4 Quality and outcomes in primary health care

Looking to expand access to high quality PHC, Brazil has taken important steps to improve the distribution of doctors, develop new forms of service organisations, introduce new financing models, and implement a range of quality initiatives, well aligned with the experiences of OECD countries. However, the Brazilian PHC system is still characterised by a relatively low population coverage, large disparities in care quality, and a weak referral system. PHC has also traditionally provided few low-complexity procedures, and is not comprehensive enough to meet evolving patients' needs. Tackling these challenges requires strengthening the gatekeeping system while expanding the range of services provided by family health teams. Efforts are also needed to ensure implementation of quality initiatives throughout the country. Greater guidance and support from the federal government will be necessary to help municipalities with low capacity.

4.1. Introduction

Brazil recognised that a strong PHC is the foundation of a health system that is effective, efficient and responsive to patients 'needs. Over the past decade, Brazil has implemented a wide range of reforms to develop the system accordingly and improve both care quality and the range of services provided by family health teams (FHTs). These include the development of standards of care, guidelines, health care services portfolio, the establishment of pay-for-performance programmes and the production and publication of data underpinning PHC. High level analyses however suggest significant scope for improving the quality and outcomes of PHC service delivery. While the burden of risk factors for health and of chronic conditions is growing in Brazil, compliance with preventive care norms, and the detection and management of chronic conditions give some cause for concern. In addition, PHC has traditionally been characterised by a low supply of health care services, offering few low complexity procedures and surgeries.

This chapter assesses Brazil PHC system with regards to the quality and outcomes of care provided. It starts with an overview of recent reforms to expand PHC and to foster quality improvement. The chapter then points to its performance in examining some indicators of PHC quality across OECD countries. The chapter concludes with some key suggestions to secure higher quality and outcomes of PHC services.

4.2. Recent reforms in PHC in Brazil

Following the implementation of the Family Health Strategy in 1994 (described in Chapter 2), several important reforms were introduced from 2011 to 2019 to continue to expand PHC in Brazil. The reforms intend to restructure PHC through new regulations to improve the distribution of doctors, to develop new forms of service organisation and new financing models for PHC.

4.2.1. Considerable efforts have been made to recruit and retain professionals in more remote areas

Several initiatives have been taken in Brazil over the past decade to recruit and retain professionals in more vulnerable areas. The *Inland Health Care Programme (Programa de Interiorizaçao de Trabalho em Saúde*) implemented from 2001 to 2004 first intended to improve the distribution and training of doctors and nurses in order to ensure their provision in poor and remote parts of the country. However, only 469 doctors joined the programme. Another federal strategy was the Valuing Primary health Programme (*Programa de Valorização da Atenção Básica – PROVAB*) introduced in 2011 to encourage health workers to spend a year working in PHC in areas with a shortage of these professionals (ordinance No. 2, 087, of 1 September 2011). The programme provided for the payment of a federal scholarship of BRL 10 000 a month. The programme also entails a mandatory 12-months theoretical-practical postgraduate course and the completion activity in the PHC units. To guarantee the quality of the service provided, medical doctors were evaluated, on a quarterly basis, by managers and institutions, in addition to conducting self-assessments. Well-evaluated participants received an additional 10% score on their medical residency exam. While the programme helped to attract more doctors in remote areas, the number was not enough to meet the needs of the target municipalities. Medical professionals showed a limited interest for the programme. In 2013, the programme hired 3 800 doctors, who were allocated in 1 300 different municipalities (Pereira et al., 2016[1]).

The Programme *Mais Médicos para o Brasil* (More Doctors Programme [MDP]) was then instituted as a federal government initiatives in 2013 to address shortfalls in the supply of doctors in PHC and diminish regional inequalities in health. The MDP was a supply side intervention with three prongs that complement each other, with a particular emphasis on strengthening PHC provision in underserved communities (Stein and Ferri, 2017[2]; WHO, 2018[3]).:

- (1) Transfer of funds to municipalities to strengthen PHC infrastructure;
- (2) Improving access to and quality of medical school training; and
- (3) Recruitment of Brazilian and foreign physicians to work within FHS teams.

