The Lancet Global Health
Commission on
Financing Primary
Health Care

SCOPING REPORT

Financing Primary Health Care in Chile

CRISTÓBAL CUADRADO, ALEJANDRA FUENTES-GARCÍA, XIMENA BARROS, MARÍA SOLEDAD MARTINEZ, JORGE PACHECO

2021

Table of Contents

Acronyms 3

Executive summary 4

1. Organisation of the Primary Health Care system in Chile 6

1.1 Current "vision" for PHC 6

1.2 Key actors in PHC services 7

1.3 Administrative structure of PHC services 7

1.4 Planning PHC services 10

1.5 Integration of PHC services 12

1.6 Role of the private sector in delivering PHC services 12

1.7 Health care reforms 14

2. Overview of health expenditure 16

2.1 Sources of revenue 16

2.2 Trends over time 17

2.3 Fiscal context 19

3. Mobilisation and allocation of resources 20

3.1 Sources of revenue and financial flows in the PHC system 20

3.2 Resource allocation in the PHC system 23

3.3 Efficiency reform 24

4. Purchasing PHC services 26

4.1 PHC legal framework 26

4.2 Provider payment mechanisms 28

5. Digital technologies and health financing 32

6. Conclusion **32**

References **33**

Appendix: Hot topics **37**

Acronyms

CGR	General Rural Centres (Consultorios General Rural)
CESFAM	Family Care Centres (Centros de Salud Familiar)
CGU	General Urban Centres (Consultorios General Urbanos)
EAP	Primary Care Health Law (Estatuto de Atención Primaria)
FFS	Fee-for-Service
FONASA	National Health Fund (Fondo Nacional de Salud)
IAAPS	PHC activity index (Índice de Actividad de la Atención Primaria de Salud)
ISAPRE	Private health insurance companies (Instituciones de Salud Previsional)
MOH	Ministry of Health
NHSS	National Health Services System
PHC	Primary Health Care
SAPU	Primary Care Urgent Services (Servicios de Atención Primaria en Urgencias)

Executive summary

This report provides an assessment of the role of financing to realise Chile's Primary Health Care (PHC) ambitions. It was undertaken for the Lancet Commission on Financing Primary Health Care, which aims to generate evidence-based, actionable policy recommendations on how countries can use health financing tools to improve efficiency and equity of PHC. The report is part of a set of country case studies that present empirical evidence on arrangements for financing PHC, drawing on published and unpublished literature, policy documents, surveys and census data. The other study countries are Brazil, China, Ethiopia, India, and the Philippines.

PHC system in Chile

Chile has an established public PHC system that aims to provide patient-centred care, coordinated with different tiers of health system and working collaboratively with families, the community and intersectoral actors. Alongside the public system, is a highly heterogeneous private sector comprised of many autonomous, small providers who deliver a range of PHC services, as well as secondary and tertiary care.

Whilst the national Ministry of Health is responsible for identifying health priorities and financing for PHC services, management of facilities has been the responsibility of municipalities since 1981, when PHC centres were decentralised to local government entities. Health districts operate between the national and municipal levels – monitoring programmes and implementation, approving municipality plans and organising staffing and resources within geographical areas.

There are several types of PHC facilities in the country, catering to both urban and rural populations including Family Care Centres, General Urban/Rural Centres, Primary Care Urgent Services, and community hospitals. In dispersed rural municipalities, healthcare is provided at health posts manned by a paramedic. Specific strategies have been set up to further improve PHC provision in rural areas, such as the Rural Health Practitioner programme, which provides financial incentives for graduate general physicians to work in PHC in rural and underserved areas.

Health expenditure

The main sources of revenue for the Chilean health system are general taxes (32%), payroll contributions (22%), direct out-of-pocket expenses (39%) and voluntary prepayments (7%). Between 2000-2015, the proportion of revenue from general taxes increased from 19.2% to 32.9%. Trends between 2000-2017 show a general increase in health expenditure as a share of GDP (from 7-9%), an increase in health expenditure per capita, and an increase in public sector health expenditure as a share of total health expenditure.

Mobilisation and allocation of PHC resources

Capitation represents 70% of overall financing transfers to PHC, with increasing trends over time. This prospective payment, allocated by the Ministry of Health (through Health Districts), for each registered FONASA beneficiary, aims to cover the cost of health workers and the management and operation of facilities. Other mechanisms of financing PHC include program financing (25% of overall financing), a prospective budget based on project activities; financing for specific PHC incentive laws (5% of overall financing); and

local government revenues. Municipalities contribute with additional financing to varying degrees, averaging about 20% of the total municipal PHC budget.

In recent years, there has been a substantial and sustained increase in funding for PHC. A fixed resource allocation formula is the main method to determine the funding flows for PHC to each municipality. Only 12% of the total transfer to municipalities is based on a risk-adjusted formula, which seeks to reduce inequalities by taking into consideration factors such as poverty, rurality, percentage of elderly population and geographical complexities.

Purchasing

Healthcare providers are paid through salaries with additional performance-based financial incentives for teams that meet health goals as defined in the national health objectives. There are several challenges to the capitation mechanism used to allocate PHC revenue, including insufficient per capita funding to reflect the real cost of delivering services, and lower levels of expenditure per registered beneficiary in poorer and rural areas. Whilst there is limited evidence on the effectiveness of performance-based salary incentives in Chile, it has been speculated that the desire to meet incentivized health goals has led officials to make decisions about patients that do not respond to their clinical needs.

Digital technologies and health financing

Chile does not have a national policy to finance digital technologies in PHC and, as a consequence, the implementation of these technologies has been poorly coordinated. PHC teams have introduced remote consultations during the COVID-19 pandemic; however, there are no special resource allocation processes or payment mechanisms for these activities, with the cost is included in the per capita amount assigned for each municipality.

1. Organisation of the Primary Health Care system in Chile

1.1 Current "vision" for PHC

Chile has a well-defined public primary health care (PHC) system, which operates alongside a private sector composed of many autonomous, small private providers offering primary, secondary and tertiary services. Since the last health reform (Law N° 19937, 2004), the Chilean public health system has been defined as based on PHC (Ministerio de Salud, Subsecretaria de Redes Asistenciales, División de Atención Primaria, 2013). In the context of a geographically integrated healthcare network, PHC is considered as a strategy performing functions at the first level of care in a particular territory with a population in charge (Law 19937, 2004, Art. 16). Thus, the primary health centre is the main entry point to the public healthcare network (the other entry point is hospital emergency services) (Frenz *et al.*, 2014).

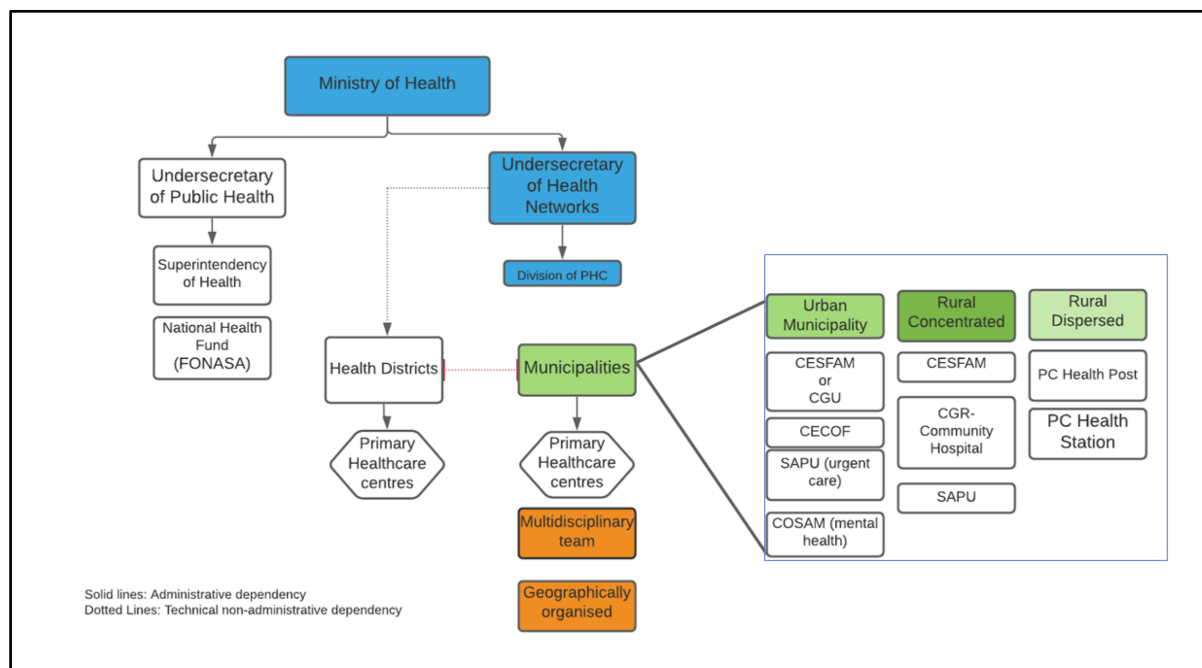
Since 2013, the PHC strategies and goals have taken a biopsychosocial approach under guidance of the Ministry of Health through the Undersecretary of Healthcare Networks (Ministerio de Salud, Subsecretaria de Redes Asistenciales, División de Atención Primaria, 2013). The direction and goals for integrated planning for the healthcare network levels are provided by the Ministry of Health every year (Ministerio de Salud, Subsecretaria de Redes Asistenciales, División de Atención Primaria, 2021).

The actions of PHC are based on the Integral Family and Community Health Model, which seeks "to provide integral, timely, high quality and effective care with continuity throughout the entire provider network" (Frenz et al., 2014). PHC strategies focus on person-centred care, coordination with the other healthcare system levels to guarantee integral and continuous care, and collaborative work with families, the community, and intersectoral actors (Frenz et al 2014, Subsecretaría de Redes Asistenciales (2013). In this context, the Chilean public primary care network is explicitly based on three principles: longitudinality, comprehensiveness, and continuity of care (including accessibility and coordination) (Ministerio de Salud de Chile, 2013). The government also identifies family/community orientation and a focus on prevention and health promotion as "ethical aspects of the primary care practice." Additionally, being the first contact with the health system and responsibility for a well-identified population, are identified as key primary care practice elements.

Whilst in the public sector PHC is deployed as a full-blown strategy based on a biopsychosocial model, in the private sector it is performed only as the first level of care.

The specific goals for PHC are set every year by the Undersecretary of Healthcare Networks' PHC Division by using an index call PHC activity index (IAAPS: Índice de Actividad de la Atención Primaria de Salud) (Subsecretaría de Redes Asistenciales, División de Atención Primaria, 2014). The IAAPS defines the areas, with their respective indicators, to be assessed in the planning year (January-December). The activities to be evaluated are formally informed by a Ministry of Health decree. Reductions in money transfers to municipalities are the consequence of not fulfilling the IAAPS.

Figure 1.1: Organogram of PHC structure in Chile



Source: Own elaboration. Box of Municipalities from Frenz *et al.*, 2014.

1.2 Key actors in PHC services

The Ministry of Health, through the Primary Healthcare Division, one of the five divisions of the Undersecretary of Healthcare Networks (Law N°19937, 2004), is the highest rank regulatory authority for primary health care in the country. Management of PHC, however, has been the responsibility of municipalities since 1981, when primary health care centres were decentralised to local government entities called municipalities (Decree 1-3063, 2nd June 1980, Ministry of Home Affairs), except for 8% of the total primary healthcare services, which remain accountable to the Health Districts.

The health care networks covering the entire country consist of 29 geographically defined health units denoted as Health Districts (Servicios de Salud), accountable to the Undersecretary of Healthcare Networks. These health districts together form the National Health Services System (NHSS).

According to the law, each Health District directorate is technically responsible for the primary healthcare centres of the municipalities of its territory (Law N°19937, 2004). In each municipality, there is a Department of Health in charge of the corresponding primary healthcare network.

