the population. The third institution is the **Ministerial Regional Secretaries of Health** (SEREMIS), which corresponds to the regional offices representing the Undersecretary of Public Health, which perform the same functions as this undersecretary with regional jurisdiction. The fourth one is the **Superintendence of Health**, which fulfills the role of regulator and supervisor of insurers and health service providers, both public and private aiming to protect and promote people's health rights. The last institution is the **Institute of Public Health**, which is in charge of contributing to the public health of the country in various health areas, such as laboratory quality assessment, disease surveillance, control and inspection of medicines, cosmetics, and devices for medical use, environmental health, occupational health, production and control of the quality of vaccines[57].

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[56] Decreto con Fuerza de Ley 1 FIJA TEXTO REFUNDIDO, COORDINADO Y SISTEMATIZADO DEL DECRETO LEY N° 2.763, DE 1979 Y DE LAS LEYES N° 18.933 Y N° 18.469. MINISTERIO DE SALUD; SUBSECRETARÍA DE SALUD PÚBLICA. SEPTEMBER 2005.
[57] Ministry of Health. *Institute of Public Health*. (n.d). https://www.minsal.cl/instituto-de-salud-publica/
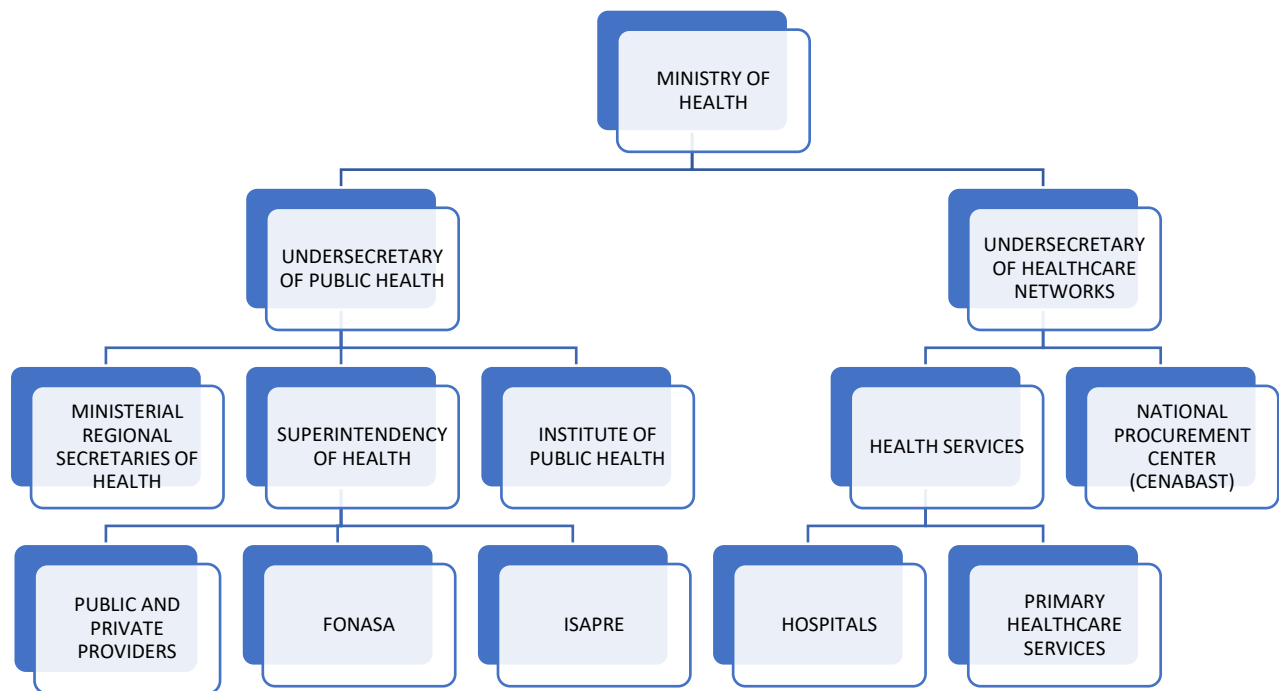
Figure 1: Chile's Health System Structure[58]

ii.   *Primary Health Care and Models of Service Delivery*

The socio-cultural, epidemiological, and demographic profile of Chile and the Americas has led to changes towards greater life expectancy and aging in the population, changes in urbanization, and other phenomena such as increasing migration, which has social, economic, cultural, and human rights implications[59]. This context requires the country's health system to aim for the effective strengthening of Primary Health Care (PHC) as the pillar of the Chilean health model, the efficient use of resources, the development of health strategies with communities at the local level for the achievement of community health and the improvement in the quality of life.

In 1993, the Ministry of Health (MINSAL) operationalized the bases for primary healthcare establishments to function as Family Health Care Centers (CESFAM). In 1998, the Ministry of Health began to demand the transformation of every Primary Health Care Center into a Family Primary Health Care Center (CESFAM), according to the "Care Model with a Family Focus in Primary Health Care"[60]. This model had to be systematically applied incorporating individuals

[58] https://saludresponde.minsal.cl/wp-content/uploads/2020/11/Presentacion-estructura-minsal.pdf

[59] Turra C., Fernandes F. La transición demográfica: Oportunidades y desafíos en la senda hacia el logro de los Objetivos de Desarrollo sostenible en América Latina y el Caribe [Internet]. 2021 [cited 2021 Sep 14]. Available from: https://repositorio.cepal.org/bitstream/handle/11362/46805/4/S2000433_es.pdf

[60] ORIENTACIONES PARA LA IMPLEMENTACION DEL MODELO DE ATENCION INTEGRAL DE SALUD FAMILIAR Y COMUNITARIA [Internet]. 2019 [cited 2021 Nov 8]. Available from: https://www.minsal.cl/portal/url/item/e7b24eef3e5cb5d1e0400101650128e9.pdf

and families centered care, the use of a biopsychosocial approach to replace the traditional biomedical approach, the constitution of health teams that offer personalized and continuous attention, and intervention emphasis on preventive actions with a strong community involvement [61]

Since the 2000s Health Reform, Primary Health Care has been governed by the guidelines of the Chilean Comprehensive Family and Community Health Care Model (MAIS) with its three inalienable principles: People-Centered, Integrality of Care, and Continuity of Care. This Model promotes the participation of the family in the activities of promotion, prevention, and recovery of health[62]. It is expected that in each contact with individuals, families, and communities, health teams incorporate actions of health promotion and disease prevention, promoting individual and family self-care, and generating healthy spaces.[63]

Primary Health Care (PHC) is currently considered the central axis of the health system, it provides health services to nearly 80% of Chile´s population, mainly from low-income settings. PHC Centers can have three administration mechanisms[64]. One mechanism is administrated by the municipal health administration entities and their corresponding establishments as a Municipal Primary Health Care Center. The second one is dependent on the Health Services, administrated by the Primary Health Care Center corresponding Health Service. And, the third one is administered by the Non-Governmental Organizations (NGOs), with a legal agreement (DFL - "decreto con fuerza de ley" 36/80) with the corresponding Health Service that allows them to execute actions at the primary level of attention.
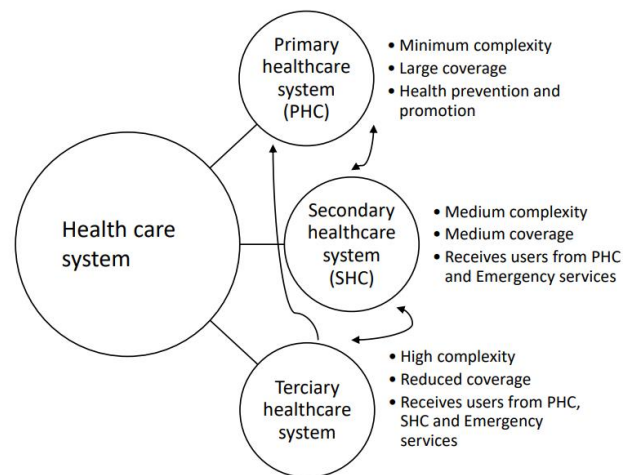
Figure 2: Health care system organization[65]

[61] Tellez, A. (2006). Atención primaria: factor clave en la reforma al sistema de salud. Pontificia Universidad Catolica: Departamento de Medicina Familiar. https://politicaspublicas.uc.cl/wp-content/uploads/2015/02/atencion-primaria-factor-clave-en-la-reforma-al-sistema-de-salud.pdf

 García-Huidobro D, Barros X, Quiroz A, Barría M, Soto G, Vargas I. Modelo de atención integral en salud familiar y comunitaria en la atención primaria chilena. Rev Panam Salud Publica. 2018;42:e160. https://doi.org/10.26633/RPSP.2018.160

[63] Ministry of Health. ORIENTACIONES PARA LA IMPLEMENTACION DEL MODELO DE ATENCION INTEGRAL DE SALUD FAMILIAR Y COMUNITARIA. (n.d.). https://www.minsal.cl/portal/url/item/e7b24eef3e5cb5d1e0400101650128e9.pdf

[64] Asesoría Técnica Parlamentaria. (2028). El sistema de salud en Chile y la Atención Primaria de Salud municipal Marco para un debate sobre desmunicipalización. https://obtienearchivo.bcn.cl/obtienearchivo?id=repositorio/10221/26811/2/BCN_Gobernanza_salud_y_demunicip_para_reposit_final.pdf

[65] https://www.frontiersin.org/articles/10.3389/fpsyt.2022.1083042/full

PHC is financed by the government via two mechanisms. First, the State Contribution, through per capita allocation per enrolled population at the municipality[66]. Each municipality receives monthly, from the Ministry of Health, through the corresponding Health Services, a state contribution, known as per capita[67]. This is made up for each commune according to criteria such as the beneficiary population in the commune, the socioeconomic level of the population, and indices of rurality and difficulty in accessing and providing health care. The second financing method corresponds to Health Sector Budget, through Municipal Reinforcement Programs. In addition to the per capita contribution, the State contributes to the financing of municipal primary health care, through the Health Sector Budget itself, through programs such as Chile Grows with You, Equity in Rural Health, Rural Emergency System, and Comprehensive Base Rehabilitation Community, among others. The specific amounts of financing are established in the annual budget law[68].

PHC provides basic promotional, preventive, curative, and rehabilitation first-contact services for the enrolled population. The provided services are established by the Universal Access to Explicit Health Guarantees Plan, the Family Health Plan, and specific Reinforcement Programs. Health programs correspond to the Family Health Plan, and they guide the provision of health services throughout the life span with health promotion, prevention, diagnostic, treatment, and rehabilitation interventions[69]. For its implementation, there are simple means of providing diagnostic support, therapeutic and human resources according to the services provided, the magnitude of the population to be attended to, and the nature of the activities to be carried out[70]. The health programs include public health activities and interventions ranging from vaccinations to palliative care[71]. These services are delivered in different health centers according to the population-specific needs [72]:

- **Health Care Centers (CES) and Family Health Care Centers (CESFAM):** They provide basic health care to a population between 5,000 and 30,000 people, with actions of promotion, prevention, cure, treatment, home care, and health rehabilitation. The difference between the CES and the CESFAM is that the latter works following the Integral Health Model with a Family and Community Approach, giving greater emphasis to prevention and promotion, focusing on families and community, giving importance to community participation, and working with family health teams that serve the whole family throughout the life cycle. These actions aim to improve the population's quality of life.
- **Community Family Health Centers (CECOSF):** This Community Family Health Center provides basic health care and works under the auspices of a CES or CESFAM,

[66] MINSAL (2017) Eje gestión de recursos financieros en atención primaria. Subsecretaría Redes Asistenciales. Disponible en http://bcn.cl/27n32

[67] Eduardo Goldstein. 2018."El sistema de salud en Chile y la Atención Primaria de Salud municipal Marco para un debate sobre desmunicipalización". Parlament technical consultancy. November of 2018.

[68] Ministerio de Salud: Partida 16.2022. Proyecto de ley de presupuestos. Recuperado de https://www.senado.cl/site/presupuesto/2022/TramitacionPL2022/LibrosPPTO2022/Partida16.pdf

[69] Dominguez-Cancino KA, Palmieri PA, Martinez-Gutierrez MS. National Health Policy Reform for Primary Care in Chile: A Qualitative Analysis of the Health Program Documents. Journal of Primary Care & Community Health. 2020;11. doi:10.1177/2150132720924884

[70] Observatorio Chileno de Salud Pública. (s/a). https://www.ochisap.cl/estructura-organizacional-del-snss/

Dominguez-Cancino KA, Palmieri PA, Martinez-Gutierrez MS. National Health Policy Reform for Primary Care in Chile: A Qualitative Analysis of the Health Program Documents. Journal of Primary Care & Community Health. 2020;11. doi:10.1177/2150132720924884

[72]Ministry of Health.(2022). https://saludresponde.minsal.cl/establecimientos-de-salud/

depending on them for more complex benefits. It aims to improve people's health, carrying out actions based on the diagnostic, planning, and evaluation with participation based on the Family and Community Health Model, which allows responding in an inclusive and relevant way to the needs expressed by the community. CECOSF differs from CESFAM mainly in that the services have a main emphasis on health promotion and prevention, serve a smaller population (2000 to 5000 registered people), and aim to improve access to PHC and therefore complement the CESFAM basic services.