Priority municipalities for participation in the programme were ones with population living in extreme poverty, population living in indigenous reserves, municipalities with very low human development index, or situated in areas of extreme poverty and with rural communities in the Northeast and North Regions (Pereira et al., 2016[1]).

The Ministry of Health paid the monthly salary of doctors enrolled under the programme. The agreement stated that Brazil paid about BRL 10 000 (EUR 2 126; USD 2 321) a month for each professional. Food, lodging and transportation costs were covered by the municipality. Doctors had a three-year contract, renewable once (Biernath, 2020[4]). It is not mandatory for the MDP physicians to take the national competency exam that is required for other physicians to practise medicine in Brazil. Instead, the MDP physicians are required to complete a mandatory three-week training course provided by the Brazilian health authorities before they could be deployed in municipalities. In addition, all MDP physicians are required to attend brief training sessions organised by Brazilian authorities in regular intervals. Online-learning courses are also available to the MDP physicians.

Overall, the MDP led to positive improvements. The programme has allowed to make considerable investment in the infrastructure of PHC units in all participating municipalities with the provision of new equipments and refurbishments (Pereira et al., 2016[1]). More recent evidence confirms that the MDP successfully channelled additional resources for strengthening the PHC infrastructure, with the MDP resources leading to the construction of 3 496 new basic health units and refurbishment of 3 417 units by 2015 (Santos et al., 2017[5]). According to Biernath (2020), more than 26 000 PHC facilities were built or renovated throughout Brazil.

In addition, the MDP have contributed to improvements in access to medical training. Data obtained from the Higher Education Census suggest that the MDP achieved its medium-term objective of expanding the number of new vacancies by 2017. An estimated 92% of the new medical undergraduate vacancies created from 2010 and 2018 took place after the MDP was launched in 2013 (Figueiredo et al., 2021[6]). It allowed to create 11 500 new places for medical training and 12 400 places for medical residency, opened to both Brazilian and foreign doctors (WHO, 2018[3]).

Lastly, evidence shows that the MDP has improved incentives for health professionals to work in underserved areas, and recruiting medical professionals from outside the country. As Brazilians were slow to accept posts in underserved communities (only 938 doctors applied for 15 460 job openings in the first months of the programme) (Biernath, 2020[4]), co-operation agreements between Brazil and Cuba facilitated by the Pan American Health Organization (PAHO) and the World Health Organization (WHO) have ensured an adequate provision of doctor. More than 20 000 Cuban doctors have been mobilised to the Brazilian health system (representing two-third of the professionals who joined the programme) (WHO, 2018[3]). In total, 18 240 job positions were created during the MDP. Among these, 8 332 were filled by Cubans, 4 525 by Brazilians who had graduated locally, 2 824 by Brazilians who had graduated abroad, and 451 by doctors of other nationalities (Biernath, 2020[4]).

Hone and colleagues (2020) suggested that the MDP was associated with a 12% increase in the number of PHC physicians by its fifth year of implementation, with more pronounced effects among municipalities that had lower levels of physician availability at the start of the programme (Hone et al., 2020[7]).

Between 2013 and 2014, the number of municipalities with fewer than 0.1 doctors per thousand inhabitants decreased by 75%, from 374 to 95 (Pereira et al., 2016[1]). More generally, the number of municipalities with a shortage of doctors fell from 1 200 in 2013 to 777 in 2015 (Biernath, 2020[4]).

In addition, the improved supply of medical doctors in remote regions in Brazil had prevented a total of 521 000 hospital admissions in 2015, generating large savings for the Brazilian health system (Biernath, 2020[4]). The MDP led to reductions in adult hospitalisations primarily due to infectious gastroenteritis, bacterial pneumonias, asthma, kidney and urinary infections, and pelvic inflammatory disease (Maffioli et al., 2019[8]), though it fell short of reducing hospitalisations due to other preventable conditions like hypertension (Özçelik et al., 2020[9]). Amenable mortality was also significantly reduced following the MDP, with greater benefits in municipalities prioritised for doctor allocation and where doctor density was low before implementation (Hone et al., 2020[7]). The positive impact of the MDP includes improved patient satisfaction with public health care services and better doctor-patient relationship (Biernath, 2020[4]) (Chapter 5 of this report provides additional details on the MDP).