1.3 Administrative structure of PHC services

Responsibilities at each administrative tier

At a national level, the Division of Primary Healthcare (2005) sets norms, standards, and goals for the delivery of outcomes: implementation of the Integral Family and Community Health Model, the management and quality of healthcare delivery, and the control of resources (Subsecretaria de Redes Asistenciales, 2016).

PHC comprises approximately 2,286 facilities at a local level with 91% under municipal administration, 8.3% managed directly by Health Districts, and 1.1% run by universities and non-profit organisations (Frenz et al., 2014).

At the municipal level, PHC services are administered via municipalities or municipal corporations. Municipal corporations are legal entities of private law, created in 1980 for the administration and operation of health, education, and care services for children (Decree 1-3063, 2nd June 1980, Ministry of Home Affairs). In 15% of municipalities in the country (54 of 345), municipal corporations manage health and education services (Observatorio Fiscal, 2017).

PHC facilities in Chile include a variety of facility types, almost covering the totality of the national territory: Family Care Centres (CESFAM) - the most advanced in the implementation of the Family and Community model, more basic General Urban Centres (CGU), and primary care urban urgent services (SAPU), in urban municipalities. Concentrated rural areas may have a CESFAM or a General Rural Centre (CCGR) or a PHC community hospital, as well as a SAPU. In dispersed rural municipalities, health is provided by health posts (*postas rurales*) and stations. There are 1,163 rural health posts and 101 PHC community hospitals (low complexity, usually in rural settings) in Chile (Frenz et al., 2014).

Table 1.1: Dependency of Family Care Centres (CESFAM) in Chile

Dependency	Number	Percentage (%)
Municipalities	550	92.59
Health Services	31	5.21
NGOs	13	2.18
Total	594	100

Source: DEIS (Ministry of Health), 2019

Lines of accountability

The national health supervising entity, the Superintendency of Health (2005), certifies specific quality and safety standards to ensure proper functioning of healthcare centres (Superintendencia de Salud, 2009).

According to the corresponding indicator, the accountability of organisations' financial performance is to the Controller General of the Republic (Subsecretaria de Redes Asistenciales, 2016), with interim reports every 3 or 4 months (IAAPS).

Decision-making autonomy and powers

Table 1.2: Degree of decision-making autonomy and powers at different levels

Areas of decision-making/ levels		National- minsal	Meso - health districts	Local- municipalities
Model of Care	Model's definition and standards	Definition of the family health model (Family and Community Health model); Setting the standard for accreditation of primary care centres to become family health centres (CESFAM); Definition of quality standards for healthcare services (GES)		Implementation of the family and Community Health model; Preparation of health centres for applying to become a family health centre (CESFAM); Preparation of health centres for quality accreditation (GES)
	Goals and strategies	Setting goals and strategies for yearly planning; National monitoring of health programmes (e.g. chronic disease programme; National immunisation programme)	Monitoring of health programmes for municipalities in its geographical area	Implementation of goals and strategies according to the local reality
	Clinical guidelines and protocols	Developing clinical guidelines and protocols	Monitoring implementation of clinical guidelines and protocols	Implementation of clinical guidelines and protocols according to the local reality
	Inclusion of new health services	Assessment and decision on the inclusion of new health services		Assessment and decision on the inclusion of new health services
Model of Management	Personnel: staffing and contracts		Yearly authorisation of staffing for municipalities in its geographical area	Management of personnel (hiring and dismissal of staff according to regulations: Statute of Primary Municipal Health Care)
	Wages and payment mechanisms	Definition of working categories of personnel; Financial incentives for PHC personnel	Transferal of money for municipalities in its geographical area	Local definition of salaries for the working categories of personnel

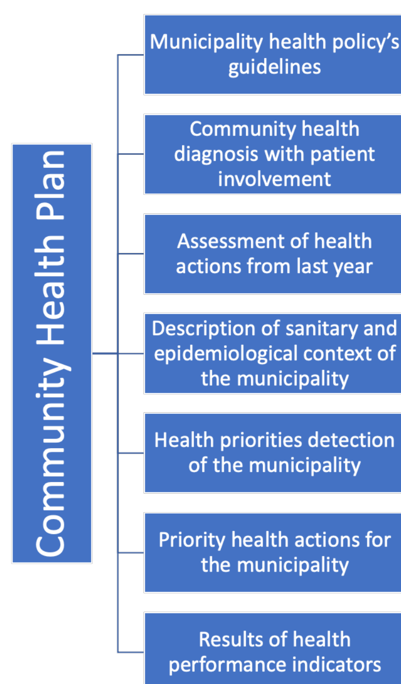
	Investment	Setting the norms and standard for investment projects (infrastructure and equipment); Technical approval of investment projects	Co-elaboration of investment projects (to apply to regional and national funds)	Elaboration of investment projects (infrastructure and equipment); Application to financial sources for investment projects (regional and national funds); Financing of investment projects (according to political interests and availability of local financial resources)
	Revenue collection	Definition of the Payment mechanism for Primary health centres; Amount of per capita payment for primary health centres	Transferal of money for municipalities in its geographical area	Receiving and managing the money transfers (per capita) from Health Districts; Definition of the share of the municipal budget devoted to primary health care
	Contracts with third parties		Contracting private health providers (non-for-profit) as part of the health care network (1)	Contracting health care service providers (mainly clinical laboratory and images exams, and medical specialist's visits)

(1) This type of contract is the exception: 13 of a total of 594 Family Health Centres in the country are run by NGOs (DEIS, Minsal, 2019). Source: Own elaboration.

1.4 Planning PHC services

The Ministry of Health is responsible for the annual planning of PHC services. In September of each year, the Ministry of Health publishes the "Planning and Programming Guidelines for the Healthcare Network," identifying health priorities for Chilean primary healthcare (Ministerio de Salud, 2021). Each municipality then must submit to its corresponding Health District authority a Community Health Plan for review and approval before the end of November of each year. Municipalities Health Departments generally work collaboratively with their dependent primary healthcare centres to produce this plan of action.

Figure 1.2: Contents of Community Health Plan for municipalities



Source: Own elaboration based on Decree Nº 2296, 1995 of The Ministry of Health

Mechanisms to ensure equitable distribution of PHC services

There are long-lasting, established, strategies to improve access to remote and rural areas of the country, such as the existence of rural health posts (*postas rurales*) manned by one paramedic. A health team or a physician from the nearest primary care centre makes periodical rounds to the health post. Another strategy that has been used for decades is a program for recently graduated general physicians which allocates providers to remote places to practice in exchange for paid scholarships for speciality residencies. Lately, some urban areas in need of primary healthcare doctors have been added to the eligible locations list for the program (Peña et al., 2010).

In terms of PHC facilities, there are standards as to the number of people assigned to a specific PHC centre. The central government takes this into account when deciding to build a new PHC centre; however, centres can be built using regional or local funds.

Mechanisms to ensure coordination of PHC services

As previously mentioned, the Chilean public primary care network is explicitly based on three principles: longitudinality, comprehensiveness and continuity of care (which includes accessibility and care coordination) (Ministerio de Salud de Chile, 2013). Vertical coordination[1] mechanisms mainly include referral and reply letters. The great majority of

[1] The Agency for Healthcare Research and Quality defines care coordination in primary care as "deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care" Consequently care coordination is a property of a service o system.
https://www.ahrq.gov/ncepcr/care/coordination.html#:~:text=Care%20coordination%20in%20the%20primary,safer%20and%20more%20effective%20care.&text=Health%20information%20technology

PHC physicians claim that they send referral letters to the secondary (specialist) or tertiary (hospital) level, however, only a small proportion receive a reply from specialists. Specific targets to boost this behaviour have been included in hospitals balance score cards monitored by the Ministry of Health. There is also insufficient recording of data in terms of medical history, tests, medication and the reason for referral (Vargas, 2018).

The main perceived discontinuities of care relate to poor information transfer and access to secondary care after a referral (Ollé-Espluga, 2020). There are no specific financial mechanisms in place to improve coordination.

1.5 Integration of PHC services

Horizontal integration[2] of primary care services in the same municipality is significant since all public primary healthcare facilities in the territory depend administratively and financially on the same health department. PHC services and secondary/tertiary services are loosely integrated since the latter fall under the administration and funding of the corresponding Health District. Nevertheless, all public healthcare services in an area constitute, by law, a Healthcare Network coordinated and overseen by the chief of the corresponding Health District ("healthcare network administrator") who reports to the Undersecretary of Health Networks. In sum, PHC services depend administratively and financially on municipalities' health departments and technically on the corresponding Health District. This combination of roles and potential misalignment of financial incentives from funding flows impose challenges for integration.

1.6 Role of the private sector in delivering PHC services

Some common primary health services, such as cancer screening or health check-ups, are delivered by private providers to a portion of the population, especially those privately insured and some top-tier publicly insured groups. In 2016, 15% of all healthcare professionals' visits in the country were delivered by private providers to publicly insured beneficiaries and 14% to privately insured people (Clínicas de Chile, 2017). In this sense, private providers constitute the first entry-point of the health system for some. However, in the private sector, primary care corresponds only to the first level of care, whereas in the public sector PHC is deployed as a full-blown strategy, as described in the "current vision" section.

In the public sector, some NGOs receive public funding to deliver primary healthcare services to a geographically defined population. One of the most successful alliances is with the Catholic University which has spurred numerous innovations in the delivery of services. Finally, it is worth mentioning that 15% of all the municipalities' health

---

[2] Integration of primary care services is defined by WHO as the "organization and management of health services so that people get the care they need, when they need it, in ways that are user-friendly, achieve the desired results and provide value for money" in four key domains: "1. across health services or programmes within a level of care; 2. across different levels of care, including primary, secondary, palliative and mental health care; 3. across health care, personal care services and public health interventions; and 4. across public, nongovernmental and private sector institutions whose actions influence health." Integration then is a broader concept and is related to organizational structure and function.
https://www.euro.who.int/__data/assets/pdf_file/0007/384757/AA40-Report-E-FINAL-FOR-WEB.pdf

departments are in fact non-profit legal entities governed by private law, which allows them more leeway to administer funds (Observatorio Fiscal, 2017).

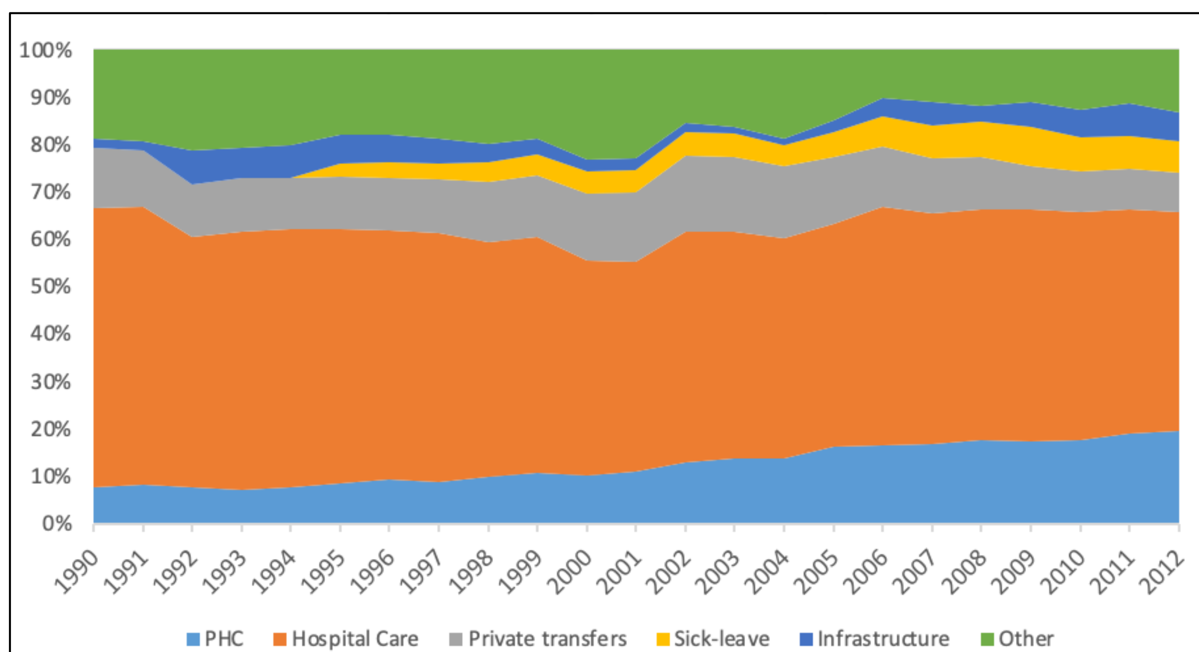
Regulation of the private sector

Currently, there is no private primary care system as such. Three large ambulatory healthcare networks, which are also vertically integrated with private insurers (Isapres) and hospitals, dominate the ambulatory services market in the private sector. However, approximately 75% of spending in ambulatory care in the private sector corresponds to services provided by small doctors' associations or solo practices (Leon-Vargas and Martinez-Becerra 2011). As is the case in most Latin American countries and other developing countries, the private healthcare provider market is highly heterogeneous in terms of use of standardized clinical and operational procedures, integration of care and organizational arrangements (Bastias et al. 2008; Basu et al. 2012; Berendes et al. 2011). Therefore, although populations with access to primary care private providers might have a better chance of obtaining the type of health service they seek, the private system does not necessarily provide superior or even equivalent care to that offered through the public system (Arrieta, García-Prado, and Guillén 2011). Regulation to oversee the private sector in delivering PHC services is scarce.