- **Rural Health Posts (PSR):** Provides attention to the health needs of rural population sectors. Preferably for the promotion and protection of health, referring to other health centers in the network situations and emergencies that cannot be resolved at this level.
- **Primary Emergency Care Services (SAPU) and Rural Emergency Service (SUR):** This is a component of the Emergency Network and attends to low-complexity emergencies when the corresponding Primary Health Center is closed. It depends technically and administratively on a CESFAM. The difference between SAPU and SUR lies in the type of territory it serves (urban or rural areas). Geographically they can be attached to a CESFAM or can be in a different location near the corresponding PHC Center.
- **High-Resolution Service (SAR):** It is a component of the Emergency Network, that provides emergency medical care to people with **high and moderate vital risk,** similar to Primary Emergency Care Service (SAPU) but with greater resolution capacity since it has observation stretchers, diagnostic support tests, and X-Ray service.

iii.   Mental Health Network

National Mental Health Plan (2017-2025)[73] proposes that health services in mental health must be accounted for in the community care model and that mental health is part of the network of health services in Chile, which are organized around the Comprehensive family and community health care model. It is established that Primary Health Care (PHC) plays a fundamental role, together with the integration of the different levels of care and the territorialization of specialized care [74] [75]. The predominance should be ambulatory care, delivered by the Healthcare Network of the Health Services, by public healthcare establishments, the municipality primary care establishments in their territory, and the other public or private establishments that have signed agreements with the Health Service. The provision of services should be granted mainly by the different public services available and

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[73] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf
[74] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[75] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

secondarily by private providers. The private providers must comply with the regulations required to agree with the public service and have the capacity to provide them. [76]

The Community Mental Health Care model arose in contrast to the asylum model. Before 1990, the year in which the first National Mental Health Plan was constructed, Chile directed most of the financing and managing efforts toward Psychiatric Hospitals[77]. The community mental health model integrates and complements the comprehensive family and community health care model. They coexist and dynamically relate under the same main principles: integrality, territorialization, the exercise of human rights, and continuity of care[78].

Community mental health assistance is based on the Comprehensive Family and Community Health Care Model and Community Mental Health Care Model. Both of them are described based on the interaction of three core elements; network approach (to work in an integrated and interrelated way between the centers that are part of the health network and in coordination with other areas of care such as the educational system), an approach to psychopathology based on a concept of the patients as the subject of rights and the importance of the relationships they establish with the community, and clinical management[79]. This means that each team member of the horizontally organized health network in the healthcare system, in collaboration with other sectors, must contribute to a common task aimed at a patient's specific care needs. It also means that the clinical centers address the pathology while accounting for social determinants of health. Finally, clinical management involves "the integration of the best clinical practices with the best management practices, aimed at providing a quality service to people"[80]. **The community mental health attention in the PHC must include these components**: 1. Community mental health promotion and prevention; 2. early detection-diagnosis-attention (for example, first psychotic episode), this must consider the individual's particular mental health risks; 3. Facilitation of a person's social participation within the community; 4. Prioritizing the achievement of an adequate quality of life, even if complete remission of symptoms is not achieved [81]. This is why primary healthcare actions, interventions, and programs financed by the health ministry focus mainly on psychosocial aspects. And, why psychiatric interventions, including pharmacology evaluations, are done at the secondary level, although psychological attention is given at primary health care depending on the severity of the pathology.

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[76] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[77] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[78] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[79] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf
[80] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf
[81] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

Based on the principles of continuity of care, distinctions were made to organize patients´ pathways through the health network, considering the dimensions of gravity, complexity, and vulnerability. Gravity is described as the intensity of a clinical situation; this may vary throughout the life cycle. **Vulnerability** is described as the possibility of developing a mental health disease and the resources available to deal with it. It considers personal and community resources. **Complexity** refers to other health conditions that may negatively impact the person's mental health and quality of life, it includes socioeconomic level, cultural elements, and quality of social relations. **Complexity** interacts with the dimensions of gravity and vulnerability[82]
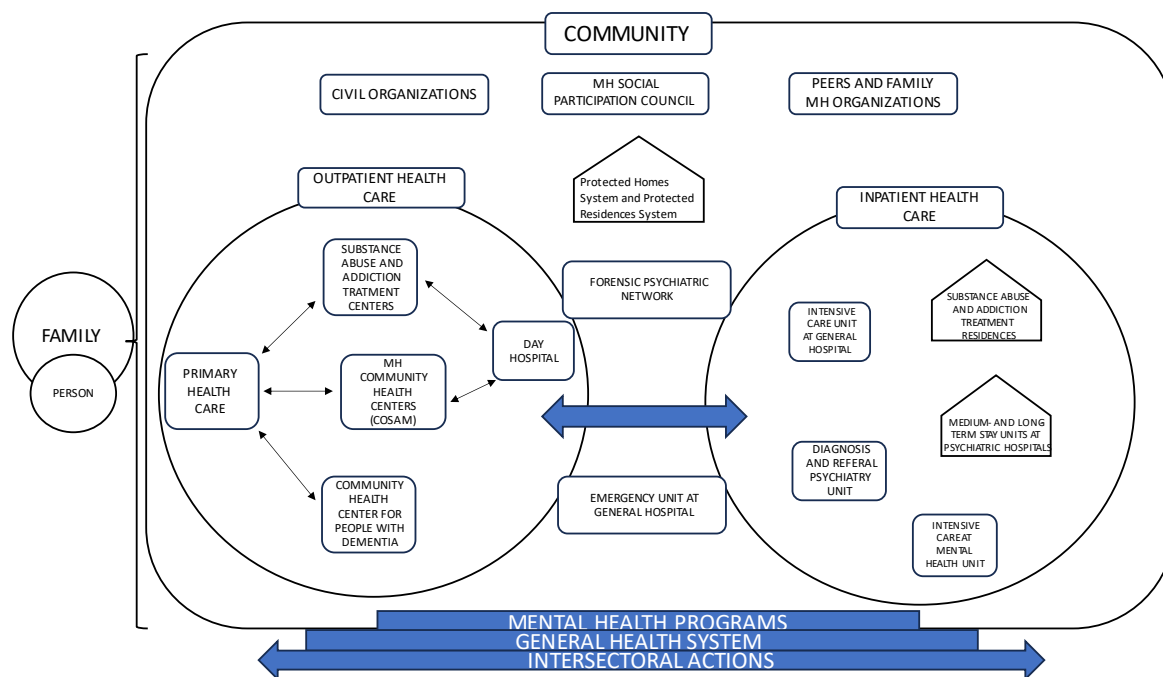
Figure 3: Organization of mental health network in Chile[83]

At the public level, the entities in charge of Mental Health in **PHC** are: Family Health Center (CESFAM), Community Family Health Centers (CESCOF), Rural Health Posts, and Community Hospitals[84]. At the **Secondary level of care**, corresponding to outpatient specialty care, there are the specialized Community Mental Health Care Centers (COSAM, CESAM, COSAMCO, ESMA) and there are specialized mental health teams in General Health Centers such as "Attached specialty centers"(CAE)[i], Diagnosis and Treatment Centers[ii] (CDT), Health

[82] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[83] https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[84] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

Reference Centers[iii] (CRS) or Psychiatry Services and Day Hospitals[85]. The **tertiary level** has <u>Short-term</u> Stay Hospitalization Units and Intensive Care Hospitalization Units in Psychiatry (UHCIP) present in General Hospitals that deliver inpatient psychiatric healthcare to people in a crisis condition or acute episode of a mental illness[86]. As for <u>medium and long-term stay</u>, there are four Psychiatric Hospitals that remain open for this function, Hospital El Salvador (Valparaíso), Hospital Philipe Pinel (Aconcagua), Horwitz Psychiatric Institute (Santiago Norte) and Hospital El Peral (Santiago Sur). There are also private UHCIPs for minors in Iquique, Til-Til, Valdivia, Coronel, and Limache [87]. In <u>penitentiary inpatient psychiatric</u> healthcare, there is a Forensic Psychiatry Macro Network that is divided into two units; the Accused Patient Evaluation Unit (UEPI) and Temporary Forensic Psychiatric Units (UPFT). These services are distributed variably throughout the country among the Health Services, inside Prisons, or in protected forensic residences. At the level of inpatient community support, there are the **Protected Homes System** and **Protected Residences System**, the latter being of greater technical and psychosocial complexity addressing higher severity inpatient MH problems. There are currently 151 Protected Homes and 57 Protected Residences throughout Chile [88]. Nationwide, all of the 29 Health Services have a corresponding Protected Home System while, of the country's regions, six do not have a Protected Residences System. At an outpatient community level, focused on patients with disabilities by psychiatric cause, there are also **Psychosocial Rehabilitation Day Centers** that should be present at every Health Service network[89]. For the care of people with alcohol and drug consumption problems, an Alcohol and Drug care program was created that considers treatments of different complexities, there are centers aimed at adults and others at the adolescent population[90].

The integration of mental health in primary health care facilitates equitable access, detection, treatment, rehabilitation, and recovery of people with mental health problems, which is why the current network restructuring has significant relevance[91] [92] [93].

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[85] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[86] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[87] Ministerio de Salud. (2018). RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[88] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[89] Ministry of Health. (2018). Modelo de Gestión: RED TEMÁTICA DE SALUD MENTAL EN LA RED GENERAL DE SALUD. https://www.minsal.cl/wp-content/uploads/2015/09/2018.05.02_Modelo-de-Gesti%C3%B3n-de-la-Red-Tem%C3%A1tica-de-Salud-Mental_digital.pdf

[90] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

[91] Petersen I, Marais D, Abdulmalik J, Ahuja S, Alem A, Chisholm D, et al. Strengthening mental health system governance in six low- and middle-income countries in Africa and South Asia: challenges, needs and potential strategies. Health Policy Plan. 2017;32(5):699-709.

[92] Hailemariam M, Fekadu A, Selamu M, Medhin G, Prince M, Hanlon C. Equitable access to integrated primary mental healthcare for people with severe mental disorders in Ethiopia: a formative study. International Journal for Equity in Health. 2016;15:121.

[93] Minoletti A, Sepúlveda R, Gómez M, Toro O, Irarrázabal M, Díaz R, et al. Análisis de la gobernanza en la implementación del modelo comunitario de salud mental en Chile. Rev Panam Salud Publica. 2018;42:e131.https://doi.org/10.26633/RPSP.2018.131

Current Restructuring in Universalization of Health, Mental Health, and Chronic Noncommunicable Diseases

a. Universalization of Primary Healthcare in Chile

According to the Ministry of Health 2021 data, Chile has fifteen million people on Public Primary Health Care insurance but only 6 million people access or use Primary Health Care Services. To address this gap, universal access to care and universal health coverage is considered necessary and efforts are currently being made to strengthen PHC as the backbone of the Health System and as the coordinator of the Integrated Health Networks.

The universalization of primary care has been considered by the Ministry of Health (MOH) as one of the central steps to initiate a necessary transformation of the Chilean health system into a Universal Health System. The implementation process is highly complex, and it is led by the National Commission for the Universalization of Primary Health Care, composed of the Health Minister, the Undersecretaries of Public Health and Assistance Networks, and a technical team composed of staff from different Ministry of Health´s Divisions and Departments, FONASA and Superintendence of Health[94]. To advise the National Commission, the Council for the Universalization of Primary Health Care was created, composed of a High-Level Health Committee, including Chile´s former Ministers of Health, and a Political-Social Committee composed of representatives of the Legislative Power, the Academy, health workers, and organizations of users of the health system. This committee was constituted with a transversal approach that works together with the Ministry of Health to plan Primary Health Care as a state policy[95].

The implementation process considers three phases; Phase 0: conceptual and operational definitions, Phase 1: policy development and progressive implementation program, and Phase 2: monitoring and evaluation.

Currently, the National Commission is defining what "coverage and access for health" imply to the Health System and the criteria for the selection process of the pilot municipalities. In July 2022, the Commission held its first meeting, established the general guidelines for the Universalization of Primary Health Care, described the overall situation of Primary Health Care in the country, and the main gaps in coverage were identified in terms of access, management, financing, human resources, and infrastructure. The implementation and scaling strategies and the number of pilot centers, six of them, were also established. The National Commission has selected several strategies according to national and international successful experiences to eliminate barriers to access, allowing people who are not insured by FONASA to access PHC. These strategies also aim to provide more accessibility to PHC Plans and Services and to promote its use pathways.

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[94] Ministry of Health. (2022). https://www.minsal.cl/universalizacion-de-la-atencion-primaria-de-salud/
[95] Ministry of Health. (2022). https://www.minsal.cl/universalizacion-de-la-atencion-primaria-de-salud/

b. Mental Health (MH)

It is necessary to generate laws and policies that promote the decentralization of care to protect the overall well-being of the population [96] [97]. A comprehensive, integrated, and community approach can reduce treatment gaps, increase coverage, and improve access inequity[98] [99].