The More Doctor Programme is still in place today but it will be gradually replaced by a new federal programme called *Programa Médicos pelo Brasil* (see Chapter 5).

4.2.2. New configurations of care have been established to promote greater co-ordination and integration of care

The family health support centres (*Nucleos de Apoio à Saúde da Familia*, NASF) were originally created in 2008 to expand the capacity of the Brazilian health care system to meet the increasing needs of the population, and move from vertical organisations of health care to horizontal modes of organisation.

The 2017 PNAB further encouraged the development of NASF to expand the scope of PHC for users and provide higher resolution of PHC through greater care co-ordination and longitudinally. NASFs were renamed Extended Family Health and PHC Units (NASF-AB). The organisation is structured on a territorial basis, depending on local needs. NASFs-AB should operate in an integrated manner to provide clinical, medical and pedagogical support for the PHC professionals (Barros da Silva, Carlos da Silva and de Araujo Oliveira, 2020[10]). NASFs- AB are multi-disciplinary teams, expected to function in an integrated manner. The overarching objective is to support FHTs and PHC teams for specific populations (Street Offices, river team) through supporting them in the management of health problems, as well as broadening the range of services offered in the community (Ministerio da Saude, 2021[11]).

Three types of NASFs-AB are recognised:

- NASFs-AB 1 includes 5 to 9 FHTs and/or PHC teams for specific populations (street consultancy team, riverside team, and river). Minimun 200 hours per week (minimum 20h and maximum 80h weekly workload)
- NASFs-AB 2 includes 3 to 4 FHTs and/or PHC teams for specific populations (street consultancy team, riverside team, and river). Minimun 120 hours per week (minimum 20h and maximum 40h weekly workload)
- NASFs-AB 3 includes 1 to 2 FHTs and/or PHC teams for specific populations (street consultancy team, riverside team, and river). Minimun 80 hours per week (minimum 20h and maximum 40h weekly workload)

The NASF-AB composition is defined based on the health needs of the territory and the supported family or PHC teams. It can be composed of social workers, physical educators, pharmacists, physiotherapists, speech therapists, nutritionists, psychologists, gynaecologists, obstetricians, psychiatric doctors, geriatric doctors, among others.

Activities carry-out by NASFs-AB include clinical care in the PHC facilities, home visits, multi-sectoral actions, health prevention, health education, case discussions with the teams and joint construction of Unique Therapeutic Projects (Barros da Silva, Carlos da Silva and de Araujo Oliveira, 2020[10]) (Sales et al., 2020[12])). Multi-disciplinary teams working in the NASF-AB have opportunity to share problems,

exchange knowledge and practices, and define together possible interventions through the Community of Practices (Communidad de Practicas).

NASFs are guided by the following priorities:

- It is a team formed by different professions and specialties;
- It is recognised as a specialised support for PHC, but it is not outpatient specialties or hospital service;
- It should be available to support scheduled and emergency health situations;
- It performs actions in collaboration with the FHT or the PHC team to increase the suppply of health services offfered in PHC settings.

Existing evaluations of NASFs-AB show overall positive results (Barros da Silva, Carlos da Silva and de Araujo Oliveira, 2020[10]; Sales et al., 2020[12]). The actions developed by the NASFs were positively perceived by the multi-disciplinary teams. Nurses and physicians acknowledged that the multi-professional formation allowed for a greater provision of services, and with greater co-ordination and communication between the team members (Sales et al., 2020[12]). A NASF team in the city of Recipe (Pernamsbuco, Brazil) has been found to improve the quality of referral, and also to generate greater care co-ordination and continuity (Barros da Silva, Carlos da Silva and de Araujo Oliveira, 2020[10]).

The technical Note of 27 January 2020 presents the new configuration of the Expanded Center for Family Health and Basic Health Care (NASF-AB). Given Brazil's vast territory and the heterogeneity of local environments, this technical note gives the flexibility to municipal managers to organise and define the team composition, the work-week hours, and team arrangements.