Contracting with the private sector

When capacity in public services is insufficient, FONASA purchases services from private providers through contracts. It can spend up to 10% of its annual budget in this way by law, reaching 8% by 2013 (see Figure 1.3 for long term trends). ISAPREs pay private providers using fee-for-service mechanisms, according to agreed tariffs. (Bitrán 2013; Frenz et al, 2014).

Figure 1.3: Distribution of public health expenditure of the Ministry of Health, 1990-2012 Chile



Source: Own elaboration based on DIPRES, 2013.

Additionally, funds are transferred from health districts to municipalities to implement resolution programs through agreements between municipalities and private providers to purchase certain services such as endoscopies, abdominal ultrasounds, chest X-rays, among others. Municipal funds can be used to make agreements with private pharmacies and private professionals to deliver services at a discounted price.

1.7 Health care reforms

The first big expansion of the public health network started in 1924 with the creation of the Seguro Obrero, which collected funds from employers and workers to finance their health care (Bass del Campo 2012). In 1952, all primary care centres were transferred to the National Health System until 1980 when the military dictatorship of Augusto Pinochet decentralized the primary care system to local government entities called municipalities, a reform that was never reversed by subsequent democratically elected governments (Becerril-Montekio, Reyes, and Manuel 2011; Manuel 2002). Although decentralization had positive effects, such as the empowerment of local authorities to set priorities according to their population's need, centres have achieved limited autonomy because financing remains centralized and insufficient in itself to cover the Family Health Plan package (Gideon 2001). There is also limited local political autonomy since the Ministry of Health retains considerable priority-setting power for the whole system (Gideon 2001) as well as technical expertise. The process has also been more challenging for rural centres that are even less autonomous due mostly to financial constraints (Atkinson et al. 2008).

In 1998 the Concertación (centre-left coalition) government started a process to transform all primary care centres into family health centres. First, a few pilot sites were given special funding to develop care based on the principles of family medicine (Gideon 2001) through the implementation of the Integral Family and Community Health Model. Currently, most primary care centres have been certified as family health centres.

The most recent system-wide health reform in Chile was implemented between 2003 and 2005 under the Lagos administration. Its main initiative was the General Guarantees in Health (GGH) Law, which created a "system of explicit guarantees in predefined health conditions for access, opportunity, quality of services and financial protection" for the whole population (Letelier and Bedregal 2006). For a predetermined list of conditions, the user has information about the treatment plan that will be applied and how much she or he will have to pay as a user fee. These health guarantees are fulfilled mostly in the public primary care system; almost 80% of the new health services provided by the GGH plan are being provided in this setting (Bass del Campo 2012). A renewed focus on the primary care system translated into a considerable growth of its budget (Helmke 2011).

On the other hand, the reform significantly transformed the production conditions in the health sector. First, the way in which health services related to users was modified, incorporating administrative, technical, and even judicial requirements. Second, the relationships within the health organization were modified, generating various devices for the surveillance and control of the medical act. To achieve this, computer equipment and programs were developed focusing exclusively on the management of explicit health guarantees. These changes made it possible to standardize clinical processes, facilitate the coordination of benefits between the different levels of the public and private care network. Third, time limits for care were incorporated and the number of benefits and

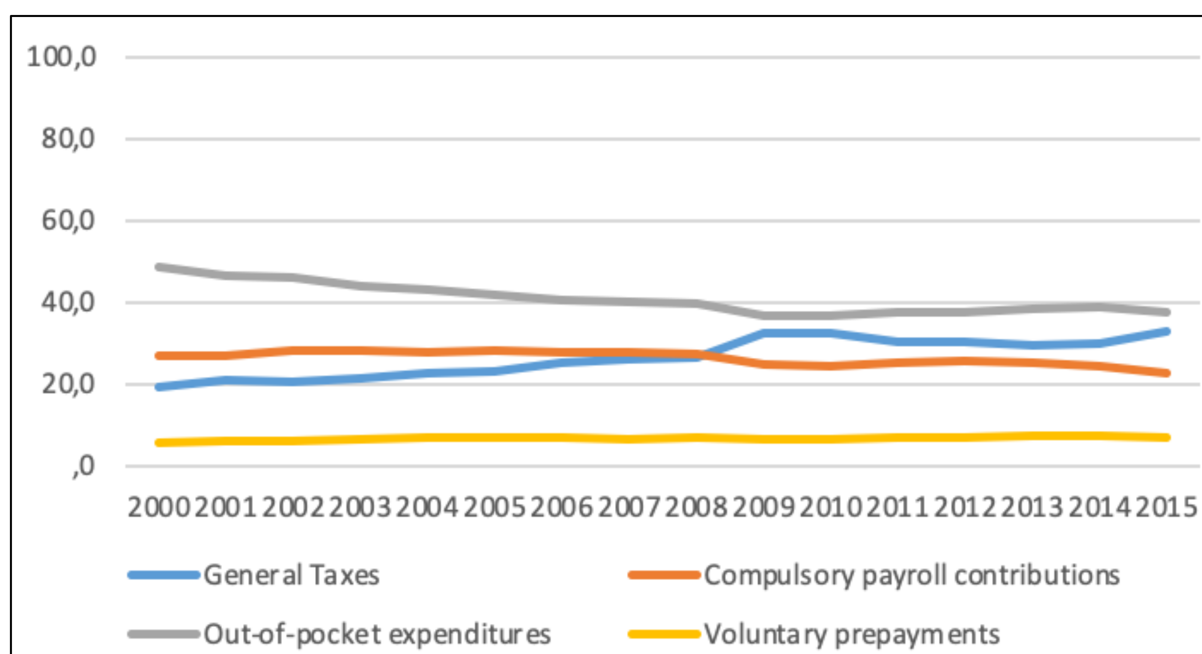
administrative procedures increased without an increase in staff, which resulted in a work overload on health teams. Fourth, the obligation to comply with guaranteed benefits stressed the supply capacity of the public system, stimulating the development of investments in health technology and the purchase of services from the private system.

2. Overview of health expenditure

2.1 Sources of revenue

The main sources of revenue for health come from general taxes (32%), payroll contributions (22%), voluntary prepayments (7%) and direct out of pocket expenses (39%). Between 2000 and 2015, general taxes as a share of health revenue increased from 19.2% to 32.9%. Total public spending is balanced considering general taxes and payroll contributions administered by the public sector (FONASA). Nevertheless, structural deficits are observed at the end of every fiscal year and new resources need to be mobilized from the Treasury, particularly to cover hospital deficits.

Figure 2.1 Sources of revenue – Chilean Health System



2.2 Trends over time

Table 2.1: Trends in health expenditure in country, 2000 to latest available year

Indicator	2000	2005	2010	2015	2017
Current health expenditure by financing schemes (% GDP)	7.04	6.59	6.77	8.30	8.98
Government schemes and compulsory contributory health care financing schemes (% GDP)	3.75	3.49	4.00	4.88	5.38
Government schemes and compulsory contributory health care financing schemes (US$ PPP)	360,29	445,50	729,25	1119,49	1334,27
Government schemes and compulsory contributory health care financing schemes (% GGE)	16.32	17.31	17.14	19.60	21.21
Government schemes and compulsory contributory health care financing schemes (% THE)	53.3	52.9	59.0	58.7	59.9
Transfers from government domestic revenue (allocated to health purposes) (% THE)	21.9	22.5	29.9	32.3	35.0
Compulsory private insurance schemes (% THE)	17.5	13.6	11.9	10.7	9.8
Household out-of-pocket payment (% THE)	42.8	42.5	34.5	34.5	33.5
Voluntary health care payment schemes (% THE)	3.9	4.6	6.5	6.7	6.6

Source: WHO's Global Health Expenditure Database that uses National Health Accounts (NHA) categories, available from https://apps.who.int/nha/database