During the last three decades, there has been an effort to integrate MH services into the national health network and to coordinate primary health care with specialized mental health teams. This allowed the system to move away from the psychiatric hospital model and promote PHC Centers' relevance in MH interventions[100]. To accomplish this, referral and flow systems between PHC and MH, specialized centers (such as COSAM) have been created, together with mental health consultancy and broader coordination with other sectors. [101]

Mental Health is currently being prioritized by the government. For the first time in Chile´s history, the minister's cabinet is composed of two mental health specialists. This process has been reinforced by the shift in the comprehension of Mental Health, not just from a disease perspective but from a comprehensive approach that includes mental health as a key component of overall well-being. Chile´s government has contributed 6% of the health budget to Mental Health, and it is MoH's responsibility to organize its disposition[102]. The Ministry of Health has created an MH program called "Building Mental Health", aimed to improve the health status of the Chilean population. It consists of **five main strategic lines of action to address Mental Health**: strengthen leadership and governance, improve the provision of Mental Health services, promote mental health and suicide prevention, strengthen Mental Health in emergency contexts, and strengthen data, evidence, and research[103]. Also, currently, the Mental Health Department, from the Ministry of Health's undersecretary of Public Health, has established **three main priorities**; Human Rights and Deinstitutionalization of patients; Budget management; and a Mental Health Law that includes inter-ministries responsibilities in terms of addressing and achieving outcomes in mental health.

To strengthen the attention to mental health, different network coordination mechanisms have been implemented, including Residence-inpatient-committees or continuity of care articulation committees, facilitating patients' management. Service diversification and decentralization, such as Day Hospitals, ensure treatments are not received only at the

[96] Rohde J, Cousens S, Chopra M, Tangcharoensathien V, Black R, Bhutta Z, Lawn JE. 30 years after Alma-Ata: has primary health care worked in countries? Lancet. 2008;372:950–61.

[97] Minoletti A, Soto-Brandt G, Sepúlveda R, Toro O, Irarrázaval M. Capacidad de respuesta de la atención primaria en salud mental en Chile: una contribución a Alma-Ata. Rev Panam de Salud Publica. 2018;42:e136.https://doi.org/10.26633/RPSP.2018.136

[98]
Rohde J, Cousens S, Chopra M, Tangcharoensathien V, Black R, Bhutta Z, Lawn JE. 30 years after Alma-Ata: has primary health care worked in countries? Lancet. 2008;372:950–61.

[99] Minoletti A, Soto-Brandt G, Sepúlveda R, Toro O, Irarrázaval M. Capacidad de respuesta de la atención primaria en salud mental en Chile: una contribución a Alma-Ata. Rev Panam de Salud Publica. 2018;42:e136.https://doi.org/10.26633/RPSP.2018.136

[100] Minoletti A, Sepúlveda R, Gómez M, Toro O, Irarrázabal M, Díaz R, et al. Análisis de la gobernanza en la implementación del modelo comunitario de salud mental en Chile. Rev Panam Salud Publica. 2018;42:e131.https://doi.org/10.26633/RPSP.2018.131

[101] Minoletti A, Soto-Brandt G, Sepúlveda R, Toro O, Irarrázaval M. Capacidad de respuesta de la atención primaria en salud mental en Chile: una contribución a Alma-Ata [Mental health response capacity in primary care in Chile: a contribution to Alma-AtaCapacidade de resposta da atenção primária em saúde mental no Chile: uma contribuição de Alma-Ata]. Rev Panam Salud Publica. 2018 Sep 24;42:e136. Spanish. doi: 10.26633/RPSP.2018.136. PMID: 31093164; PMCID: PMC6385793.

[102] Ministerio de Salud. (2021). Tercera Subcomisión Mixta aprueba Presupuesto de Salud 2022.
https://www.minsal.cl/tercera-subcomision-mixta-aprueba-presupuesto-de-salud-2022/

[103] Ministerio de Salud. (2020, 14 de October). "Construyendo Salud Mental". Biblioteca Dr. Bogoslav Juricic Turina. http://www.bibliotecaminsal.cl/construyendo-salud-mental/

Psychiatric hospital level[104] and are moving towards a community approach in addressing mental health. To complement this process, Health Services have increased second-level centers MH-services, establishing psychiatry attention and MH-related house visitations as intervention strategies. These strategies aim to promote the therapeutic bond between the patient and clinicians and to improve treatment adherence. These actions are based on the integrated model of care approach, on Empowerment approach, and the Recovery approach described in the Mental Health National Plan, incorporating families into the treatment. Other efforts support elevating interest in MH by promoting intersectoral participation, such as the disability office (SENADIS) and other institutions participating in the process of assessing the person´s needs and demands, or the creation of a Labor inclusion law, together with the ministry of labor.

Particularly in Primary Health Care, MoH has fortified promotion, prevention, treatment, and social integration or community connection actions that must be performed by the entire health team. To support this, the annual mental health fund in PHC has tripled between 2008 and 2017[105]. This has made it possible to increase the number of PHC professionals and the number of hours dedicated to mental health. A 2014 WHO Report[106] indicates the presence of psychologists in 99.6% of Chile's primary healthcare systems. This means there is a psychologist in almost every PHC Center. Although this human resource increase is not homogeneous, neither between professions nor between regions, and most of the professionals are concentrated in urban Santiago.[107] To strengthen MH coverage and quality of care, Chile has implemented different programs over the years that promote PHC professionals hiring, accompanied by a significant increase in the mental health budget at the PHC level. According to the Ministry of Health, some of the main problems that need to be addressed in MH services in PHC settings are the low levels of recovery rate, the monitoring of treatment outcomes, lack of patient consent in their health care intervention plan, and the presence of mainly individual treatments with high latency between interventions.

As manifested by the Ministry of Health's Primary Health Care division (DIVAP), a redesign plan is currently being piloted to generate strategies to strengthen the Mental Health care process in PHC, for its latter nationwide scale-up. This redesign plan has two main objectives: to improve **access** to MH services and to improve the **quality** of care. The pilot is being implemented in five PHC Centers of the Metropolitan Region and Valparaiso Region. Chile´s efforts to restructure and include Mental Health in PHC accounts for the Comprehensive Person-Centered Care Strategy (ECICEP), which is currently being implemented, as well as the previously mentioned Comprehensive Health Care Model with a Family and Community Approach. The objective to integrate mental health into the delivery of healthcare in PHC is consistent with the current National Mental Health Plan premises. Chile´s Ministry of Health

[104]Ministerio de salud. (2018). Modelo de Gestión Centro de Salud Mental Comunitaria. https://www.minsal.cl/wp-content/uploads/2015/09/2018.03.28_MODELO-DE-GESTION-CENTRO-DE-SALUD-MENTAL-COMUNITARIA_DIGITAL.pdf

[105] Minoletti A, Soto-Brandt G, Sepúlveda R, Toro O, Irarrázaval M. Capacidad de respuesta de la atención primaria en salud mental en Chile: una contribución a Alma-Ata [Mental health response capacity in primary care in Chile: a contribution to Alma-AtaCapacidade de resposta da atenção primária em saúde mental no Chile: uma contribuição de Alma-Ata]. Rev Panam Salud Publica. 2018 Sep 24;42:e136. Spanish. doi: 10.26633/RPSP.2018.136. PMID: 31093164; PMCID: PMC6385793.
[106] Minoletti A, Alvarado R, Rayo X, Minoletti M. *Sistema de Salud Mental de Chile: Segundo Informe (WHO-AIMS)* Santiago, Chile: Ministerio de Salud de Chile; 2014
[107] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

considers this strategy of high relevance, because of the impact comprehensive care strategies have on people with MH conditions and multimorbidity.

As mentioned by MoH, this redesign pilot is organized across two broad processes, "**Cross-sectional process management**" and the "**Clinical management process**". The first component is described by the MoH as the overall managing process at the micro, meso, and macro level which involves administrative, funding, human resourcing, and other dimensions to sustain the strategy. These include coordination between Health Services, MoH, and municipalities, the coordination between municipalities and the PHC Centers, and the internal coordination within the PHC Centers. The second component is focused on a person-oriented approach and continuity of care outcomes. It is described by MoH as the clinical processes involved in a patient´s direct visit, and it is considered complementary to the PHC structural design.

Based on both components, global and clinical process management, **the redesign includes eleven dimensions** that are being worked on and are permanently reviewed:

1. Mental Health Screening: Performed by a general professional and an MH professional. This includes and ensures screening and follow-up.
2. Time allotted: Deliver a package of services instead of a single visit.
3. Diagnostic Confirmation.
4. Risk stratification: Supported by initial screening.
5. Staggered plan
6. Group interventions
7. Rescue actions
8. Evaluation of the treatment process
9. Consensual plan of intervention
10. Review of a consensual plan of intervention
11. User satisfaction assessment

The Ministry of Health has identified four of these dimensions as milestones of the care process, Screening, Diagnosis confirmation, Treatment, and Discharge. All of which are supported by the other elements.

To evaluate the redesign initiative, MoH created specific tools characterizing each level of development that includes the above-described dimensions for self-evaluation and improvement at the PHC center level. This tool was applied at the initial stage, and based on the results, the MoH developed and adapted an improvement plan. MoH has established four self-administered evaluations to follow up the implementation process. The MoH selected an initial group of PHC centers in 3 municipalities to test the initiative and obtain preliminary outcomes to sustain and reformulate the broad process before scaling up to a large (national) level. At the local level, each PHC center and municipality must monitor different dimensions and stages of the implementation process in coordination with the Primary Health Department (DIVAP) from MoH. This provides the opportunity to work hand-in-hand with

local teams and yield a more grounded analysis. To strengthen intersectoral and locally adapted implementation, the Ministry is looking to add a municipality staff member to the implementation workforce. In particular, a member that acts as a "community health monitor" at the municipality management level. The city official oversees monitoring health status throughout the commune and, therefore has a broader vision of the specific population's health status and systems and services gaps. All of this will be helpful when making real-time suggestions in PHC establishments and scaling up PHC universalization.

To secure accompaniment and guidance, the Ministry of Health´s Primary Health Care Division (DIVAP) holds weekly meetings and monthly visits with the PHC Centers to obtain qualitative information on the process to complement the evaluation and deliver useful strategies for it.

As per DIVAP[iv], the preliminary results of the pilot redesign are significant. There has been a significant improvement in waiting times from the screening of an individual to the first visit with the provider. The reasons for these improvements include increasing human resources and facilitating intermediate care before medical practitioners' attention. Further, the non-medical professionals consolidate the information of the initial evaluation, therefore, the doctor has more baseline information for diagnostic confirmation at the time of the first visit. The Ministry of Health has also highlighted the importance of better and more relevant clinical information for an effective diagnosis and stratification, all of which are related to improvements in patient therapeutic bonding and adherence.

Stigma and discrimination towards people with mental health conditions are some of the main problems this redesign plan is expected to tackle. This is a transversal challenge, and therefore, an important barrier to be fully addressed. Stigma is a phenomenon comprising negative thoughts and actions towards a specific group, in which "*elements of labeling, stereotyping, separating, status loss, and discrimination co-occur in a power situation that allows these processes to unfold*"[108]. Some groups of people may suffer various types of stigma and more than one at a time (being of a different race, HIV positive, woman, etc.). There is also structural discrimination and socio-economic repercussions for stigmatized people. Clinicians' stigma has also been described, as health professionals emulating socially stigmatized lay perceptions of those with mental illness within a power disparity context[109]. Stigma-related attitudes and behaviors can be experienced in healthcare settings in various forms, such as being threatened with coercive treatment or being provided with insufficient information, among others[110] [111]. Stigma attitudes harm PHC users' overall well-being and healthcare provision.

The lack of **mental health training for health providers** is another problem that the restructuring will try to address. Chile´s Ministry of Health considers it necessary to respond

[108] Link BG, Phelan JC. Conceptualizing Stigma. Annu Rev Sociol. 2001 Aug;27(1):363–85.

[109] Holder SM, Peterson ER, Stephens R, Crandall LA. Stigma in Mental Health at the Macro and Micro Levels: Implications for Mental Health Consumers and Professionals. Community Ment Health J. 2019 Apr 15;55(3):369–74.

[110] Murney MA, Sapag JC, Bobbili SJ, Khenti A. Stigma and discrimination related to mental health and substance use issues in primary health care in Toronto, Canada: a qualitative study. Int J Qual Stud Health Well-being. 2020 Jan 1;15(1):1744926.

[111] Stuart H, Arboleda-Florez J, Sartorius N. Paradigms Lost: Fighting Stigma and the Lessons Learned. Oxford University Press; 2012.

to MH population necessities from different professionals and not only from the perspective of providers such as psychiatrists or psychologists, therefore it is important to train each member of the healthcare team in MH and basic psychosocial intervention skills. Under this premise, since 2016 Chile has been implementing the mhGap strategy [112] with the help of the World Health Organization and Panamerican Health Organization. To "strengthen local training capacities, both in the municipalities and in the 16 regions of the country"[113], they have been implementing a training process called "training for trainers". The mhGAP strategy has been integrated into the Chilean national health strategy[114], with a broad presence in PHC to reduce the gaps in mental health and provide knowledge of mental health not only to doctors but other professionals who work in primary health care.

The importance of implementing effectively the ECICEP strategy relies on the possible advance in care integration, attending to the person according to their condition and focusing on the disease while accounting for their needs. The government is directing its efforts toward focusing on person-centered services and network coordination. Key elements that facilitate that process are the **mental health services outcomes indicators**. The greatest challenge is defining appropriate financing and administrative indicators. Current ones do not allow a translation from the theory of a person-centered approach to the practice. One example of this is the performance indicators, which consider efficiency, counting how many patients are attended per hour, but not the quality or outreach of the intervention. This indicator is the foundation for several changes that might be needed at CESFAM.