Figure 2.1: Health expenditure as a share (%) of GDP, 2000-2017

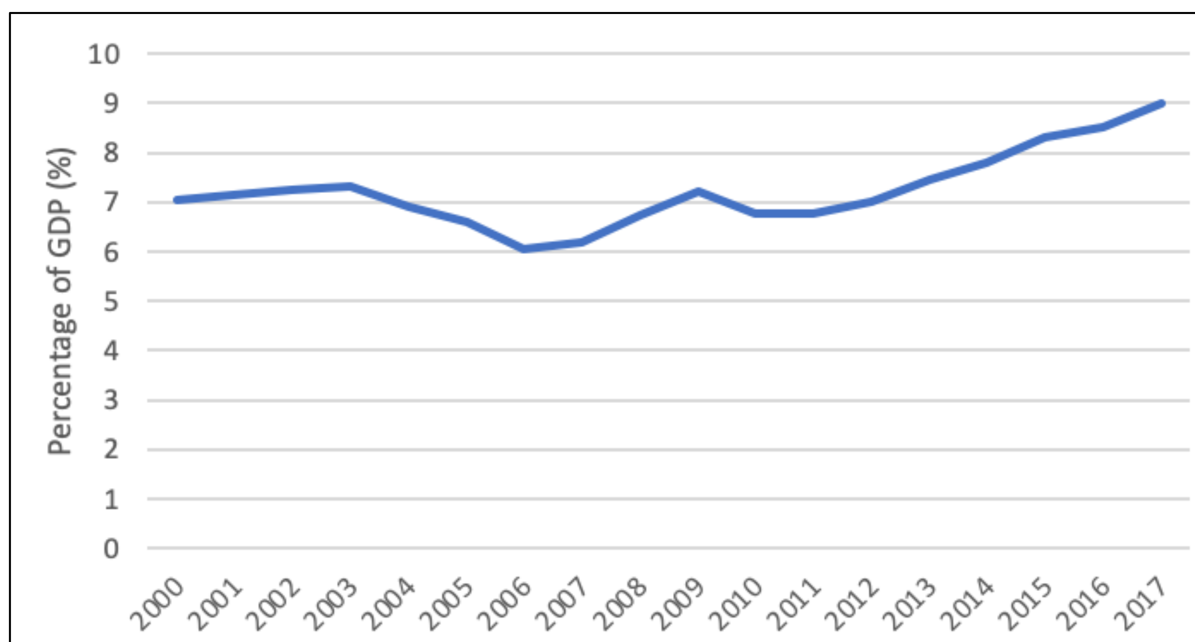


Figure 2.2: Health expenditure in US$PPP per capita, 2000-2017

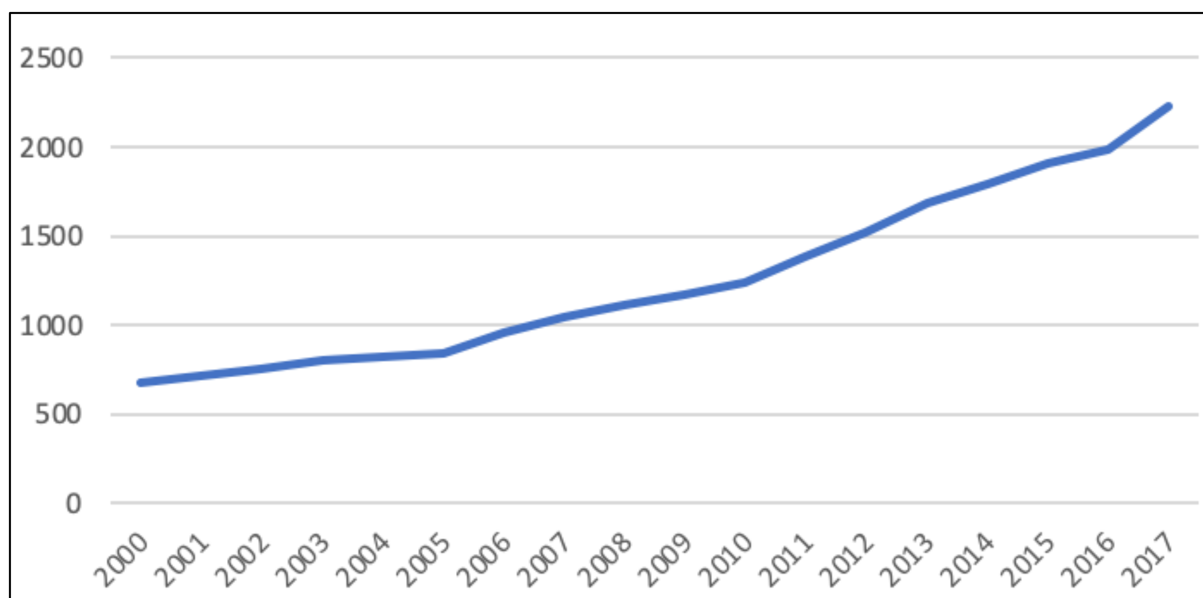
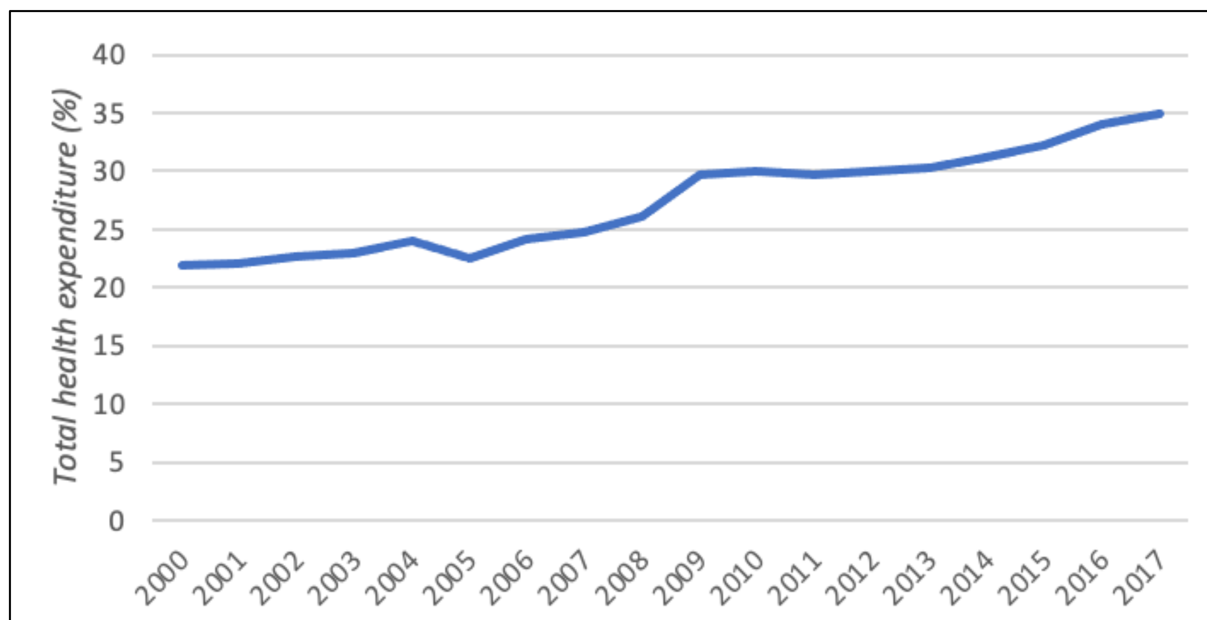


Figure 2.3: Public sector health expenditure as a share (%) of total health expenditure, 2010-2017



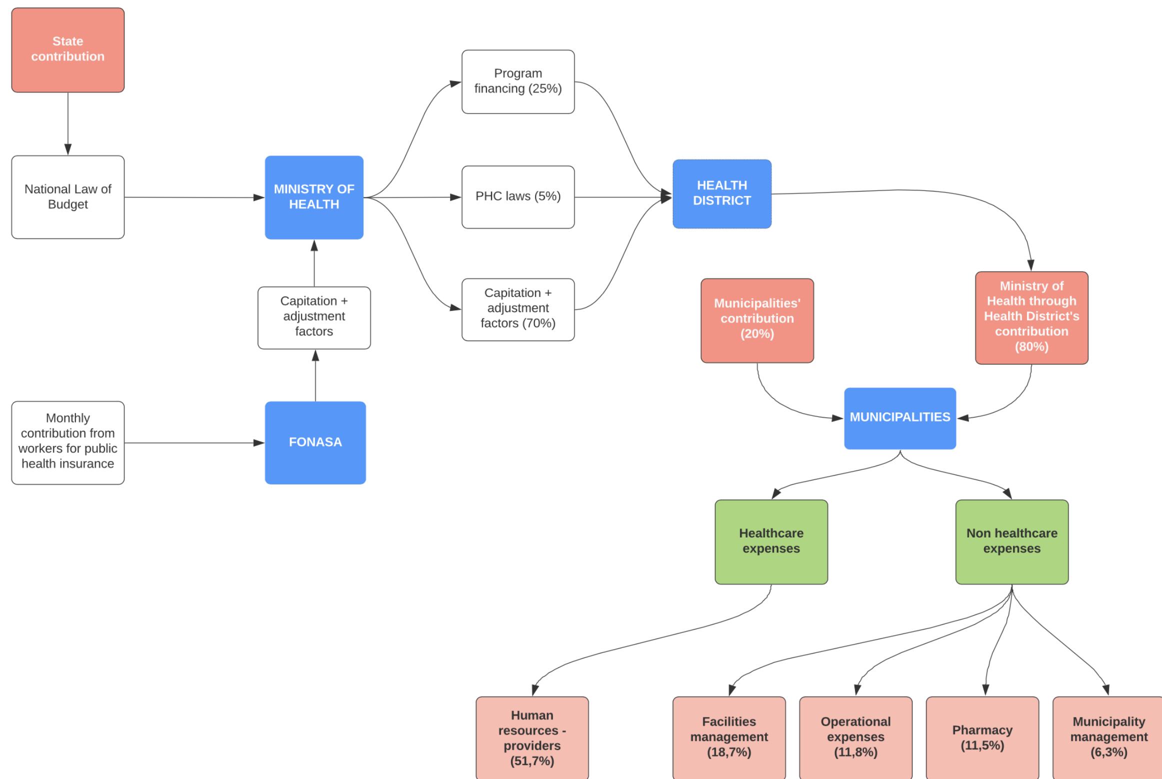
2.3 Fiscal context

Central governments have the responsibility for defining the tax structure for the country; no subnational administrative structures can levy additional taxes. Historically the tax system in Chile has relied largely on taxes on goods and services (mainly VAT). As an example, the last health reform was funded through a 1% increase in the VAT. Compulsory payroll contributions are also defined by the central government, fixed at a 7% rate of the gross salary, without any changes over the last decades.

3. Mobilisation and allocation of resources

3.1 Sources of revenue and financial flows in the PHC system

Figure 3.1: PHC financing scheme



Source: Own elaboration based on Debrott (2015)

The structure used to transfer resources to PHC can be organized as follows (Debrott, 2015; Frenz et al., 2014):

1. **Capitation**: represents 70% of overall financing transfers to PHC, with increasing trends over time (see figure 3.2). Capitation is a prospective payment allocated by the Ministry of Health (through Health Districts) for each registered FONASA beneficiary in each facility depending on municipalities. The capitation is calculated in order to cover the costs of health workers, pharmacy, municipality and facility management, operational expenses of the Family Health Plan II and GES guarantees. The base capitation is adjusted upwards, according to factors related to rural population, deprivation level and geographic zone. Additionally, a fixed amount is added according to the percentage of the population over 65 years and for difficult duty due to geographic or sociocultural challenges.

   In 48 municipalities (15%) with small populations (under 3,500) a fixed cost capitation is used instead. Capitation mechanism for PHC was introduced in Chile in the second semester of 1994. This mechanism for allocating resources replaced the system for allocating payment for benefits, known as the "Billing Mechanism for Care Provided in Municipalized Facilities" (FAPEM), which paid for the activity carried out and operated

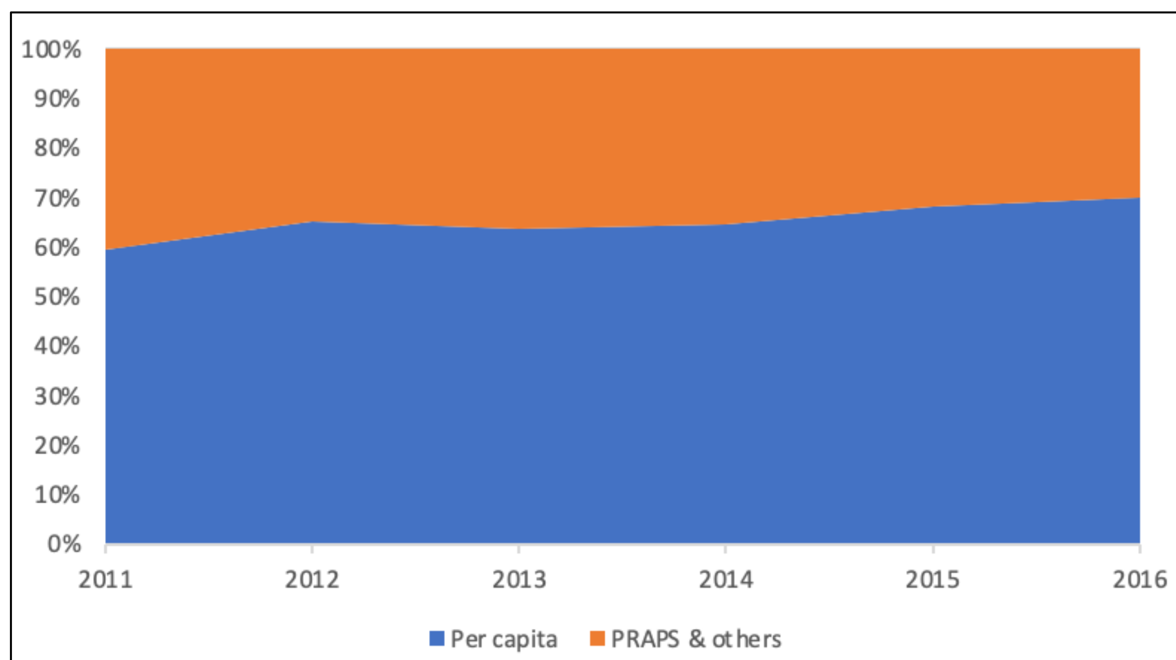
on the basis of communal ceilings defined by the regional authority, each activity having an associated payment per professional. The objective was to obtain greater equity in the allocation of resources, generate incentives for efficiency associated with cost containment and provision of cost-effective services, ensuring quality of services. Other perceived benefits of capitation include: greater flexibility in municipal management, incentivizing actions of promotion and prevention, and guiding the action of suppliers and in particular of establishments towards obtaining results rather than carrying out activities. At the same time, capitation contributes to promoting the participation of users, introduces incentives for the quality of services, improvement in the identification of beneficiaries and better planning and targeting of health care provided at the primary level (Ministerio de Salud, 2011)

2. **Program financing**: represents the 25% of overall financing transfers to PHC. It is allocated by the Ministry of Health and is a prospective budget based on projected activities aimed at increasing PHC capacity to resolve GES problems and other priorities or health innovations.

3. **Specific PHC laws**: represents the 5% of overall financing transfers to PHC. Corresponds to incentives' laws (for performance, retirement and compensation for hard performance in risky or extreme geographic areas)

4. **Local government own revenues**: municipalities contribute with additional financing to varying degrees, averaging about 20% of the total municipal PHC budget, according to data from the Chilean Association of Municipalities (2015). An important amount comes from the Municipality Common Fund, a redistribution mechanism to allocate resources from high income to lower income local governments.

Figure 3.2: Trends in PHC financing from central government by funding mechanism



Coverage: who and what is covered

All the beneficiaries of FONASA are potential beneficiaries of the public PHC (80% of the population). Nevertheless, they are required to actively enroll into one PHC centre to

ensure access to all of the services covered, which occurs in no more than 70% of the FONASA beneficiaries. Whilst, in theory, user charges exist for higher income groups, they are unlikely to be users of public PHC facilities. From this follows that user charges, in practice, do not exist at the PHC.

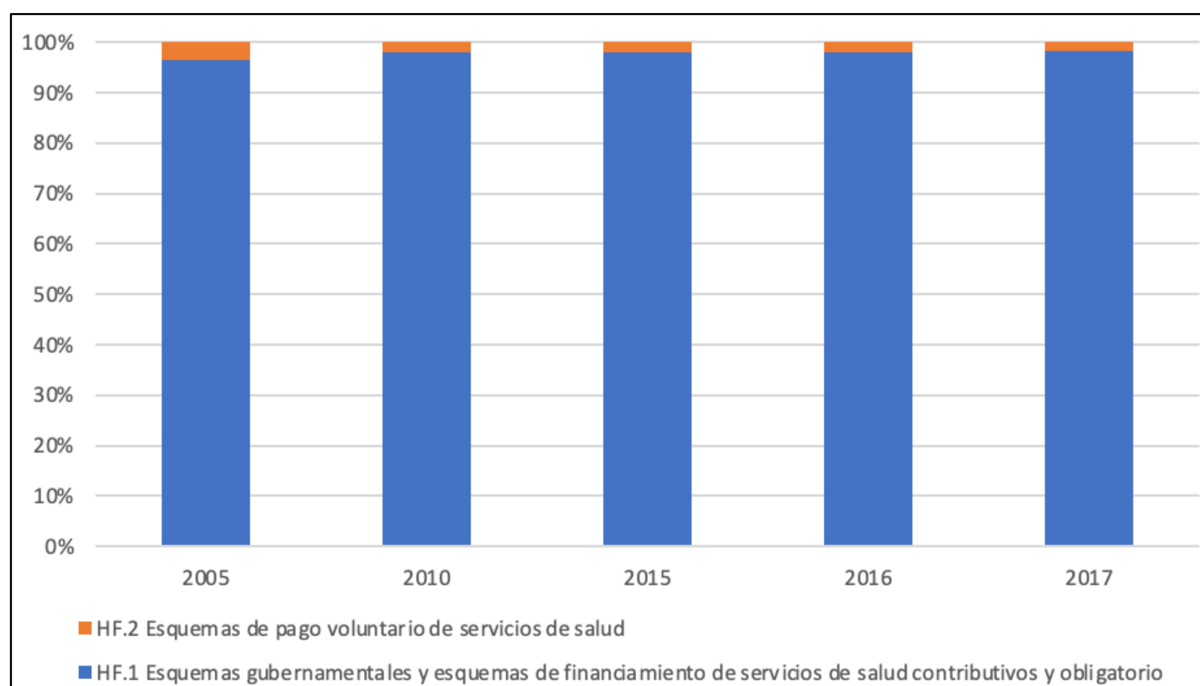
Prices paid by insurers in the public system are much lower than in the private system. For example, FONASA considers that the total price for a physician visit in the public system is 4,050 Chilean pesos (app. US$8) and for the same visit in the private system FONASA will consider the total price of the service to be 10,050 Chilean pesos (app. US$20). The final price that the patient faces depends on their health plan. Task shifting – the allocation of tasks to a less costly health worker – also contributes to the public sector having lower prices than the private sector. For example, FONASA pays 1,080 Chilean pesos (app. US$2) for a preventive or follow-up visit performed by a nurse such as children wellness visits; services that are generally performed in the private sector by a physician. Moreover, FONASA does not reimburse visits performed by a nurse in the private sector so the price of a visit in the public sector can be 10 times cheaper than one in the private system, since the coinsurance is calculated based on the total price that FONASA sets for the service. Nevertheless, out of pocket spending can vary by type of health plan; there are some instances where services provided in a private facility within a private health plan's network might imply smaller out of pocket payments than for services offered by a public provider for a particular individual who is privately insured.

Users of the public system evaluated the care they receive as "bad" more frequently than users of private ambulatory centres (22% versus 8%). The main complaints are long waiting times and abuse from staff and providers. Individuals that use private ambulatory centres identify the cost of services as the main disadvantage of using these services (Superintendencia de Salud de Chile 2012).

Collection and pooling of PHC revenue

Main revenue sources occur from mandatory social security contributions and general taxes (see section 2), which is collected by the central government and then transferred to health districts and municipalities (see Figure 3.1). Additionally, local governments can use other sources of funds to invest in PHC. Providers are paid mainly by salaries (human resources) and fee for service for externalized services such as radiological and laboratory tests.

Fig. 3.2: Percentage of total expenditure on primary health care according to source of revenue, 2005-2017



3.2 Resource allocation in the PHC system

Budget decisions are taken annually by the Treasury in consultation with the Ministry of Health at the central level. Discussion on specific health budgets, prominently the amount of resources available for capitation of PHC, often occurs within the parliament before the budget is approved for the next fiscal year. Therefore, resources for PHC are usually discussed separately each year and have specific budgetary lines. Underspending in PHC has regularly been a prominent topic during the budget discussions, due in part to the increasing share of the budget assigned to PHC, both compared to hospitals and as a proportion of the overall health budget, during the last 10 years (see Figure 1.3).

While there are not specific health budgets at the regional level, some general funds are allocated freely for the regions that can be used for investments in infrastructure in different sectors, including health. Municipalities define their budgets based on the transfers received from the central government and the funds that can be raised at the local government level.

Transfer of revenue to pooling agencies

Funding flows are described above in Figure 3.1. Agencies involved in the pooling of compulsory sources of revenue are public agencies, including the National Health Fund (FONASA) and the Treasury. Funds are then funnelled through Health District authorities to the municipalities.

Allocation of PHC resources to purchasers

Resource allocation formula is the main method to determine the funding flows for PHC in Chile. (See figure 3.1 for further information) and a single standardised process is used across the country. Clearly separated budgets are approved every year for programmes, with separate funding for hospitals and PHC. PHC funds are treated as hard budgets, without any changes during the fiscal year. In contrast, hospital flows can be treated as a soft budget with new resources usually at the end of the year to cover deficits.

PHC flows based on capitation are partially risk-adjusted taking into consideration factors including poverty, rurality, percentage of elderly population and geographical complexities. However, other relevant factors that determine population risk such as morbidity are not included as part of the allocation formula. Moreover, on average, only 12% of the total capita transfer to municipalities is based on a risk-adjusted formula, while 88% is defined by a fixed capita rate (basal per capita).

According to the Ministry of Health, risk-adjusted capitation seeks to reduce inequality with regards to financing allocation in order to improve efficiency in PHC financing use. Therefore, the current risk-adjusted formula recognizes the need to reduce inequality in allocation: the adjustment for poverty, rurality, older population and others in those places where the provision of services is more difficult, and also in those municipalities that are small, could introduce more efficiency into PHC (Ministerio de Salud, 2008).

Autonomy of purchasers

Municipalities can use funds from local tariffs to invest in health. Nevertheless, they are not allowed to implement cost-sharing mechanisms or additional premiums to users or citizens to access PHC. For PHC services not covered by the PHC benefit package, such as some prescription drugs, municipalities use cost-sharing to provide access through a rapidly expanded programme named Farmacias Populares.

Municipalities bear the financial risk of providing PHC services. Formally, no surplus from transfers from central government are allowed to be appropriated by the municipalities, all funds need to be effectively expended on primary care services. Potential deficits need to be covered by local funds. Nevertheless, a Municipal Redistribution Fund exists to reallocate local funds between municipalities for social spending (not only health), enabling some level of redistribution of local funds between richer and poorer municipalities.

3.3 Efficiency reform

Current reforms

Currently, efforts are underway through the 'People-centred Integrated Care Strategy' to make primary and secondary care more comprehensive, integrated and focused on people's health needs. One of the key aspects of the strategy is to focus health interventions in line with the health risks and needs of those enrolled in PHC. Specifically, it seeks to address issues of duplication of health care, uncoordinated health care, and health services based on supply rather than demand (see Table 3.1). Currently, the strategy is in the installation and implementation phase in 9 of the 29 health districts in

Chile. Processes related to financing and purchasing structures are less likely to be changed because these involve changes in the legal framework which operate over PHC.

Table 3.1: Sources of inefficiencies and horizon of change

Source of inefficiencies	Short-term	Medium-term	Longer-term
Duplication of health care services	X		
Uncoordinated care	X		
Health services based on supply and not on demand	X		
Unnecessary care (e.g. health services not based on scientific evidence)		X	
Fragmented payment mechanisms between PHC and hospitals			X
Atomized purchasing process (e.g. for pharmaceuticals)			X

Previous efficiency reforms

The transition from fee-for-services (FFS) payments to per capita mechanism for PHC financing during the 1980s is probably one of the most important efficiency reforms that led to increasing allocative efficiency. Additionally, the process of prioritisation of services on the healthcare guarantees, implemented in the early 2000s, incentivised efficiency through prioritization of the most cost-effective interventions and standardization of care, in theory, reducing practice variability. However, the impacts of such reforms on fiscal space are unclear, with no formal evaluations conducted to date.

Decentralization of PHC and transition from FFS to per capita payments was implemented during the military dictatorship in Chile. Therefore, no deliberation or democratic discussion occurred in the context of its design and implementation (Bossert et al, 2000). In contrast, the political economy of health reform in the early 2000s was complex and heavily contested. The final approval required important concessions from the government to the opposition, including the rejection of the proposal for a solidarity fund for the pooling of resources between public and private insurers in Chile.

4. Purchasing PHC services

4.1 PHC legal framework

Since 1995, the Chilean PHC has had a legal framework (Estatuto de Atención Primaria, EAP, Law 19.378) covering two key areas: regulation of management, financing and coordination of healthcare; and, regulation of the health workforce, including relationships, career pathways, duties and rights of personnel who carry out primary health care actions. Specifically, this legal framework (Frenz et al, 2014):

- Regulates matters relating to the administration, financing and coordination of municipal primary health care to regulate the employment relationship, career service, duties, and rights of the PHC personnel.
- Sets the role of the Ministry of Health and Health Services regarding normative aspects, monitoring and evaluation of financing of programme offerings and achievement of goals (Arts. 49, 58, 59 y 60).
- Art. 49: Per capita financing and adjustment.
- Art. 56: Establishes the obligation of health facilities to comply with norms, guidelines, plans and programmes that the Ministry imparts. It also sets the responsibility of administering entities to establish the organizational structure of their local primary care management and the unit responsible for health, based on the Community Plan and the Care Model defined by the Ministry.
- Art. 58: Establishes that the Annual Health Program is approved by the Municipal Council and reviewed by the respective Health Service to determine if it meets Ministry of Health standards.
- Art. 60: Health Services should monitor compliance with technical standards by PC municipal facilities and the municipal health program.