To promote the network redesign it is necessary to secure budgeting, MoH accompaniment, and intersectoral work. The MoH describes the necessity to integrate multimorbidity and Mental Health Pilot programs to ensure the most efficient and effective use of human resources and financing.

c. Non-Communicable Diseases

Noncommunicable diseases (NCDs) are the leading cause of death and disability in the world[115]. NCDs along with Mental health are responsible for nearly three-quarters of deaths in the world[116]. NCDs alone are the cause of death of 17 million people under the age of 70, and 86% of them live in low- and middle-income countries (LMICs)[117] . Specifically in Latin America, the annual mortality figure is 5.5 million people from this cause[118]

In Chile, 11 million people are estimated to have a chronic condition, within this group, 2.4 million people (17.5%) have 5 or more chronic conditions, a situation that shows a sustained

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[112] World Health Association. 2021. Mental Health Global Action Programme (mhGAP) in Chile: Lessons learned and challenges for Latin America and the Caribbean. https://iris.paho.org/handle/10665.2/53405

[113] World Health Association. 2021. Mental Health Global Action Programme (mhGAP) in Chile: Lessons learned and challenges for Latin America and the Caribbean. https://iris.paho.org/handle/10665.2/53405

[114] World Health Association. 2021. Mental Health Global Action Programme (mhGAP) in Chile: Lessons learned and challenges for Latin America and the Caribbean. https://iris.paho.org/handle/10665.2/53405

[115] Non Communicable Diseases (2022). https://www.paho.org/en/topics/noncommunicable-diseases

[116] World Health Organization. (2022). Invisible numbers The true extent of noncommunicable diseases and what to do about them

[117] https://www.who.int/teams/noncommunicable-diseases/invisible-numbers

[118] Pan American Health Organization. (2022). *Noncommunicable Diseases*. https://www.paho.org/en/topics/noncommunicable-diseases

increase from 2010 to 2017[119]. In addition, the 2022 PAHO Report on Noncommunicable Diseases indicates NCDs to be the main cause of death in the country[120].

In Chile, some of the main challenges regarding health care for people with chronic diseases include:[121][122]:

- People with NCDs require individual on-site care by a doctor at least once or twice a year and for life, considering pharmacological and therapeutic aspects. The Chilean health system (public and private) is currently capable of serving a maximum of approximately four million people with chronic diseases, that is, only 36% of the total population.
- The Chilean health system is organized around single, fragmented diagnoses with a focus on the disease, not a person.
- The approach of the Chilean System towards NCDs was considered ineffective and far from the central principles of the Model of comprehensive family and community health care under which the different care strategies are designed throughout the life cycle of the Chilean population.
- Programs that address NCD treatments are fragmented and not synchronized with other more complex levels of multimorbidity care. All of this generates a lack of coordination of care, redundant prescription of drugs, and contraindicated medications, which consequently affects the efficiency and safety of the treatment.

Due to the above-described challenges the country was facing, an innovation-focused institution (Innovative Center Áncora UC), which is dependent on the Pontificia Universidad Católica de Chile, designed and implemented a successful pilot experience in the public network called the "Multimorbidity Patient-Centered Care Model" (MACEP), together with the South East Metropolitan Health Service (SSMSO) and FONASA between 2017 and 2020. This innovation aimed to reorganize care delivery to incorporate a multimorbidity approach based on risk stratification and other five core elements[123].

The preliminary results of MACEP, as well as other lessons learned from initiatives in this area, encouraged the Ministry of Health's approach to people with multimorbidity, called the **People-Centered Comprehensive Care Strategy for the Promotion, Prevention, and Management of Chronicity in the Context of Multimorbidity** (**ECICEP**). The ECICEP strategy has been implemented since 2019 throughout the entire health network to

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[119] Vargas I., Barros X., Fernandez MJ., Mayol M. (2021) Rediseño en el abordaje de personas con multimorbilidad crónica: desde la fragmentación al cuidado integral centrado en las personas https://www.elsevier.es/es-revista-revista-medica-clinica-las-condes-202-articulo-rediseno-el-abordaje-personas-con-S0716864021000651

[120] Pan American Health Organization. (2022). *Noncommunicable Diseases*. https://www.paho.org/en/topics/noncommunicable-diseases

[121] Zamorano, Paula., Varela, Teresita., Tellez, Alvaro., Espinoza, Manuel., Muñoz, Paulina., Suarez, Francisco. (2022). Impact of a patient-centered care model implemented in public health facilities in Chile: A real world evidence evaluation. *Academic Journals*. *14*. (1). https://academicjournals.org/journal/JPHE/article-full-text-pdf/745850A68548#:~:text=From%20the%20patient's%20perspective%2C%20the,in%20families%20with%20NCD%20members.
[122] Téllez et.al. (2020, march). Propuesta para la escalabilidad de un nuevo modelo de atención centrado en las personas y estratificado por riesgo para las personas con enfermedades crónicas en Chile. En: Centro de Políticas Públicas UC (ed.), *Propuestas para Chile Concurso Políticas Públicas 2019*. Santiago: Pontificia Universidad Católica de Chile, pp. 33-114.

[123] Zamorano, Paula., Varela, Teresita., Tellez, Alvaro., Espinoza, Manuel., Muñoz, Paulina., Suarez, Francisco. (2022). Impact of a patient-centered care model implemented in public health facilities in Chile: A real world evidence evaluation. *Academic Journals*. *14*. (1). https://academicjournals.org/journal/JPHE/article-full-text-pdf/745850A68548#:~:text=From%20the%20patient's%20perspective%2C%20the,in%20families%20with%20NCD%20members.

strengthen promotion, prevention, treatment, and rehabilitation with a focus on multimorbidity.

The purpose of this strategy (ECICEP) is to promote the defragmentation of care programs based on pathologies with an emphasis on improving clinical parameters and providing continuous and people-centered comprehensive care. It is considered a tool for the empowerment and accompaniment of people, their families, and/or caregivers, in their health pathway. It is a strategy aimed toward the Public Health Chronic Disease programs for the population aged 15 and over, that restructure care provision throughout the health network, strengthening the principles of the Comprehensive Family and Community Health Care Model (MAIS). **The ECICEP proposes four strategic lines**: 1) promotion and prevention, 2) patient´s responsibility and autonomy 3) continuity of care, and 4) efficient interventions adapted to the specific needs and complexity. Each of these strategic lines has different actions aimed at strengthening the health system with a chronicity phenomenon-oriented management[124].

This restructuring of care delivery is aimed at[125]:

- People with good health status (no prior chronic condition diagnosis), who will participate in health promotion and chronic disease prevention
- People with chronic condition diagnosis, move from a reactive to a proactive system to offer integrated and continuous care that responds to patient population needs, providing them a more active responsibility and role in their health management.
- Health teams, with greater time optimization, are organized based on the added value of tasks.

In 2020, the Ministry of Health published ECICEP´s conceptual framework, which addresses the fundamentals and strategic concepts of people-centered comprehensive care, so that health teams have a referential framework to understand this restructuring in care delivery. In 2021, a document was generated to complement and operationalize the conceptual framework, providing recommendations for the installation and implementation of the ECICEP in Health Services, communes, Primary Health Care, and specialized levels of care.[126]

This strategy reorganizes Primary Health Care Centers to be able to deliver care according to the person's needs. Even though the services have a person-oriented focus, the approach is still integral and collaborative. Given the complexity of chronic conditions, disease burden, and recognition that those who have no chronic disease diagnosis need less attention and resources devoted to them, a pyramid approach was developed that facilitated stratifying population risks, and, according to this organization, the care is delivered.

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[124] Vargas, Irma., Barros, Ximena., Fernández, María José., Mayol, Macarena. (2021).
Redesign in the approach of people with multimorbidity chronic: from fragmentation to comprehensive care people-centered. Revista médica Clinica Las Condes. *32*. (4). P.400-413. DOI: 10.1016/j.rmclc.2021.05.003

[125] Ministerio de Salud. (2021). MARCO OPERATIVO ESTRATEGIA DE CUIDADO INTEGRAL CENTRADO EN LAS PERSONAS PARA LA PROMOCIÓN, PREVENCIÓN Y MANEJO DE LA CRONICIDAD EN CONTEXTO DE MULTIMORBILIDAD. https://www.minsal.cl/wp-content/uploads/2021/06/Marco-operativo_-Estrategia-de-cuidado-integral-centrado-en-las-personas.pdf
[126] Ministerio de Salud. (2021). MARCO OPERATIVO ESTRATEGIA DE CUIDADO INTEGRAL CENTRADO EN LAS PERSONAS PARA LA PROMOCIÓN, PREVENCIÓN Y MANEJO DE LA CRONICIDAD EN CONTEXTO DE MULTIMORBILIDAD. https://www.minsal.cl/wp-content/uploads/2021/06/Marco-operativo_-Estrategia-de-cuidado-integral-centrado-en-las-personas.pdf

For the Ministry of Health, the relevance of the restructuring in NCDs assessment and the coordination with other ongoing restructurings such as Mental Health lies primarily in 3 aspects:

- Comprehensive care strategies have shown an impact on MH and multimorbidity conditions.
- The comprehensive care strategy for the population with multimorbidity is consistent with what Chile has been working on in the National Mental Health Plan in terms of community mental health.
- This strategy has a person-focused approach, which is aligned with what MH's restructuring efforts have been integrating.

Examples of Innovations for Improvement in Public Health Outcomes

The Ministry of Health has taken two innovations to improve processes and programs in MH and NCDs, in addition, there are other successful experiences presented that are expected to continue to nurture the development of Chilean government initiatives and public policy in health.

MH Network pilot redesign. DIVAP: Pirque's example

The population of Pirque is distributed in 11 localities. In the municipality there are currently 8,308 households, the total number of its population is 26, 521, of which 13, 429 are men and 13, 092 are women. The number of people registered in the Primary Health Care Centers of the municipality is 22,121. A large portion of Pirque´s population is registered in PHC. Given the geographical and population characteristics of the municipality, although there are urban places, most of the population lives in rural areas which has a direct effect on interventions and human resources needed.

The pilot is being implemented in CESFAM "El principal" and CESFAM "José Manuel Balmaceda".

a. Piloting experience at CESFAM "El Principal"

CESFAM "El Principal" is a Rural Health Center that is transitioning towards a proper CESFAM, to do this it has to effectively implement the Comprehensive Family and Community Health Care model. It is in the final administrative process to obtain the official CESFAM label. From the overall Pirque population, 9.852 are registered at this PHC Center.

According to CESFAM "El principal" data, at a municipal level, in 2021 a total of 2.039 PHC service users were diagnosed with MH problems. The more frequent diagnoses were anxiety disorders (30.9%) and mixed anxiety and depression disorders (19.1%).

In October 2020 "El Principal" CESFAM began implementing the Early Detection Mental Health Initiative at the PHC level. Due to the COVID-19 pandemic, during 2020 and 2021 the preventive screening was made mostly remotely by telephone, calling the patients, but on-site screening remained available. Later, when MoH guidelines allowed it, the screenings were made on-site at PHC facilities such as waiting rooms or consultation rooms. In November 2021 a "psychosocial duo" (generally composed of two non-medical professionals, i.e. social worker, psychologist, or occupational therapist) was incorporated into the program. CESFAM "El Principal" implemented a psychosocial duo composed of a psychologist and a social worker. In December 2021, on-site screenings increased in availability, user referrals were made by MH PHC Center's health teams in the waiting room or consultation room. The referrals could have been also made at the CESFAM's front desk if the users asked for unscheduled (unplanned) MH appointments. In the latter case, administrative workers passed the patient's information to the mental health team, and the team performed the initial MH screening and risk assessment of the patient. This option augmented the MH services demand, which resulted in the reinforcement of a new "psychosocial team" and incorporation into the screening process. According to CESFAM "El principal" director, the psychosocial duo is currently fully integrated into the general health team and MH team functions. This coordinated work has enhanced overall MH services.

Although CESFAM "El Principal" has been able to gradually adjust to the pilot implementation, there have been some challenges along the way. One of them was the COVID-19 Pandemic, which delayed the implementation process. At the beginning of the implementation, there was resistance from the PHC Center health teams, including general health care workers and administrative workers to continue with the pilot implementation. The excessive demand for mental health services together with the lack of provider hours for mental health care services, sufficient consultation rooms, and materials (such as printing materials) put additional pressure on the implementation process. The MH team and general healthcare teams have worked together to address these challenges. MH team has been providing training and re-educating health teams and administrative workers on the relevance of such integration for patient outcomes or recovery, which led to lower resistance to integration. Today all the health teams and admin workers recognize the effect of this redesign and the importance of the role they themselves play in achieving desired patient outcomes.

The current workflow chart established one specific PHC professional, a nurse, as the lead referral manager who ensures the screening before the patient is admitted to the MH program. The MoH's long-term expectation is to train all PHC Center nurses to apply the MH screening process. The PHC has increased the medical hours available for attending to the MH needs of their patients. And, finally, the PHC director supported the allocation of additional funding for building consultation rooms and human resources to develop community work, such as group interventions and workshops, diminishing the demand for individual MH consultations. The MH team in charge of the Pilot's implementation considers the redesign can be scaled up as it effectively assesses patients' care needs and overall satisfaction with the services delivered.