PHC workers are salaried employee of municipalities and the structure of their payment is as follows (Law Nº 19378):

1. Base salary (sueldo base): pecuniary remuneration of a fixed nature and for equal periods, that each health worker will have the right to receive according to the level and category of health worker in which he is classified. This base salary could not be less than national minimum wage and it will be fixed by public sector payment readjustment.
2. Municipality PHC pay assignment (asignación APS): salary increase from base salary which each health worker has by right if they are included in the municipality formal health workers resources (dotación).
3. Zone assignment (asignación de zona): a percentage over base salary for those health workers who are working in extreme areas in Chile, geographically speaking.
4. Managerial assignment (asignación de responsabilidades): if one health worker has a managerial assignment (as PHC facility manager - director- or PHC health program

manager or PHC health team manager) has an additional payment (until 30% over their base salary).

5. Hard PHC performance assignment (asignación de desempeño difícil): if an urban or rural PHC facility is classified as "hard PHC performance" facility, their health workers receive a pecuniary assignment (until 15% over their base salary) This classification is recalculated every three years.

6. Family health specialist (doctors) incentives: salary increase address to attract and retain family doctors to PHC.

7. Destination and Training Stage doctors' incentives: salary increase address to attract and retain doctors to PHC, in the meantime, they are being trained to become specialists (Peña et al, 2015).

8. Performance-based salary incentives (Law 19813, 2002): a percentage over base salary for those PHC health teams who meet health goals related to national health objectives. This incentive is delivered at PHC teams level.

9. Law 20645 Respectful treatment to patient bonus (Bono Trato Usuario): an economic incentive is given to workers in establishments that give respectful treatment to patients.

Career services

The EAP career services establishes the norms related to skills development training programmes, contributing to the growth and retention of the PHC workforce. It is especially important for non-medical professionals, such as paramedics and technicians, for whom good wages, job stability, and career development are strong motivations (Frenz et al., 2014).

In order to organize the way to advance into the PHC career service, PHC workforce is classified in six categories (Law 19378, 1995):

- Category A: doctors, pharmaceutics and dentists
- Category B: other health professionals (psychologists, social workers, midwives, nurse practitioners, physiotherapists)
- Category C: health technicians (i.e. nurses)
- Category D: other health technicians
- Category E: administrative staff
- Category F: auxiliary personnel

For being classified as category A and B, it is mandatory to have a professional degree given by a university or for workers to complete eight semesters of professional training. There are 15 salary levels for each category described, which allow workers to advance in terms of salary upon completion of training. Each municipality decides salary increases for each category.

4.2 Provider payment mechanisms

Individual level providers are paid through salaries. Performance-based salary incentives are included for teams that meet health goals defined in the national health objectives (20% - 30% of the salary). This attempts to provide quality incentives and to promote integration of care through the delivery of services by clinical teams, instead of individual providers.

Capitation

A major challenge of the capitation system is that the amount of funding allocated per capita does not reflect the real cost of delivering the PHC plan and guarantees made to communities in Chile, and adjustments are insufficient to equitably distribute resources by need, despite substantial and sustained increases in funding (Frenz et al., 2014; Montero et al., 2008). Currently, the indexers used do not account for an adequate correction of per capita value perceived by the municipal territories. The main criticism lies in the capacity of the indexers to adequately predict health needs at the population level, thus generating inequity by providing resources that are not adjusted to the needs of each person (Centro de Estudios Públicos y Escuela de Salud Pública Universidad de Chile, 2017). Adjustment variables, such as demographic characteristics, burden of disease and indexers that account for inequity in health outcomes, such as the difference in population life expectancy, are absent in the Chilean capitation formula (Centro de Estudios Públicos y Escuela de Salud Pública Universidad de Chile, 2017).

Therefore, some municipalities are required to make their own contributions (although 92% make up deficits with their own resources, on average these contributions are of the order of 4% of the total income received by the municipality). This is because when the resources are not reached, the gap is supplied by municipal resources. Currently, the average financing gap estimated by the Minsal is $1,655 Chilean pesos per month per person in 2015, which represents almost 40% of the per capita of that year equal to $4,373. However, the economic capability of municipalities is different according to several characteristics and that could be a source of health inequality introduced by capitation. According to Riquelme et al. (2017) there is a growing inequality in financial resources among municipalities that manage PHC. Evidence indicates that there is a wide dispersion of the budget availability per enrolee among the different municipalities of Chile, which is not necessarily consistent with the existing population needs.

When sociodemographic determinants of spending were assessed, relevant associations were found: i) The increase in spending per enrolled with a higher proportion of the population in extreme ages is consistent with the existing evidence on the greater use of health services; ii) The strong inverse association between schooling and potentially lost years of life is noteworthy; iii) The higher the proportion of municipal population in conditions of poverty and rurality, recognized social determinants, the lower was the expenditure per registered, despite the fact that the central government's per capita allocation system considers adjustments for both factors. This reveals a scenario of frank socioeconomic and territorial inequality, where inhabitants of municipalities with vulnerable profiles have less possibility of accessing health care (Riquelme et al., 2017).

In theory, a capitation scheme should incentivize providers to focus on preventive care (Barnum, Kutzin, and Saxenian 1995) since they could extract more profit from the

capitation payment if the population they are responsible for is healthier and does not use services intensively. However, this situation does not operate exactly in this way in practice, since capitation payments are transferred to municipalities who distribute the funds at their discretion to primary care centres. Furthermore, doctors are salaried so most of the incentives, beneficial or not, of capitation are diluted. A shortcoming of this kind of payment mechanism is that it could incentivize under provision of services and enrolment of low-risk patients to reduce costs (Barnum, Kutzin, and Saxenian 1995). In fact, these incentives do not apply to public health centres since, as it was mentioned before, they are paid mostly through a global budget by the municipality they belong to. Furthermore, by law, public health centres cannot withhold services or cherry pick low-risk patients and are not allowed to turn away patients that want to enroll (unless they are Isapre members or do not live or work near the centre).

Program financing

Program financing entails cumbersome administrative procedures, aggravated by the number of programmes (over 50), each with separate reporting requirements (qualitative and quantitative reports are required according to the type of program and the availability of data). There are several administrative bottlenecks in the program administration process: delays in transfers and availability of resources, lack of reporting and poor knowledge of central government administrative processes, difficulties with regards of technical governance of health activities and financial norms at the municipal level (Zuleta, 2013). Tackling them through measures including transfer of programme financing to capitation, streamlining processes and increasing administrative support, including implementation of electronic records, is a current priority (Frenz et al., 2014).

Innovative provider payment systems

There is a lack of real-world experience in the implementation of innovative provider payment systems at the local government in Chile. It is unclear if this is due to lack of autonomy, long-term structural deficit that can hamper innovation or, more likely, driven by the lack of technical capacities to implement such innovations.

Performance-based salary incentives

Inside of the modernization of the State management movement, the health sector was one of the priorities of the Ricardo Lagos government. Health reforms launched in the 2000s (Congreso Nacional, 2002), aimed to improve the collective performance of the health workforce to achieve national PHC goals. This strategy was materialized in Law 19813 - the result of negotiations between the Ministry of Health (directed by Dr. Osvaldo Artaza), the Chilean Association of Municipalities and the Confederation of Municipal Health Union (PHC workers union) in association with primary healthcare that sought social and economic demands directed at PHC workers.

The aim of the Law was to improve the labour and economic conditions of PHC workers. The generalized perception in the different PHC labour unions was that PHC had been highly postponed during the dictatorship years and that health workers deserved improved labour conditions. In order to improve these conditions, PHC union's proposal

was to increase salaries straightway (Congreso Nacional, 2002). However, this was not possible on the Ministry of Health side, since a wage increase for PHC workers would have prompted other health unions (hospitals, for example) to request the same concession, a situation that would have further conflicted the health reform scene in those years. Hence, compromise was found to create an economic incentive for PHC workers that was associated with improving access and quality of services for the registered population.

Currently, this incentive is paid four times per year (quarterly) according to the range of achievement of health goals accomplished the year before. The verification of the fulfilment of each goal was left in the hands of each Regional Ministerial Secretariat, belonging to the Undersecretariat of Public Health of the Ministry of Health. If the PHC team meets 90% of its targets, all PHC workers, administrative and provider staff of a specific facility will receive the economic incentive, consisting of a variable percentage of the base salary, divided into four payments.

The goals of prioritized sanitary conditions, subject to compliance by PHC, are defined by the Ministry of Health. To do this, every September of the current year the Ministry reconsiders the Chile's health priorities and sets the national goals to be met for next year, ensuring that the committed activities are contained in the Family Health Plan II (basket of benefits), whether known and routinely developed by health teams, which allow the participation of all the levels that make up the health teams and are activities that are recorded in the monthly statistical summary (Law 19813, 2002).

Based on the definition of health goals prioritized by the Ministry of Health, Health Districts, PHC labour unions and municipalities health administration entities set their own parameters for meeting the goals in the prioritized health conditions. Thus, the setting at the local level among Health District, PHC labour unions and municipalities health administration entities facilitates the relevance and realism of meeting goals, by providing technical information (mainly, regarding staffing and workload that would imply the proposed goal achievement parameter) (Decree number 324, 2003).

The available evidence on the effectiveness of performance-based salary incentives is scarce. Even so, some precedents highlight several inefficiencies of this incentive. For example, there are concerns about the credibility of performance reporting. In one study, the effectiveness of hypertension treatment across regions varied from 28% to 75%. In contrast, 2010 information reported by PHC centres ranged from 54% to 77% (Mansilla et al. 2013).

In the opinion of some Chilean PHC experts, due to performance-based salary incentives, focus on coverage versus results is biased towards the areas where the objectives are set, especially in areas that are guaranteed by the GES instead of all the prioritized areas. This situation introduces another bias: PHC teams would prefer to put all their effort only on economically incentivized health actions (Frenz et al., 2014). Also, the desire to meet the incentivized health goals could lead officials to make decisions about patients that are not entirely adequate or that do not respond to their clinical needs (Frenz et al., 2014). This has happened in polypharmacy and older people (Arce, 2015).

Another study, commissioned by the Undersecretariat of Healthcare Networks (Ministry of Health) and developed by the Center for Public Systems of the University of Chile, investigated different actors and processes of the health sector, in order to analyse the

composition, amount and results in the public health management of the application of assignments for compliance with the goals established in Law 19,937 (establishments dependent on Health Districts). The study roughly concludes that improvements must be made to the incentive scheme for Health District and their associated establishments, since the mechanism was causing more harm than good. According to the qualitative perception of the actors interviewed and surveyed, it is believed that gaming would affect the effectiveness of the incentive and that there would be a crowding out effect that replaced the old public official pride (intrinsic motivation) with external motivations (monetary incentive) (Subsecretaría de Redes Asistenciales, 2016).

Finally, regarding the procedures that form the incentive system at the municipal level, a study conducted by the World Bank has indicated that the procedure described in Law 19813 is unfair on two fronts: on the one hand, the methods used to determine the goals (remember that they are set in a tripartite commission among the municipalities entities, their PHC labour unions and the Health District, based on the parameters defined by the Ministry of Health) makes the control of the State ineffective. On the other hand, it's reasonable to doubt about the final effect of the incentives, since the mayor's behaviour could weaken the power of the incentives by setting other elements of the employee's income and thus decrease the power of the incentives. In this way, the mayor's behaviour remains behind a veil of doubt because the incentives transferred from the central level could modify his behaviour towards PHC workers (Banco Mundial, 2011).

Barriers to financial incentives

Since municipalities are already responsible for covering the funding the gap left by capitation payments, it is unlikely they can afford to pay for additional economic incentives for PHC workers. Aspects related to the effectiveness of the governance of the Ministry of Health over decentralized PHC can be understood as barriers that would hinder the effectiveness of economic incentives. In the relationship between Health District and municipalities, there is a tremendous space of freedom to accommodate rules in order to always get the incentive (administrative steps to correct numbers in order to not undermine the incentive).