To support this MH redesign pilot, the MoH has recently built the first "PHC Mental Health Community Meeting Space" at CESFAM "El principal", a round dome designed to be used for group interventions, peer-to-peer activities, and other promotion and prevention initiatives. It is expected for these domes to tackle the lack of infrastructure reported by health teams throughout the implementation process. The domes have an approximate cost of 55,000 dollars (45 million Chilean pesos) and are equipped with basic furniture and technology to develop workshops and group interventions, such as computers, chairs, and wide tables. It is expected to install these domes in all of the five initial PHC Centers to implement the MH restructuring pilot in 2022 and to expand it to all of the 35 Centers that will implement it throughout 2023. DIVAP is currently working on a guideline document to specify the Domes' appropriate utilization.

b.   Piloting experience at CESFAM "José Manuel Balmaceda"

This CESFAM delivers health care to 10,374 registered users, 959 of whom are also registered in the MH program. The establishment works in coordination with Pirque´s three Rural Primary Health Care Centers that provide care in rural localities where people face geographical restraints to access care. The Rural Health Care Centers deliver general services provided by general practitioners, midwives, or social workers. CESFAM's "José Manuel Balmaceda" mental health team is composed of one nurse, three psychologists, two social workers, and one occupational therapist. Among the most common mental health diagnoses, they encounter anxiety disorders (43%) and depression(28%), with moderate depression diagnosis being the most observed. These mental health conditions are treated in coordination between CESFAM and specialist MH teams, but complex cases are treated solely at the secondary level.

Pilot implementation began in October 2020. The initial step was to bring in the MH screening process. A designated nurse was in charge of such a process. The patients can enter the program in three different ways: through active search for services by the mental health team, referrals from professionals from other programs (not MH), and by user request. During the COVID-19 pandemic, due to the higher risk situation, the screenings were made remotely, which helped to access patients quickly and efficiently. PHC provider in charge of screening, the nurse, conducts an interview that includes general mental health history, history of whether the patient has previously been in the mental health program and chronic disease history. In an ideal case scenario, the patient will receive a first MH visit no later than a month from the screening.

In January 2022 the PHC MH team began to implement mental health group interventions at the CESFAM to reduce the waiting between individual appointments. The focus of group intervention was based on the most common MH challenges the attending population was facing, accounting for the needs of those in the group. The workshops are implemented to promote users' participation in meaningful group activities while they wait for their individual appointments, and secure professional accompaniment from the screening until they receive personalized attention.

In March 2022, **users´ care needs were stratified according to their level of psychosocial risk in mental health** from N0 to N4. This criterion was developed by MoH, Municipalities technical referents, and Health Services technical referents, it establishes five levels according to the MH attention requirement. N0 means the person does not have an MH issue, N1/N2/N3 means the MH problem can be solved at Primary Health Care (the greater the number, the greater attention needed), and N4 means the person´s MH problem needs to be assessed in the secondary or tertiary level of care, in constant coordination with the PHC.

In April 2022, CESFAM´s mental health and multimorbidity programs were integrated into the person-centered care strategy (ECICEP) to tackle the interconnected and complex relationship of Mental Health and multimorbidity services offered at the establishment. The CESFAM MH health team developed **a patient pathway flow chart to ensure both MH and Multimorbidity are simultaneously addressed**. Once the user arrives at the PHC Center, screening is simultaneously conducted by the MH program nurse (in charge of MH screening) and ECICEP case manager (in charge of multimorbidity and chronic disease screening). Both collect relevant information related to their respective programs and make the referral together, according to the patient's risk level. This professional duo oversees follow-ups, and actions needed to secure treatment adherence, in case a user drops out of treatment and needs to be reintegrated the psychosocial duo is there to facilitate this, as well as to carry out the continuity and provision of care coordination.

The initial screening process is coordinated via e-mail, sending relevant information and contact number to the nurse from the MH program and the corresponding ECICEP Case Manager (different case managers are assigned, this is determined by the location where users live). Every Friday the MH program nurse and every Case Manager of the CESFAM meet to review the referrals, accounting for psychosocial and morbidity risks and necessary future actions. The CESFAM MH team has created its chart to organize users´ risks and the associated actions required accordingly. **MH is stratified from N0 to N3 and multimorbidity from G0 to G3, where 0 is the lowest risk and 3, is the highest**. The level of risk may vary over time, it can increase or decrease depending on clinical and psychosocial variables, and actions are re-evaluated accordingly. For example, if a person is classified as an N0, they may need MH promotion and preventive services, on the contrary, if a person is classified as an N3, they might need MH specialized attention and/or psychiatric emergency assistance. If a person is classified as a G0, they might not have multimorbidity and need promotion and preventive actions, but if they are classified as G3 there´s a presence of multimorbidity and specialized care is needed.

This CESFAM faced some challenges in implementing the MH pilot. This included a lack of knowledge and inadequate communication about the ongoing redesign, a lack of infrastructure, including the physical space to provide the services, appointment coordination, and poor communication with the users of the new preventive MH program.

Among the highlights of the implementation, the CESFAM "José Balmaceda" MH Team describes that it has made it possible to effectively direct care provision to the patient´s needs. The screening process is considered highly relevant since it nurtures a long-term relationship

with the user. It enables creating a bond, which leads to trust, encourages active listening, and focuses on meeting the most pressing needs. And most importantly, the coordination with the ECICEP strategy has also made it easier to address the user in a comprehensive and integrated way.

Center for Innovation in Health ANCORA UC

Center for Health Innovation Áncora UC (CISAUC) is a research center created in 2017, linked to Pontificia Universidad Catolica de Chile medical school. It aims to design, develop, implement, evaluate, and consolidate new healthcare strategies to address relevant healthcare gaps and health problems identified in the Chilean Health Care System to prevent unnecessary secondary and tertiary health services utilization, evaluate the benefits, and scale up successful interventions. CISAUC's main objectives are to create partnerships with PHC Centers and Hospitals to develop on-site pilot implementations; to increase the outpatient resolution of the most demanding diseases by implementing innovative healthcare strategies; to evaluate the implemented innovations and the necessary scale-up conditions; to contribute knowledge and experience to public health policy.

CISAUC collaborates with different school departments of Pontificia Universidad Catolica, such as schools of medicine, nursing, and psychology. It counts on academics' strong participation and focuses on improving the strategies used in the health care system.

One of CISAUC's strengths is the linkage and alliance for innovations development from an interdisciplinary approach (Family Medicine, Public Health, Psychiatry, Cardiology, Anesthesiology, Medical informatics) with various faculties and schools of the Pontificia Universidad Católica de Chile (Medicine, Nursing, Designs, Psychology, Social Work, Physiotherapy, Nutrition, Chemistry, and Pharmacy, and Political Sciences schools). In addition, CISAUC has strategic alliances with entities outside the university that facilitate the piloting process, such as municipalities and health services, FONASA, and the Ministry of Health.

Its first innovation was the "Multimorbidity Patient-Centered Care Model" (MACEP). After three years of implementation and evaluation (2017-2020), the innovation center (CISAUC) has systematized the intervention strategy and generated recommendations for its scalability, which has been implemented since 2019 throughout the country by the Ministry of Health as the Comprehensive Person-Centered Care Strategy (ECICEP). By successfully developing this innovation in multimorbidity (MACEP), the team has established an **innovation methodology framework** and generated its process, which considers the following steps:

1. Identify the relevant gaps.
2. Search for the best international and national evidence and practices.
3. Design new intervention strategies.

4. Implement the intervention in a pilot center, evaluate and consolidate the innovative intervention considering the best practice experience according to the real context.
5. Develop a scale-up intervention proposal.

CISAUC also created an Evaluation Framework for Health Innovations Implementation and Scalability to evaluate the implementation of these innovations[127]. This framework consists of determining the conceptual and theoretical basis to design the evaluation processes and was used to evaluate the "Multimorbidity Patient-Centered Care Model" (MACEP) in 2020. The theoretical foundations of this consolidated framework consider the Science Implementations approach, including the Consolidated Framework for Implementation Research[128] and Implementation Research Outcomes Framework[129]. The CISAUC framework was developed because of the necessity to adapt the conceptual and theoretical framework to on-site interventions, considering different contexts, objectives, and evaluation needs. This framework supports academic robustness to perform an assessment that can be used in future implementation evaluations.

As of 2020, CISAUC has designed other innovative strategies to improve the public health system, such as Non-Cancer Chronic Pain, Interprofessional Rehabilitation, Cancer Survivor Follow-up strategy, a Hybrid Mental Health Program, and a Cardiovascular Medical effective resolution. Below we describe the MACEP model focusing on its innovative response toward PHC coordination and strengthening.

"Multimorbidity Patient-Centered Care Model" (MACEP)

In 2017, CISAUC collaborated with the National Health Fund (FONASA) and the South East Metropolitan Health Service (SSMSO) to design, pilot, and evaluate a multimorbidity integrated care strategy (MACEP). The objective was to reorganize health services delivery by implementing an approach based on integrated care, risk stratification, and case management that could increase the Health System´s efficiency and modify the single diagnosis approach. After three years of implementation and evaluation (2017-2020), CISAUC has systematized the MACEP intervention strategy and generated recommendations for its scalability. As described before, this model was later implemented throughout Chile´s PHC as a Comprehensive Person-Centered Care Strategy or ECICEP.

Before implementing this multimorbidity strategy, Primary Health Care´s approach to chronicity was organized by programs focusing on the disease and a single diagnosis approach. This contributed to fragmented and ineffective care, far from the Comprehensive Family and Community Health Care Model (MAIS) principles. For patients, this gap in health

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[127] Sapag J. (2020). Marco Integral de Evaluación sobre Implementación y Escalabilidad de Innovaciones en Salud.

[128] Damschroder et al., (2009). Consolidated Framework for Implementation Research. https://cfirguide.org

[129] Proctor et al., (2011). Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. Administration and Policy in Mental Health and Mental Services Research, 38(2), 65-76

service delivery meant attending health centers on multiple occasions to receive clinical care with different health teams for each chronic condition. The Multimorbidity Person-Centered Care Model (MACEP) aimed to change and reorganize the single diagnosis approach to a new one based on person-centered care, risk stratification, self-management, individualized care plans, shared responsibility, and continuity of care. This approach was expected to reduce health complications due to multimorbidity, reduce the unnecessary use of health services, and improve the patient's overall quality of life.

First, intervention strategies were designed and implemented according to each person's health plan based on the results of risk stratification. This stratification considered a high-risk group for people with five or more chronic diseases, a moderate-risk group for people with 2 or 3 chronic diseases, and a low-risk group for people with 1 or 2 chronic diseases. For a high-risk classified patient, the case management team was composed of a nurse manager, a nurse technician, and a physician who provided frequent face-to-face and distance health counseling, education on self-management of chronic diseases, and utilization of the health network, among others. For moderate and low-risk classified patients, clinical services were provided according to each person´s needs, with a strong focus on telemedicine. Self-management is decisive in this strategy, focusing on continuously improving patient skills.

The service provision reorganization involved incorporating defined intervention roles, actions, and services. All of these were differentiated according to each person's multimorbidity risk. This meant adapting several core actions such as consultations, programming future clinical assignments, adapting registration protocols, consultation times, and others. This innovation involved incorporating **two new roles to coordinate and support the high-risk care coordination across the health system**. One of these new roles was the Case Manager, who organized the health plan within the primary health care center. The other new role was the Transition Nurse, who organized the continuity of care with the affiliated hospitals. As for patient clinical follow-ups, new professionals were incorporated, two nurses and one nurse technician[130]. In addition, modifications were made to facilitate the **coordination of health services**. For example, a single medical record was implemented, which included all of the current chronic diseases, instead of the previous one on which each clinical attention was registered separately according to the disease. According to the health plan, a single medical prescription was also implemented instead of several prescriptions per diagnosis.

As mentioned, MACEP was piloted for three years, in 7 Primary Healthcare Centers and three Southeast Metropolitan Health Service (SSMSO) hospitals. The process can be summarized in the following steps:

1. **Design:** Overall strategy and implementation plan was designed.
2. **Pre-implementation:** This stage involved the dissemination of MACEP information, preparation (hiring of new team members, implementing electronic records), and training of health teams. It also included management protocol modification as per MACEP implementation.

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[130] The human resources hired in the pilot stage remained unchanged for the escalation process by the Ministry of Health

3. **Start up:** This stage included establishing changes in the scheduling and registration process according to risk stratification. Consultation time and frequency were also modified, establishing lower frequency between services for low-risk patients and 45-minute sessions for high-risk patients, 30-minute sessions for moderate-risk patients, and 20-minute sessions for low-risk patients. In this stage, the strategy implementation started.
4. **Tracking:** This stage involves monitoring and following the adaptation and consolidation of the implementation. The follow-up was done once a week and addressed implementation barriers and identification of facilitators supporting the incorporation process of new roles, developing workshops, and reviewing critical aspects of management changes among others.
5. **Systematization:** Implementation experience information was collected and systematized and it included scalability recommendations. The Ministry of Health used this information and other main experiences as a basis for the design and implementation of PHC´s **People-Center Integrated Care Strategy for the Promotion, Prevention, and Management of Chronicity in the Context of Multimorbidity (ECICEP).**

The CISAUC team describes positive results from MACEP pilot implementation. Results show the incidence rate of the number of hospital admissions, length of hospital stays, number of consultations to hospital emergencies, and the number of consultations to primary health care emergency showed to be significantly lower.[131] All of these results indicated a positive impact of the new model on the health system performance[132]. CISAUC developed an implementation evaluation from the perspective of PHC health teams, strategic partners such as the National Health Fund (FONASA) and the South East Metropolitan Health Service, and high-risk users who participated in the implementation process. Positive results are associated with adequate implementation of the strategy's core elements such as case management, continuity of care, self-management, and risk stratification[133], and the presence of other favorable influences such as political and technical support, internal and external leader's role implementation, health teams training, among others. In addition, positive results regarding the innovation's acceptability, adoption, reach, fidelity, and sustainability are shown. MACEP was mainly focused on high-risk patients´ attention. Future challenges rely on enhancing the implementation of the strategy aimed at users of moderate and low complexity. In this specific group of patients, positive overall satisfaction was described regarding core elements such as case management, constant communication with the PHC health team, and personalized consultations. However, regarding continuity of care between care levels, patients described lower satisfaction, which might be affected by the health system´s and clinicians' intervention fragmentation. For example, not carrying out face-to-face clinical consultations with the same professional at the secondary or tertiary care level, or not having an integrated clinical file between the different levels of care which would facilitate the transfer of information between professionals.

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[131] Zamorano, Paula., Varela, Teresita., Tellez, Alvaro., Espinoza, Manuel., Muñoz, Paulina., Suarez, Francisco. (2022). Impact of a patient-centered care model implemented in public health facilities in Chile: A real world evidence evaluation. *Academic Journals. 14. (*1). Pp.1-9. 10.5897/JPHE2021.1371
[132] Zamorano P, Muñoz P, Espinoza M, Tellez A, Varela T, Suarez F, et al. (2022) Impact of a high-risk multimorbidity integrated care implemented at the public health system in Chile. PLoS ONE 17(1): e0261953.   https://doi.org/10.1371/journal.pone.0261953
[133] Zamorano, Paula., Varela, Teresita., Tellez, Alvaro., Espinoza, Manuel., Muñoz, Paulina., Suarez, Francisco. (2022). Impact of a patient-centered care model implemented in public health facilities in Chile: A real world evidence evaluation. *Academic Journals. 14. (*1). Pp.1-9. 10.5897/JPHE2021.1371

After the piloting stage had been finalized, some challenges were identified, including, enhancing the strategy´s sustainability; creating health indicators according to the strategy; advancing the protocol creation, and increasing necessary resources to implement new activities present in the strategy.
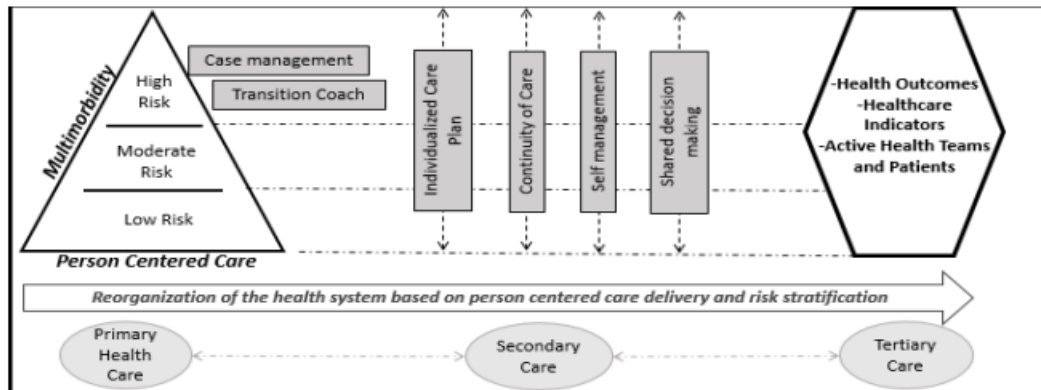

Figure 1. Multimorbidity Patient-Centered Care Model (MPCCM).

Figure 4: Patient-centered care model implemented in public health facilities in Chile, MACEP framework [134]

CISAUC has prepared several documents to facilitate MACEP knowledge dissemination. For example, a workshop cycle guide and a self-management notebook were created to support PHC users' self-management. Also, several training courses are available as part of a clinical and implementation skills improvement program, taught at the Pontificia Universidad Católica de Chile and sponsored by the Ministry of Health. Furthermore, a unique clinical registration form software technical guide was developed, five scientific papers were published[135] [136] [137] [138] [139] and guideline documents regarding minimum conditions for the implementation process were created[140]. In addition, an Intervention strategy for transition health care was developed to support continuity of care.

[134] https://academicjournals.org/journal/JPHE/article-abstract/745850A68548

[135] Barros Urzua, J., Zamorano Pichard, P., Varela Yuraszeck, T., Irazoqui Soto, E., & Tellez Tellez, A. (2019). Cambios en el modelo de atención de personas con multimorbilidad crónica: una revisión narrativa. *ARS MEDICA Revista De Ciencias Médicas*, *44*(4), 35–40. https://doi.org/10.11565/arsmed.v44i4.1569

[136] Zamorano, P., Varela, T., Tellez, A., Espinoza, M., Muñoz, P., & Suarez, F. (2022). Impact of a patient-centered care model implemented in public health facilities in Chile: A real world evidence evaluation. Journal of Public Health and Epidemiology, 14(1), 1-9.

[137] Zamorano P, Tellez A, Muñoz P, Sapag JC, Martínez M (2022). Effect of COVID-19 pandemic on the implementation of a multimorbidity person-centered care model: A qualitative study from health teams perspective. PLos ONE 17(3): e0265091. https://doi.org/10.1371/journal.pone.0265091

[138] Martínez, Mayra, Sapag, Jaime C., Zamorano, Paula, Muñoz, Paulina, Varela, Teresita, & Téllez, Álvaro. (2022). Contribución de una estrategia de atención centrada en la persona con multimorbilidad al Modelo de Atención Integral de Salud Familiar y Comunitario en Chile. *Revista médica de Chile*, *150*(6), 782-787. https://dx.doi.org/10.4067/S0034-98872022000600782

[139] Zamorano P, Muñoz P, Espinoza M, Tellez A, Varela T, Suarez F, et al. (2022) Impact of a high-risk multimorbidity integrated care implemented at the public health system in Chile. PLoS ONE 17(1): e0261953. https://doi.org/10.1371/journal.pone.0261953

[140] Téllez et.al. (2020, march). Propuesta para la escalabilidad de un nuevo modelo de atención centrado en las personas y estratificado por riesgo para las personas con enfermedades crónicas en Chile. En: Centro de Políticas Públicas UC (ed.), *Propuestas para Chile Concurso Políticas Públicas 2019*. Santiago: Pontificia Universidad Católica de Chile, pp. 33-114.

Clan project

Childhood Mental Health (MH) has vital importance in the foundations of the future mental health of the individual. The mental disorders that begin during childhood carry health, economic, and social consequences through adulthood[141]. The development areas of positive identity perception, the ability to manage thoughts and emotions, and to establish meaningful and satisfactory social relationships need to be assessed and considered when evaluating children and adolescents' health[142]. Evidence suggests childhood is a critical period for behavior development.[143] National and international research shows an increase in the prevalence of mental health challenges in childhood and adolescence[144]. By the year 2012, in Chile, 22.5% of the child and adolescent population had had a Mental Health disorder in the previous year [145] . Family and social context influence children and adolescents' overall well-being. A Chilean study describes that the perception of family dysfunction was associated with a higher presence of a Mental Health disorder and a higher socioeconomic status was related to a lower presence of anxiety disorders[146]. School context is highly relevant to daily life and experience among children and adolescents. It is a learning and knowledge center that allows working on health promotion and prevention in a sheltered context, including family and school staff support[147] [148]. Literature suggests children and adolescents with Mental Health problems primarily seek support from services provided through the education setting.[149] From the perspective of schools as health promoters, an innovative project was born. The "Clan Project" aimed at promoting well-being and preventing mental health disorders among the child and adolescent population. This intervention-based project was developed by Valparaíso University and Universidad de Chile researchers and it is based on information and communication technology to reduce suicide risk among the teenage population from the Metropolitan and Valparaíso Regions.

Clan Project is an interactive application designed and developed collaboratively with teenagers, under the premise of teenagers being "experts by experience", where suggestions arise from their "lived" experience. The project team is composed of psychiatrists, engineers,

[141] De La Barra, M. F., Vicente, P. B., Saldivia, B. S., & Melipillán, A. R. (2012). Estudio de epidemiología psiquiátrica en niños y adolescentes en Chile. Estado actual. Revista Médica Clínica Las Condes, 23(5), 521-529

[142] Organización Mundial de la Salud (2004). *Prevención de los trastornos mentales: Intervenciones efectivas y opciones de políticas públicas.* Informe Compendiado. Departamento de Salud Mental y Abuso de Sustancias, Centro de Investigación en Prevención de las Universidades de Nijmegen y Maastricht, Ginebra. Recuperado de https://apps.who.int/iris/handle/10665/78545

[143] Zeanah CH, Zeanah P. The scope of infant mental health. En C. H. Zeanah (ed). *The handbook of infant mental health*, 3rd ed. New York: The Guilford Press; 2009

[144] De la Barra, F. (2011). Epidemiología de trastornos psiquiátricos en niños y adolescentes en Chile: Estudios de prevalencia. *Revista Chilena de Neuro-Psiquiatría*, *47*(4), 303-314.

[145] Vicente B, Saldivia S, de la Barra F, Kohn R, Pihan R, Valdivia M, et al. Prevalence of child and adolescent mental disorders in Chile: a community epidemiological study. *J Child Psychol Psychiatry* 2012 Oct; 53(10): 1026-1035.

[146] Vicente B, Saldivia S, de la Barra F, Kohn R, Pihan R, Valdivia M, et al. Prevalence of child and adolescent mental disorders in Chile: a community epidemiological study. *J Child Psychol Psychiatry* 2012 Oct; 53(10): 1026-1035.

[147] Organización Mundial de la Salud (2004). *Prevención de los trastornos mentales: Intervenciones efectivas y opciones de políticas públicas.* Informe Compendiado. Departamento de Salud Mental y Abuso de Sustancias, Centro de Investigación en Prevención de las Universidades de Nijmegen y Maastricht, Ginebra. Recuperado de http://www.who.int/mental_health/evidence/Prevention_of_mental_disorders_spanish_version.pdf

[148] Leiva, Loreto, George, Myriam, Antivilo, Andrés, Squicciarini, Ana María, Simonsohn, Ariela, Vargas, Belén, & Guzmán, Javier. (2015). Salud mental escolar: Logros de una intervención preventiva en salud mental en niños y niñas del primer ciclo de enseñanza básica. *Psicoperspectivas*, *14*(1), 31-41. https://dx.doi.org/10.5027/psicoperspectivas-Vol14-Issue1-fulltext-508

[149] Vicente B, Saldivia S, de la Barra F, Kohn R, Pihan R, Valdivia M, et al. Prevalence of child and adolescent mental disorders in Chile: a community epidemiological study. *J Child Psychol Psychiatry* 2012 Oct; 53(10): 1026-1035.https://dx.doi.org/10.4067/S0034-98872012000400005

and the selected teenagers. To select the participants for the teenagers group a focus group was held to make it diverse and representative. It ended up being composed of seven adolescents, four females, and three males, ages 13 to 20 that reside in three different regions, studied in different types of schools (public/private), and belong to different socioeconomic levels. According to their personal preferences, three working group areas were established: Content and Structure of the app, Image and Graphic Design of the app, and Use of technology.

When creating the app, some main features were established according to the "expert by experience" suggestions. The first one was the necessity to create relevant content for teenagers, it had to be directed to them and not their caregivers or other adults. It also had to be directed towards the entire teen population and not just to those who had been diagnosed with a MH condition, focusing on overall well-being promotion and not just psychopathological aspects. The teenage group also suggested adding discussion forums and peer support information. The app´s graphic design had to be teenager-oriented, the colors, platform distribution, and aesthetics needed to be visually interesting and appealing to them. The language used had to be age appropriate and the overall platform elements had to ensure gender neutrality. In terms of structure, the app had to have a Gamification approach that allowed the user to gain points while using it and had to reduce personal appearance relevance and ensure anonymity to promote openness towards tabu and complex subjects. Finally, the "experts by experience" team established the name "Clan Project" and defined the app as a "Welcoming and inclusive virtual space, in which adolescents can feel comfortable expressing themselves freely, forming new bonds and solving their doubts with the help of trained professionals and their peers"[150].

Since this app is created under the premises of a community approach, it not only has individual games but also group ones, aligned with the comprehension of Mental Health as a collective matter that is constructed and sustained in the interaction with other human beings. The updated version of the application establishes interaction with the platform itself, between students and the school counselors. The latter is presented in the game as a "counselor cat" that interacts individually or as a group with the students. This Kitten avatar receives alerts from the app when it detects words such as "suicide", "death" and other alarming words, and a private chat can be created to address the situation directly with the student. This allows the school to implement early intervention and establish possible referrals to health services. Other games and tasks are oriented to be completed with parents, friends, or classmates and, if the user succeeds, they gain points to improve their avatar´s features such as getting new equipment, clothes, or personal characteristics.