Per capita flows follow the users when they decide to change from one PHC to another, particularly from different municipalities, acting as a voucher. While, in theory, this could incentivize some degree of competition between PHC and/or municipalities to attract users, in practice this does not occur. First, the mobility of users is limited due to practical constraints, such as the limited number of PHC facilities located in most areas. Second, as capitation fees are likely underfunded, little incentive exists for municipalities to engage in competitive behaviours to attract new users. In most cases, the incentive could be the opposite.

Non-financial incentives

One of the main factors that dampen access to PHC in Chile is the limited availability of human resources, mainly physicians, to work as PHC providers. This is explained by a lack of financial (e.g., salaries) and non-financial incentives (e.g. prestige) (Bass, 2010). A well-established mechanism to cope with this challenge and facilitate access to publicly-provided PHC services across the country is the Rural Health Practitioner Programme, first

implemented in 1955. The main objective of the programme is to attract physicians to work in rural primary care hospitals and health centres for a minimum of three years (and a maximum of six). The main incentive is a paid residency in a university hospital plus attractive salaries and benefits proportional to the degree of isolation and clinical responsibility (Peña, 2010). This programme has been extended to urban areas in recent years.

5. Digital technologies and health financing

Chile does not have a national policy to finance digital technologies in PHC. As a consequence, the implementation of these technologies has been poorly coordinated. Multiple electronic medical records coexist in the public healthcare system without complete integration between them, even in the same referral network.

Recent initiatives to digitalise the public health system are mostly focused on specialist medical care provision, the clearest example is "*Hospital digital*". Although it provides some primary care services, such as remote scheduling, the main purpose of this strategy is to decrease waiting lists through specialist remote consultation.

As a way to respond to the COVID-19 pandemic, PHC teams implemented remote consultations (telephone and video calling) for acute and chronic care conditions. There are no special resource allocation processes or payment mechanisms for these activities (as occur for specialist care), so its cost is included in the per capita amount assigned for each county.

6. Conclusion

Chile has a long tradition of an integrated, territorial, multidisciplinary-oriented PHC. A health system organization based on community centres across the country, financed mainly through a capitation system have contributed to this success. Nevertheless, problems from coordination between providers at different levels (e.g. with hospitals) occurs due to differences in the governance, responsibilities and financing schemes implemented at Health Services and Municipalities.

Political, institutional and regime factors had been influential in key changes of the PHC organization in Chile, including the military government and the leadership of the central-left government after democratic transition. Long standing health programmes, such as the Rural Health Practitioner programme, and incremental changes (such as the implementation of PRAPS and changes in the capitation financing scheme for PHC) have likely allowed increased access and acted as levers to sustain and expand PHC in Chile.

References

Arce G, Pinto M, Vivallo F. Caracterización del tratamiento farmacológico en pacientes adultos mayores hipertensos y diabéticos del Programa de Salud Cardiovascular en CESFAM Juan Pablo II, San Bernardo. In: II Congreso Latinoamericano de Mastozoología XXV Jornadas Argentinas de Mastozoología. 2015, p. 10.

Arrieta, Alejandro, Ariadna García-Prado, and Jorge Guillén. 2011. "The Private Health Care Sector and the Provision of Prenatal Care Services in Latin America." World Development 39(4): 579–87.

Atkinson, Sarah, Amélia Cohn, Maria E Ducci, Lucília Fernándes, and Fiona Smyth. 2008. "Promotion and Prevention Within a Decentralized Framework: Changing Health Care in Brazil and Chile.." The International journal of health planning and management 23(2): 153–71

Banco Mundial. Optimización del Sistema de Salud de Chile. Análisis de los Sistemas de Incentivos y Opciones de Política. Santiago, Chile, 2011.

Barnum, H, J Kutzin, and H Saxenian. 1995. "Incentives and Provider Payment Methods.." The International journal of health planning and management 10(1): 23–45.

Bass, C. 2012. "Family Health Model in Chile and Greater Resoluteness of Primary Health Care: Contradictory or Complementary?." Medwave 12(11): e5571–71.

Bass, C. 2010. Identificación de Factores Relacionados con la Rotación Laboral de los Médicos que Trabajan en Centros de Salud de Atención Primaria del Gran Santiago. II Encuentro Anual de la Sociedad Chilena de Políticas Públicas. Sociedad Chilena Políticas Públicas.

Bastias, G, T Pantoja, T Leisewitz, and V Zarate. 2008. "Health Care Reform in Chile." Canadian Medical Association Journal 179(12): 1289–92.

Basu, Sanjay, Jason Andrews, Sandeep Kishore, Rajesh Panjabi, and David Stuckler. 2012. "Comparative Performance of Private and Public Healthcare Systems in Lowand Middle-Income Countries: a Systematic Review." PLoS Medicine 9(6): e1001244.

Becerril-Montekio, Víctor, Juan de Dios Reyes, and Annick Manuel. 2011. "Salud Pública De México - the Health System of Chile."

Berendes, Sima, Peter Heywood, Sandy Oliver, and Paul Garner. 2011. "Quality of Private and Public Ambulatory Health Care in Low and Middle Income Countries: Systematic Review of Comparative Studies." PLoS Medicine 8(4): e1000433

Bitran, Ricardo. 2013. Garantías explícitas de salud para los chilenos: el plan de beneficios del AUGE - Serie de estudios ÚNICO. UNICO Studies Series;No. 21. World Bank, Washington DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/13281 License: CC BY 3.0 IGO.

Bossert T, Larrañaga O, Infante A, Beauvais J, Bowser D. Applied research on decentralization of health systems in Latin America. Chile case study. Data for decision-making project. Boston: Harvard School of Public Health, 2000

Castro, R., 2006, 'Midiendo la eficiencia de la salud municipal', Serie informe social 97, Libertad y Desarrollo.

Centro de Estudios Públicos y Escuela de Salud Pública, Universidad de Chile. 2017. Propuesta de

modernización y fortalecimiento de los prestadores estatales de servicios de salud. https://www.cepchile.cl/cep/libros/libros-digitales/propuesta-de-modernizacion-y-fortalecimiento-de-los-prestadores

Clínicas de Chile 2017. Dimensionamiento del Sector de Salud Privado en Chile: Actualización a cifras año 2016. http://www.clinicasdechile.cl/wp-content/uploads/2017/12/DimensionamientoSaludCifras2016.pdf

Congreso Nacional (2002). Historia de la Ley 19.813 Otorga Beneficios a la Salud Primaria. Chile.

Debrott David (2015). Financiamiento de la atención primaria de salud municipal. Congreso de Salud Primaria Municipal, Viña del Mar.

Decree 324. 2003. Aprueba reglamento de la Ley Nº 19.813 que otorga beneficios a la salud primaria. https://www.bcn.cl/leychile/navegar?idNorma=206664&buscar=reglamento%2B324Ministerio de Salud.

DIPRES (División de Presupuestos), 2013. Sistema Público de Salud, Situación actual y proyecciones fiscales 2013-2050. Ministerio de Hacienda.

Frenz P, Alfaro T, Orsini M, Alaniz R, Aguilera H, Acevedo J, Sgombich X, Díaz C, Infante A (2014) 'Learning from Promising Primary Care Practice Models for the USA: Country Case Study Chile', Escuela de Salud Pública, Facultad de Medicina Universidad de Chile, Santiago for the Training and Research Support Centre, July 2014.

Gideon, Jasmine. 2001. "The Decentralization of Primary Health Care Delivery in Chile." Public Administration and Development 21(3): 223–31. http://onlinelibrary.wiley.com/doi/10.1002/pad.175/abstract.

Helmke, Irene. 2011. "A Decade Towards Better Health in Chile." Bulletin of the World Health Organization 89(10): 710–11.

Law N° 19937. Establece una nueva concepción de Autoridad Sanitaria, distintas modalidades de gestión y Fortalecer la Participación Ciudadana. Diario Oficial de la República de Chile, Santiago, Chile, 24 de febrero de 2004. http://transparencia.redsalud.gov.cl/transparencia/public/ssantofagasta/archivos/Ley_%2019937.pdf

Law Nº 19378. Establece Estatuto de Atención Primaria de Salud Municipal. Diario Oficial de la República de Chile, Santiago, Chile, 24 de marzo de 1995 https://www.bcn.cl/leychile/navegar?idNorma=30745

Law N° 19813 Otorga Beneficios a la Salud Primaria. Diario Oficial de la República de Chile, Santiago, Chile, 18 de junio de 2002 https://www.bcn.cl/leychile/navegar?idNorma=199676

Leon-Vargas, E A, and A Martinez-Becerra. 2011. "Estructura Y Comportamiento Del Mercado De Salud en Chile." ed. Jorge Katz. Universidad de Chile.

Letelier, Luz M, and Paula Bedregal. 2006. "Health Reform in Chile." Lancet 368(9554): 2197–98.

Manuel, A. 2002. "The Chilean Health System: 20 Years of Reforms." Salud Pública de México 44(1): 60–68

Ministerio de Salud, Subsecretaría de Redes Asistenciales, División de Atención Primaria (2008). Simposio Fortalecimiento del sistema per cápita. Revisión de indexadores en el modelo de financiamiento de la atención primaria. Presentación, Análisis, Conclusiones. Santiago. http://www.bibliotecaminsal.cl/wp/wp-content/uploads/2016/03/14.pdf. Accessed: 27/11/20

Ministerio de Salud, Subsecretaría de Redes Asistenciales, División de Atención Primaria. (2011). Financiamiento de la atención primaria municipal. Evaluación de indexadores del per cápita basal'. Santiago. http://www.bibliotecaminsal.cl/wp/wp-content/uploads/2018/01/001.Financiamiento-de-la-Atención-Primaria-de-Salud-Municipal-evaluación-de-indexadores-del-per-capita-basal.pdf. Accessed: 27/11/20

Ministerio de Salud, Subsecretaría de Redes Asistenciales, División de Atención Primaria. (2013). 'Orientaciones para la implementación del modelo de atención integral de Salud Familiar y comunitaria dirigido a equipos de salud'. Santiago. https://www.minsal.cl/portal/url/item/e7b24eef3e5cb5d1e0400101650128e9.pdf Accessed: 27/11/20

Ministerio de Salud (2020). Orientaciones para planificación en Red 2021. https://www.minsal.cl/wp-content/uploads/2020/09/20200908_ORIENTACIONES-PARA-LA-PLANIFICACION-EN-RED-2021.pdf Accessed: 12/10/2020 .

Montero J, Poblete F, Torche A, Vargas V. (2008). Análisis del modelo de asignación financiera en la atención primaria chilena: pertinencia del per-cápita actual y uso de variables en su cálculo para asegurar concordancia entre la situación epidemiológica actual y el modelo de atención. Capítulo III. Camino al Bicentenario - Propuestas para Chile. Centro de Políticas Públicas UC. https://politicaspublicas.uc.cl/wp-content/uploads/2015/02/analisis-del-modelo-de-asignacion-financiera-en-la-atencion-primaria-chilena.pdf

Observatorio del Gasto Fiscal en Chile (2017) Análisis del Marco Jurídico de las Corporaciones Municipales en Chile. https://observatoriofiscal.cl/archivos/documento/Marco_Juridico_Corp_Municip_(VFF.05.06.2017).pdf. Accessed: 25/11/20.

Ollé-Espluga L, Vargas I, Mogollón-Pérez A, et al. (2020) Care continuity across levels of care perceived by patients with chronic conditions in six Latin-American countries. Gaceta Sanitaria. ISSN 0213-9111. https://doi.org/10.1016/j.gaceta.2020.02.013.