The implementation process started in the first semester of 2019, by testing the Pilot at three schools that varied by vulnerability levels of the student population. Two schools were in Santiago and one in Valparaiso. Six classes, from middle school to high school were chosen to participate in this pilot, with teenagers between 11 and 17 years of age. Three of the groups were randomly established as the intervention group and the other three as the control group.

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[150] As presented in World Bank Meeting. Alvardo, R. (2022). Presentación projecto Clan. Power point presentation.

The intervention groups received the intervention, and the controls received a "Healthy Habits" textbook with the same basic information as the application was to deliver.

The pilot was implemented for a month and evaluated at the beginning and then three months later. The first implementing stage consisted of the "Diffusion phase", promotional posters were placed in the school´s strategic areas, informative seminars and printed informative material were delivered, an Instagram and a Facebook page were created and parents´ and students´ consents were obtained. Then the "Intervention stage" began. The intervention and control groups were randomly assigned after the initial interview evaluations. After the groups were established, a presentation and basic training on how to use the application were conducted, students' and school members' app profiles were created and platform access was granted.

The research team has described some preliminary results that are being considered for the app's future implementations or scale-up. Baseline data was taken in 2019, and it showed a high prevalence of suicidal thoughts among the students, from the overall population, 8.2% had thought about killing themselves and 2.1% had tried to commit suicide. Regarding intervention results, the intervention group showed twice as much reduction of suicide risk compared to the control group. The head researcher considers that one of the main features that support these results is the active participation of teenagers in the app design which promotes the app to resonate with the target audience.

The team is now working on a scale-up in four municipalities of the Metropolitan Region and has discovered higher rates of suicidal risk and suicidal attempts at the baseline data collection.

ECO Barrio Solidario para la Infancia: A multisectoral approach to children and adolescent MH

According to the Community and Family Model premises, on which Chilean PHC rests, the Mental Health Network must work in coordination with the Justice system, the National Service for Child and Youth (former SENAME, currently Better Childhood), the Community, the Education System, the Health System, and other Social Programs to deliver an adequate healthcare response. The current National Mental Health Plan also suggests the necessity to coordinate MH actions between different government sectors, civil society, and Municipalities[151].

"ECO Barrio Solidario para la Infancia" is a children and teenagers-oriented initiative that is aligned with these premises and promotes effective intersectoral work. This project started at the "Valparaíso Hospital" Psychiatric Unit in 2015 and sought to improve efficiency in MH referrals and to achieve effective ways of detecting mental health disorders among children and teenagers. It relies on the Bronfenbrenner Ecological Framework, as it understands that

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[151] Ministerio de Salud. (2017). Plan Nacional de Salud Mental. https://www.minsal.cl/wp-content/uploads/2017/12/PDF-PLAN-NACIONAL-SALUD-MENTAL-2017-A-2025.-7-dic-2017.pdf

a person´s development depends on the interaction with their environment, including family, as well as social, cultural, and political context and all the organizations and services that are part of this system (education sector, health sector, others)[152]. The Hospital´s MH team conducted several meetings with PHC Centers, and other Services related to children and teenagers care to ensure stakeholders' participation in the new coordinated healthcare assessment proposal.

The project´s first step was to develop collaboration between PHC Centers, the Hospital de Valparaíso MH Team, Education Sector, and Social Services (Better Childhood, Ex-SENAME) when addressing children's mental health. Three Primary Health Care Centers from three different neighborhoods and every public school from those neighborhoods participated in the project. From the perspective of the educational sector, the difficulty to resolve was referrals to health services, as there was a long waiting gap and inadequate organizational flow. Social Services (Better Childhood) identified the greatest challenge of working with other sectors to be a lack of a common framework between their respective services. The hospital team described the necessity to improve early detection, as referrals up to that time were only provided for children twelve years of age or older. The PHC Centers described the necessity to implement coordinated actions within the network and with other sectors. The overall conclusion of this effort was a lack of coordination in the Network´s actions and services. After this initial evaluation, the Hospital´s MH team established regular meetings with PHC Centers, Education Sector representatives, Social Services, and other Health Network-related organizations to promote coordination between them during the project´s implementation and to initiate the construction of a more connected network to assess children´s MH.

The initiative was implemented in three neighborhoods, establishing referral coordinators in each PHC Center, at schools, community organizations, and better childhood health services. The initiative also created a WhatsApp group between the service´s representatives to facilitate communication and created a webpage with their basic contact information such as the establishment's telephone number and address. To facilitate referrals from schools to PHC, a special referrals document was created, which had to be legally authorized by the caregiver and delivered at PHC. After the child was registered at the PHC Center for treatment, schools and PHC Centers held regular meetings which promoted continuity of care. As a result of the implementation, positive results were observed. The option to refer children younger than the age of 12 was introduced, and it dropped to the age of eight, which allowed early intervention by the health team. Also, the participants of the network felt more acknowledged and had a sense of belonging. The referral document showed high efficiency and it was adopted by the city council for the entire Valparaiso network.

Because of the innovation effectiveness, the work has continued and is currently implementing an educational program directed to the network´s professionals and overall community in which every participant of the network performs open seminars about a specific subject that´s relevant to children´s mental health ("training for trainers"). For example, "Better Childhood" representatives address trauma, education sector representatives address

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[152] Ettekal, Andrea & Mahoney, Joseph. (2017). Ecological Systems Theory. 10.4135/9781483385198.n94.

violence at school, and health system representatives address depression and suicidal ideation in such seminars.

This project has managed to promote intersectoral coordination at a local level and sustain continuity of care and referral efficiency. All of which are aligned with the innovations of MoH.

Comprehensive Intervention to Reduce Stigma in PHC, FONDECYT Project[153]

Stigma is a transversal phenomenon that affects the entire health system and the overall health treatment outcome. Stigmatizing attitudes and behaviors towards people with MH problems have been described in different healthcare levels and establishments[154,] and stigma among PHC providers has been defined as a critical issue[155]. Literature suggests higher rates of mortality and morbidity due to physical illness among people with severe mental health problems, partially due to non-compliance with standard healthcare protocols at PHC and other healthcare levels[156]. More attention has been drawn to the stigma presence in PHC settings, particularly in Latin America, where the process of integration of Mental Health in PHC is being carried out[157] . To address this complex problem, studies have described the effectiveness of programs or interventions assessing stigma among PHC professionals.[158] [159] [160]

A Public Health Department Research Team, from Pontificia Universidad Católica, has implemented two related anti-stigma projects to assess Health care providers' stigma in Chile. The first project was focused on providers, how users perceive their attitudes, and how these two key elements interact. The project received a FONDECYT[v] grant and had a three-year implementation plan to understand stigma expression in Chile´s PHC system. The project was directed at adapting and validating an instrument for measuring stigma (Opening minds), identifying key elements for the intervention, which factors might be affecting the stigma, and examining in depth the stigma process in Chile. The project identified different types of stigma among providers in PHC settings. The most common type was "public stigma ", the negative

[153] FONDECYT Project #1201504

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stereotypes and prejudice held towards people with Mental Health and Substance Use Issues (MISUI) that lead to discrimination. Automatic stigma was also described among PHC providers, implying an immediate association between the use of mental health services with problematic behavior, resulting in shortened consultation time. Courtesy stigma was also found in PHC settings, people who were related to a person with MISUI were also stigmatized, most commonly family members. Intersectional stigma was present among PHC providers, it occurred when MISUI stigma was linked to other stigmatized conditions to further marginalize and discriminate against the PHC user, reinforcing the stigma's negative effects. Structural stigma was observed in various settings, including in PHC training, PHC protocols, and various government institutions that have not sensitized the wider public to mental health disorders. Further, there was simply a lack of basic MH knowledge among general health professionals on how to manage a situation when interacting with a person with a mental disorder. Structural stigma is manifested through institutional and social contexts, constrained opportunities, resources, and wellbeing[161]. Stigma among users of MH services was also found. The PHC service users (patients) with mental health conditions had the perception that received stigma was true and they internalized these social attitudes, this is known as self-stigma and it is widely present. Furthermore, users of mental health services have experienced all the previously mentioned forms of stigma, including courtesy stigma, public stigma, structural stigma, and intersectional stigma.

The second part of the project, using this previously collected data, includes the implementation of a comprehensive anti-stigma intervention directed to PHC providers, to prevent stigma towards people with Mental Health and Substance Use disorders. A FONDECYT grant was received again to implement a four-year intervention that is currently ongoing. This project includes an international collaboration of researchers from Perú, Canada, and other countries, most of whom participate in an international consortium with Canada funding for Stigma-related initiatives. The original Canadian project sought to reduce stigma towards people with Mental Health and Substance Use Problems in Toronto, Canada. It was implemented and evaluated in Canada[162] and then adapted and implemented in Perú by different research teams that have continuously collaborated. The current FONDECYT project will test the effectiveness of the adapted instruments and intervention (same as Canadian and Peruvian versions used) in Chilean CESFAM via a two-arm, cluster randomized controlled trial design in 16 CESFAMs. CESFAMs will be randomized to control and intervention arms of the study. Data will be collected in intervention and control CESFAM on relevant stigma outcomes before (baseline), during (mid-point), and after (endpoint) the intervention, as well as 6 months post-intervention (follow-up), to determine the effectiveness of the stigma reduction program. It has been proposed as an 18-month intervention. The intervention started and consists of five stages:

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1. **Leadership team development**: The first stage of the intervention consists of creating a local team of leaders of 3 to 5 people, PHC professionals, and service users (patients). The team assists with the data collection process throughout the study by encouraging colleagues to complete questionnaires and recruit service users, as well as oversee and implement the intervention at their respective PHC Centers.

2. **Innovative Contact-based intervention**: This stage consists of educational workshops at intervention PHC Centers and it includes anti-stigma and recovery principles, along with specific MISUI topics relevant to PHC providers. Emphasis is placed on cultural beliefs and values that may influence stigma related to MISUI, concurrent disorders, and inter-professional collaboration within PHC Centers and various health agencies. This phase of the intervention is co-led by people with lived experience of stigmatizing conditions who also participate in developing and delivering the curriculum to PHC providers. By acting as facilitators, participants, and/or speakers, PHC service users teach PHC providers to deliver sensitive and culturally relevant care for populations affected by MISUI.

3. **Raising awareness**: This phase includes the use of various forms of media to increase awareness about stigma, and discrimination and showcasing the recovery. Local leaders' teams at intervention CESFAMs determine the type of media they would like to use. It is intended to complement other components throughout the entire intervention.

4. **Recovery-based arts**: Small groups of PHC providers and PHC service users jointly participate in 5 or 6 sessions of art form training (painting, sculpting, etc.) facilitated by an experienced artist. The facilitators, in collaboration with local leaders, determine themes related to MISUI to cover in each session. At the end of the program, each CESFAM hosts an exhibit, open to the community, to showcase the artwork that has been produced. This component emphasizes contact-based education by encouraging meaningful relationships, and increased contact between PHC providers and service users.

5. **Analysis of internal policies and procedures**: This stage of intervention is based on the premise that it is not only necessary to train people but also to change the organizational culture of the PHC Center. The Team of local champions identifies and selects relevant policies. A WHO equity framework[163] is used and an external body applies a tool to assess different policies to determine whether policies and procedures can be amended to better serve consumers.

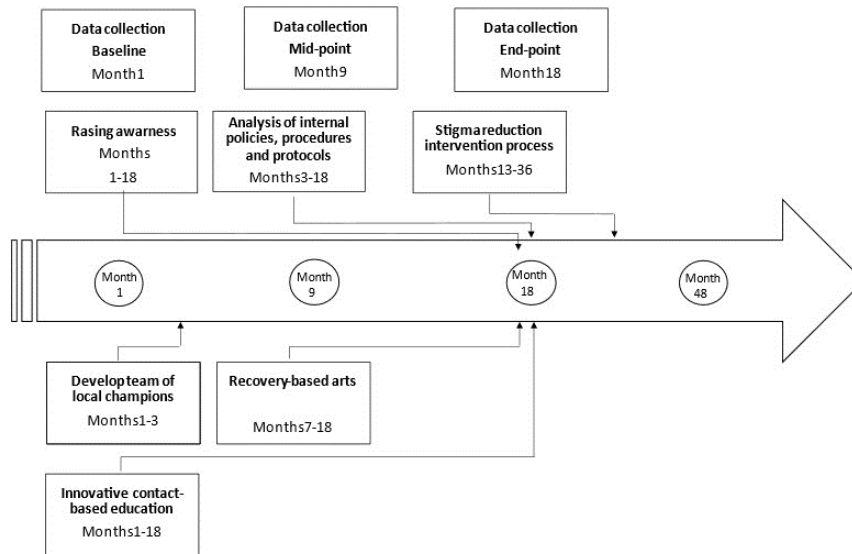[163] World Health Organization. (2019). Health Equity Policy Tool

Figure 5: Reducing stigma toward mental illness and substance use issues in primary health care in Chile: Protocol of a cluster-controlled trial study[164]

The research team intends to scale up the intervention in Chile and develop general guidelines for wider implementation. They describe two key elements that might facilitate this process; an online platform for easier access, and a mix of onsite and online interventions to facilitate the nationwide implementation process. All of these need to be addressed considering cultural, economic, and geographic contexts.

Lessons Learned

The innovations presented throughout this document reflect the joint effort between the Ministry of Health, Research Teams from different Universities, Innovation centers, and National Research Funds to promptly address health needs and respond to social and epidemiological changes in the Chilean population. The analysis presented in this Report aims to identify key elements from Chile´s innovative response towards PHC universalization, integration of MH and NCD services at the primary level of care, and other valuable initiatives to improve healthcare services. It seeks to describe relevant actions taken to strengthen public health systems and PHC service provision. Although some of these experiences are currently being implemented and therefore their evaluation and implementation processes are being

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improved and perfected, they establish significant pathways that can be locally adapted.

Primary Health Care Network

Different PHC development models have shown important impacts on some health indicators in many countries, particularly since the Alma-Ata Declaration[165]. Chile has progressively integrated Mental Health care into the entire network of PHC centers[166] [167] [168]. Innovative approaches have revealed opportunities to improve the coordination and integration of the Primary Health Care Network. These enhancements have the potential to impact and lower MH and NCD prevalence, promote early diagnosis and comprehensive treatments, increase more equitable distribution of resources throughout the Health System, and improve the population´s overall health outcomes.

1.1 Strengthening intersectoral work and coordination

"Eco Barrio Solidario" was able to lower young children and teenagers' age referrals and therefore to increase the opportunity to identify MH disorders earlier than before. By establishing work teams composed of the educational, social services, and health sectors, the Eco Barrio Solidario was able to establish a coordination network and comprehensively address MH social determining factors, sociodemographic and socioeconomic conditions, and health services accessibility in children and teenagers.

By creating and documenting a common workflow structure known to every establishment representative, coordinated action was enabled. One of the main problems described by MoH and MH researchers is the difficulty in implementing MoH guidelines effectively due to each municipality's local necessities and specificities. Eco Barrio Solidario implemented a coordinated and locally centered strategy that helps address this limitation by focusing on the educational sector as an active member of healthcare and securing constant accompaniment from other sectors to promote teachers' and counselors' role in children's and teenagers' wellbeing.

"Clan project" in a similar fashion also worked in coordination with health and educational sectors and was able to reduce suicide risk among their intervention group, the teenagers. An innovation this project leveraged is the use of "experts by experience", teenagers, who are also the target audience of the intervention. This form of participation and collaboration has helped to create a relevant intervention project, more efficient and population-targeted, as it was created according to what the application users deemed necessary. This application allows teachers and counselors to be active members of their students' overall well-being, which promotes a more comprehensive response in complex situations.

Clan project and Eco Barrio Solidario promote an adequate and coordinated response to children and teenagers' MH promotion, prevention, and intervention. To achieve this goal

[165] Rohde J, Cousens S, Chopra M, Tangcharoensathien V, Black R, Bhutta Z, Lawn JE. 30 years after Alma-Ata: has primary health care worked in countries? Lancet. 2008;372:950–61.

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[167] Minoletti A, Rojas G, Horvitz-Lennon M. Salud mental en atención primaria en Chile: aprendizajes para Latinoamérica. Cadernos Saúde Coletiva. 2012;20:440-47

[168] Minoletti A, Sepúlveda R, Gómez M, Toro O, Irarrázabal M, Díaz R, et al. Análisis de la gobernanza en la implementación del modelo comunitario de salud mental en Chile. Rev Panam Salud Publica. 2018;42:e131. https://doi.org/10.26633/RPSP.2018.131

some key elements were recognized, such as establishing a community team as a main coordinating body to enhance local coherence and adaptation of the interventions.

It is also necessary to work as a geographical nod, identifying intersectoral challenges and necessities and promoting critical thinking during the intervention and implementation processes. Finally, to ensure a coordinated network intervention each sector must identify a professional to participate in intersectoral activities and for this group to be in charge of directly assessing complex cases collaboratively. Different providers from various professional backgrounds can be a part of this team. A Community Health Worker assigned by the PHC Center with experience in community-based activities and knowledge of the health network´s operation could be useful for the task, particularly in rural areas. They are aware of the community-specific necessities and coordination systems within the network abilities. It is necessary to identify and promote participation from professionals in every sector such as health, education, or employment, and give them tools and strategies to develop intersectoral evaluations, programs, and interventions from a comprehensive approach beyond health status, including social determinants of health. A PHC worker (or volunteer) trained in MH and NCDs basic intervention skills, from a preventive promotion approach, could help reduce the waiting gap and could promote faster referral between care levels and institutions. This could be particularly useful in low-income communities where maximum efficiency is needed and not enough resources are available, accelerating the patient flow in the healthcare and social welfare system.

1.2 Mental Health and NCD Coordination

One of the main aspects that stand out in the initiatives presented is that the Comprehensive Family and Community Health Care Model and its central principles are the point of reference on which different innovations develop improvements. All of which finally contribute to an effective and efficient operationalization of the current model.

The Multimorbidity Model (ECICEP) sets a new opportunity to improve health policies, towards a bottom-up and service-centered approach that allows the delivery of efficient services. The Multimorbidity Patient-Centered Care Model (MACEP) presents the opportunity for locally developed innovations to be quickly identified by the Ministry of Health, analyzing the central aspects that can contribute to improving the health system and incorporating them as part of structural reforms for the care of people with chronic diseases and multimorbidity.

To implement a unified MH and NCD strategy, it is necessary to ensure an adequate division of responsibilities. As seen in both of Pirque´s CESFAMs, when establishing clear work divisions and defining responsibilities flow, it is easier to implement integrated health care. At CESFAM "José Balmaceda", an autonomous integration was made between NCD and MH teams. This CESFAM decided to unify the screening process and designate a specific healthcare professional for each program; a nurse for the MH program and a case manager for NCD. Jose Balmaceda CESFAM created a blended classification of NCD and MH risks and actions required,

which led to coordinated work throughout the entire treatment process, securing continuity of care. The clear inclusion of regular meetings between programs' representatives, a combined workflow and registry form, and the effort to educate the entire CESFAM personnel on the program implementation enhanced an efficient use of resources and supported continuity of care and network coordination. CESFAM "José Balmaceda" was able to improve an ongoing public policy pilot and manage to effectively integrate ECICEP and MH innovation. This local innovation shows the importance of including PHC Centers' inputs during a public policy implementation as it can deliver relevant information about local findings useful to nationwide implementations. To improve this coordinated work, it is useful to have a common form or clinical file to facilitate the patient´s management process, to secure a combined workflow known by every healthcare provider, and to promote users' self-management to lower their PHC providers' dependence and reduce PHC providers' workload.

The Innovation Center (CISAUC) identified vital aspects that facilitated the adherence of high-risk patients to the MACEP strategy and are helpful for future implementations. First, it was necessary to secure Continuity of Care actions performed by the same healthcare team throughout the treatment. It also identified the need to establish self-management activities, such as telephone counseling, home visits, and six self-management workshops, empowering users to oversee their health and adequately use PHC resources. And finally, to promote open communication between users and their case managers. By establishing a nurse technician as part of the case management team, the patient felt more comfortable as they perceived to be closer to the health professional. To adequately implement this role, first precise identification and training needs to be done. The worker in charge of management and direct contact with patients has to know the PHC Center organization, not only MH or NCDs but other health programs. Case managers in rural areas must be aware of the population's particular necessities and possibilities of access to interventions throughout the health network.

Regarding the implementation process, CISAUC describes that innovations have shown some key aspects that improve its efficiency and efficacy. Among the most relevant are involving stakeholders at the local level at all stages of the implementation process, allowing them to make modifications and suggestions for a better adaptation, and reorganizing roles and functions to enhance the multidisciplinary nature of primary care teams. Furthermore, including implementation leaders from the Ministry of Health and innovation managers to advise local teams periodically and systematically, incorporating and maintaining resources for the sustainability of innovations (training, human resources, information management systems, and registration, among others) are equally important. Finally, evaluating the implementation process and identifying its core elements to ease scalability is a critical step for the sustainability of desired outcomes.

1.3 Ministry of Health Support and Collaboration

The support of the Ministry of Health has been widely described as necessary to promote innovative implementations. Pirque´s CESFAM and CISAUC described MoH support as fundamental for the ongoing process. The support can come in different forms including training seminars, resources, technical support, financial resources, or periodic meetings to share experiences, depending on the center's specific needs.

As per the input of healthcare centers, some of the greatest challenges are healthcare workers' education and up-to-date knowledge and information, all of which can be addressed with the support of the MoH. Clinicians' training in MH strategies, such as mhGAP, has been very important for this process, allowing a more complex intervention in PHC settings, which finally impacts networks' overall burden, effective coordination, and better patient outcomes.

1.4 Legal Framework and Intersectoral Collaboration

A key aspect of intersectoral collaboration is the creation of a Mental Health Law that includes and shares responsibilities with other ministries and translates the comprehensive mental health concept into a specific legal framework that secures its relevance and functions. This law can then support community health premises, the necessity to deliver patient-oriented interventions, and integral care plans, and secure human rights not only through MoH but through a legal framework perspective as well. This then secures the implementation of guidelines, coordination, and delivery of mental health services and patients' health outcomes. As described in the literature and seen in "Proyecto Clan", users' participation is useful to improve health care outcomes, therefore, users' participation in decision-making and not only through consultancy can improve overall outcomes. All of the above can be secured through a Mental Health Law. Mental Health Law can also help supervise infrastructure, human resources, and services that a point of attention should include, and it also secures accountability. Finally, it could support the process for an equitable distribution of resources in MH at every level of care.

2. Academy / MoH collaboration

Most of the innovative experiences presented are developed by research teams, with or without MoH direct support. Funding health policy research has proven to be successful in improving public health outcomes, in terms of service design, efficient workflow implementation, and overall health indicators. Current MH prevalence data information does not come from epidemiological studies, it comes from other studies such as the pandemic impact on people's well-being or symptoms. It is necessary to acquire updated prevalence data, to direct health services efforts according to adequate PHC indicators, and not only management indicators from PHC Centers.

People with MH and Substance abuse disorder can suffer from stigmatizing attitudes and discrimination from healthcare providers, which hinders individuals from seeking health treatment and accessing appropriate care. The anti-stigma project, developed by Universidad Católica, is a previously culturally adapted intervention to diminish stigmatizing attitudes among healthcare providers. These intervention guidelines can be extremely useful when evaluated and implemented by the academia and MoH, accounting for communities' possibilities and resources. The five-component intervention could be addressed separately and implemented according to the availability of resources in each PHC Center. A Community

Health Worker can oversee the coordination together with researchers and government representatives. The sensibilization component, for example, can be adapted to the social media or mass media communication form that works best in urban or rural sectors. Every component needs to be evaluated and adapted, including the feasibility of community interventions, door-to-door activities, or the implementation of psychosocial duos. More resources need to be directed to applied research to promote evidence-based health policies.

3. MH and NCD INDICATORS

Indicators are the main components to consider when facing restructuring of the health system. One of the biggest barriers for the Chilean health care model (MAIS) to improve and strengthen the primary care level is that current indicators are established according to diagnosis (diseases) and not from a person-centeredness and continuity of care approach. Therefore, PHC goals and incentives are designed based on the former, as opposed to the latter. The necessity for a wider concept of indicators is also mentioned in MH program implementation, and the importance of integrating MH, NCD, and psychosocial assistance as part of the construction of indicators has been described. The lack of up-to-date databases regarding mental health and chronic disease indicators at the national level hinders effective PHC service provision and current situation analysis. Finally, indicators need to incorporate the changes that are being implemented at the national level.

4. Systematization process

There´s a necessity to systematize innovative responses to facilitate future scale-up processes. The systematization process is much better accomplished in an Academic context than through the MoH and PHC Centers. Hence it is important to work jointly on Pilot systematization, and effective local innovations to help to create more accomplished public policy. CISAUC Framework for Health Innovation is useful for evaluating decision-making and public policy implementation, to adapt protocols to local particularities, according to their socioeconomic and geographical differences. It is also necessary to access the overall implementation experience and measurement scales used, to replicate the evaluation process.

Chile's success in the health system has evolved over many years, and it has taken a step-wise approach at different levels. Some of these evolutions are still ongoing, nonetheless, the lessons Chile offers can be adapted to other countries that are on the path of strengthening their health systems and are integrating essential services at the primary level of care.

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[i] It is a specialized outpatient psychiatry care for male and female patients with highly complex psychiatric pathologies.

[ii] Highly complex open care establishments corresponding to a particular General hospital, deliver care on an outpatient basis preferably referred by the PHC, CRS and hospitalized patients in the General Hospital they correspond.

[iii] Open care establishments of medium complexity, which provide Diagnostic and therapeutic care preferably for patients referred by the PHC.

[iv] Primary HealthCare Division from Assistencial Network undersecretary (DIVAP)

[v] The National Fund for Scientific and Technological Development, abbreviated FONDECYT, is the main public fund of the Government of Chile, dependent on the National Commission for Scientific and Technological Research, to encourage scientific research in all areas of knowledge.