Observatorio Fiscal 2017. https://observatoriofiscal.cl/archivos/documento/Marco_Juridico_Corp_Municip_(VFF.05.06.2017).pdf

Peña, S., Ramirez, J., Becerra, C., Carabantes, J., & Arteaga, O. (2010). The Chilean Rural Practitioner Programme: a multidimensional strategy to attract and retain doctors in rural areas. Bulletin of the World Health Organization, 88(5), 371–378. https://doi.org/10.2471/BLT.09.072769

Riquelme Briceño, Camilo, Haase Delgado, Juan, Lavanderos Bunout, Sebastián, & Morales Martínez, Andrea. (2017). Desigualdad en recursos financieros de la Atención Primaria de Salud Municipal en Chile, 2001-2013. Revista médica de Chile, 145(6), 723-733. https://dx.doi.org/10.4067/s0034-98872017000600723

Subsecretaria de Redes Asistenciales (2016) Organigrama Subsecrtetaría de Redes Asistenciales https://www.minsal.cl/wp-content/uploads/2018/05/ORGANIGRAMA_SUBSECRETARIA-DE-REDES-ASISTENCIALES.pdf Accesed 25/11/20

Subsecretaría de Redes Asistenciales, División de Atención Primaria (2014). Índice de actividad de la atención primaria (IAAPS). Orientación técnica y metodológica de evaluación. Santiago. Available in: http://buenaspracticasaps.cl/wp-content/uploads/2014/07/MINSAL-2014_orientaciones-iaaps.pdf Accessed: 26/11/20

Subsecretaría de Redes Asistenciales. Estudio de Diseño e Implementación de los Incentivos Institucionales de los Servicios de Salud. Santiago, Chile, 2016. http://www.dipres.gob.cl/598/articles-163149_doc_pdf2.pdf

Superintendencia de Salud (2009) Manual del Estándar General de Acreditación para Prestadores Institucionales. Atención Abierta https://www.supersalud.gob.cl/observatorio/671/articles-4530_Manual_AA_pdf.pdf Accessed: 25/11/20

Vargas I, Garcia-Subirats I, Mogollón-Pérez AS, et al. (2018). Understanding communication breakdown in the outpatient referral process in Latin America: a cross-sectional study on the use of clinical correspondence in public healthcare networks of six countries, Health Policy and Planning, Volume 33, Issue 4, May 2018, Pages 494–504, https://doi.org/10.1093/heapol/czy016

Zuleta S (2013) ‘Condicionantes para la gestión de atención primaria de salud’, Presentación. División de Atención Primaria. Ministerio de Salud: Santiago. (Available at: http://minsal.uvirtual.cl/documentos/archivo/soledad_zuleta.pdf)

Appendix: Hot topics

Summary of topics that are salient on the PHC experience in Chile:

1. The Integrated Delivery strategy, based on multidisciplinary teams including health providers and social workers, with a territorial organization and responsibility over the population within that area.

   Hot topic: Models of health service integration in Chile

   This strategy has been a pillar for public health achievements including high vaccine coverage, maternal and childhood care and, in recent years, comprehensive care for multimorbidity for NCDs. Moreover, during the COVID-19 pandemic this delivery strategy had allowed mount test-trace-isolate programmes all around the country.

2. Experiences of integration of private providers of PHC within the public health sector delivery schemes.

   Hot topic: Integration of public and private sector

   While most private providers act as substitutive providers for health services in the segmented health system in Chile, some have opted-in to be part of networks of providers. The most salient experiences are linked to the ANCORA and Cristo Vive PHC centres, whose experiences are similar to the Health Centre Program from the Health Resources and Services Administration (HRSA) from the Federal Government of the United States of America. For example, the ANCORA network, being associated with a University, works as an innovation hub for primary care practice.

   The success of these experiences could be a noteworthy case-study showing the opportunities for further integration of private providers in publicly financed health systems; however, it is important to notice that even though these experiences are more than a decade old, they have not spread throughout the country. There is no consensus about the desirability of the spreading of these types of private-public partnerships in PHC.

3. Process of decentralization of PHC conducted on 80s during the military government in Chile.

   Hot topics: Historical perspective on the evolution of PHC delivery, and, level and detail of provider autonomy

   Reforms led to transferring ownership and management of PHC centres to local governments (municipalities) based on quasi-private organizations, altering the payment mechanisms starting with a FFS scheme and rapidly moving to capitation for cost containment.

4. Incentives for PHC providers.

   Hot topics: Introduction of strategic payment mechanism in country, and, Historical and political economy analysis of how these incentive mechanisms developed

   Incentives for PHC providers have been implemented during the last decade with mixed results. The policy design and implementation could shed light on the opportunities and problems (for example the resistance from health unions) that implemented such schemes in LMIC can face in real world practice.

5. Long history of risk-adjusted capitation mechanism for transferring PHC resources to local governments.

   Hot topic: Risk-adjusted capitation mechanism

   Reforms to the formula and allocation mechanisms have been proposed but not implemented nationwide. Nevertheless, some pilot experiences, analysis and lessons learned can inform future steps with regards to the capitation payment mechanism in the Chilean health system.

6. The role of incentives in increasing the PHC workforce.

   Although it was not identified within the hot topics for the Commission, the development of financial and non-financial incentives for increasing the number of physicians (generalist and specialist) working at PHC during the last decades is noteworthy. It started decades ago with a programme to cope with the shortage in rural/isolated areas but has evolved in recent years with different programmes that aim to incentivise physicians to work in PHC.

Additional information on these hot topics is presented in the following table.

Hot topics table

Key topic	Description	Why of interest?	Scale – national or a pilot?	Evidence of impact
DELIVERY				
Models of health service integration in the country	Integrated delivery strategy based in multidisciplinary teams including health providers and social workers with a territorial organization and responsibility over the population within that area.	This strategy has been a pillar for public health achievements including high vaccine coverages, maternal and childhood care and, in more recent year, comprehensive care for multimorbidity for NCDs. Moreover, during the COVID19 pandemic this delivery strategy had allowed to mount test-trace-isolate programmes all around the country.	National	There is no quantitative evidence of the impact of the model. Nevertheless, case studies evaluating the coordination of integrated delivery through multidisciplinary teams and provider networks exists
Integration of public and private sector	Experiences of integration of private providers of PHC within the public health sector delivery schemes. While most private providers act as substitutive providers for health services in the segmented health system in Chile, some have opted-in to be part of networks of providers. The most salient experiences are linked to the ANCORA and Cristo Vive primary health care centres whose experiences are similar to the Health Center Program from the Health Resources and Services Administration (HRSA) from the Federal Government of the United States of America.	The ANCORA network for example, being associated with a University works as an innovation hub for primary care practice. The success of these experiences could be a noteworthy case-study showing the opportunities for further integration of private providers in publicly financed health systems.	Local / pilot. It is important to notice that even though these experiences are more than a decade old they have not spread throughout the country.	There is no consensus about the desirability of the spreading of these types of private-public partnerships in PHC.
Historical perspective on the evolution of PHC delivery	The evolution of PHC delivery in Chile has been determined by the type and characteristics of its dependency. In 1952 all PHC was transferred to the National Health Service until 1980, when, under	In the last decades, PHC delivery health sector decentralization policies have been implemented on a broad scale throughout the developing world. The case of Chile marked by political factors could be a noteworthy	National	Analysis has shown advantages and disadvantages of decentralization of PHC delivery, since financing remains centralized and insufficient in itself

	the Dictatorship regime, it was decentralized to local governments (Municipalities). After the return to Democracy (1990), there has not been further modifications to this reform. The implementation of General Guarantees in Health (GGH, 204) significantly transformed the production conditions in the health sector.	case-study showing the lights and shadows of historical evolution of PHC delivery.		to cover the Family Health Plan package, as well as the Ministry of Health retains considerable priority-setting power for the whole system. There is scarce evidence about the impact of GGH reform to PHC delivery.
INCENTIVES				
Introduction of strategic payment mechanism in country	Program financing is a component of PHC financing. Represents the 25% of overall financing transfers to PHC. It is allocated by the Ministry of Health and is a prospective budget based on projected activities aimed at increasing PHC capacity to resolve GES problems and other priorities or health innovations.	Program financing entails cumbersome administrative procedures, aggravated by the number of programmes (over 50) each with separate reporting requirements There are several of administrative bottlenecks in the program administration process: delays in transfers and availability of resources, lack of reporting and poor knowledge of central government administrative processes, difficulties in regards of technical governance of health activities execution and financial norms at the municipal level.	National	There is no quantitative evidence of the impact of the program financing

Risk-adjusted capitation mechanism	Capitation is a prospective payment allocated by the Ministry of Health (through Health Districts) for each registered FONASA beneficiary in each facility depending on municipalities. The capitation is calculated in order to cover the costs of health workers, pharmacy, municipality and facility management, operational expenses of the Family Health Plan II and GES guarantees. The base capitation is adjusted upwards, according to factors related to rural population, deprivation level and geographic zone. Additionally, a fixed amount is added according to the percentage of the population over 65 years and for difficult duty due to geographic or sociocultural challenges.	Capitation represents the 70% of overall financing transfers to PHC, but per capita amount does not reflect the real cost of delivering the PHC plan to the communities in Chile, particularly to comply with guarantees, and adjustments are insufficient to equitably distribute resources by needs, despite substantial and sustained increases The main criticism lies in the capacity of the indexers to adequately predict health needs at the population level, thus generating inequity by providing resources that are not adjusted to the needs of each person	National	There is some evidence in regards of capitation deficiency and new proposal of risk adjustment variables
Level and detail of provider autonomy	Provider autonomy is limited in Chile. Although decentralization has allowed local authorities to set priorities according to their population's need, centres have achieved limited autonomy because most financing remains centralized. Rural centres are even less autonomous due mostly to financial constraints.	The autonomy of PHC providers, although limited, allows certain areas of decision such as management of personnel, local definition of salaries and financing of investment projects (according to political interests and availability of local financial resources).	National	There is a lack of real world experiences in the implementation of innovative provider payment systems at the local government in Chile. It is unclear what are the reasons behind this lack of experiences.
History and political economy analysis of how these incentive mechanisms developed	Performance-based incentive was created within the Health Reform launched in the 2000s. This strategy was materialized in Law 19813. This Law contains the result of the negotiations between the Ministry of Health, the Chilean Association of Municipalities and the Confederation of	Performance-based salary incentive is an interesting scheme of incentive because it is associated with known pitfalls regarding incentive side effects. Also, the generalized perception is that gaming would affect the effectiveness of the incentive and that there would be a crowding out effect that replaced the old public official pride (intrinsic	National (not available for NGO facilities)	The available evidence about the effectiveness of performance-based salary incentives is scarce. Even so, some precedents could show inefficiency of this incentive.

	Municipal Health Union (PHC workers union) in association with primary healthcare that sought social and economic demands directed at PHC workers. The aim of this Law was to improve the labour and economic conditions of PHC workers. The generalized perception in the different PHC labour unions was that PHC had been highly postponed during the dictatorship years and that it deserved to improve their labour conditions. In order to improve these conditions, PHC union's proposal was to improve their salaries straightway. However, this was not possible on the Ministry of Health side, since a wage increase for PHC workers would have prompted other health unions (hospitals, for example) to request the same concession, a situation that would have further conflicted the Health Reform scene in those years.	motivation) with external motivations (monetary incentive). And, finally, regarding the procedures that form the incentive system at the municipal level, could introduce ineffective control from government and manipulation from municipal authorities.		
Other: incentives to attract human resources for PHC	Rural Health Practitioner Programme was implemented in 1955. The main objective of the programme is to attract physicians to work in rural primary care hospitals and health cen-tres for a minimum of three years (and a maximum of six). The main incentive is a paid residency in a university hospital plus attractive salaries and benefits proportional to the degree of isolation and clinical responsibility.	Although it was not identified within the hot topics for the Commission, the development of financial and non-financial incentives for increase the number of physicians (generalist and specialist) working at PHC during the last decades is noteworthy. It started decades ago with a programme to cope with the shortage on rural/isolated areas but have evolved in recent years with different programmes that aims to incentivise physicians to work at PHC.	National	Some indicators of evaluation are available on Peña (2010) including recruitment, retention rates and satisfaction.