Another interesting development in Brazil is the establishment of the health care networks *Rede de Atençao à Saúde* (RAS) (CONASS, 2020[13]). Established in 2011, RAS are large health care networks aimed at reducing health fragmentation. FHTs and PHC teams have a key role to play here, in being identified as the hub to co-ordinate care between and across the health sector.

RAS are similar to territorial communities of health professionals aimed at improving patient-centred care. They are organised by *Regioes de Saúde* (Health Regions) which are agglomerations of municipalities, with the objective of integrating organisation, planning and provision of health care services at regional level (from PHC, mental health, public health, emergency care to specialised care and hospital care). RAS are agreed by Municipalities and States by the *Comissoes Intergestores*, according to population health needs, regional and municipal capacities (in terms of operational structure including support, logistical and governance systems), and the health care model.

There are thematic *Rede de Atençao à Saúde* including:

- Maternal and Child Health Care Network (Rede Cegonha)
- Urgency and Emergency Care Network (Rede de Atençao as Urgencias)
- Health care network for people with chronic diseases (Rede de Atenção à Saúde das Pessoas com Condições Crônicas) – such as cancer, overweight or obesity;
- Health care network for people with disabilities (Rede de Cuidados à Pessoa com Deficiência)
- Mental health care network

CONASS has been actively working on the development of RAS over the past years, notably with the development of *Planificação da Atenção Primária à Saúde* (PAPS) and *Modelo de Atenção às Condições Crônicas* (MACC) (CONASS, 2020[13]; CONASS, 2018[14]). PAPS and MACC provide technical and managerial guidance to support health managers and workers in states and municipalities to establish and organise RAS. PAPS consists of a set of workshops, tutorials and short-term trainings for health professionals and the managerial teams of the states and municipalities. The development of MACC in Brazil is based on the well-known Kaiser Permanente Pyramid Population Management, the Wagner

Chronic Care Model, and the Dahlgren-Whitehead "rainbow model" of social health factors (CONASS, 2018[14]).

The use of PAPS and MACC was piloted across several municipalities, for instance in Curitiba (Parana), Santo Antonio do Monte (Minas Gerais) and Taua (Ceará) (see Box 4.1). Evaluations of pilot programmes have been positive in terms of better management of chronic conditions through greater integration of primary and specialised health care (CONASS, 2018[14]; CONASS, 2020[13]).

Box 4.1. Establishment of RAS in Taua (Ceará)

A new configuration of PHC was developed in the municipality of Tauá (Ceará) with the establishment of a RAS in 2014. The project was led by CONASS in partnership with the Secretary of Health of the State of Ceará, Municipal Secretary of Health of Tauá, School of Public Health of Ceará and Fiocruz Ceará.

The project began through the use of the PAPS that proposes new way of organising health services in this municipality. The development of RAS were also supported by several workshops with the participation of all health professionals, and the use of the MACC to identify at risk population including children under 2 years old, pregnant women, hypertensive and diabetes patients.

Risk stratification was used to better understand the health and risk profiles of the community, to undertake proactive management of patients' needs and define intervention in primary and specialised care before the occurrence of any adverse outcomes.

Teams' actions are based on indicators defined by the management, such as:

- preventive actions for congenital syphilis (early detection of infection for pregnant women, timely notification and treatment of pregnant women and partners, appropriate referral to the maternity)
- updating immunisation for elderly people;
- better monitoring of chronic conditions in line with recommended clinical practice guidelines, and care co-ordination with secondary care for high-risk and very high-risk patients.

Evidence of the impact of this RAS in Ceará is positive, with reduced complication from chronic conditions; reduced mortality rates from cardiovascular disease, improved quality of health care service and greater supply of PHC services.

Sources: CONASS (2020[13]), Estudos sobre a planificaçao de atençao à Saúde no Brasil – 2008 a 2019: uma revisão de escopo.

4.2.3. Brazil has embarked on an important reform to finance PHC

Federal financing of PHC has recently changed with the Ordinance 2 979 (12 November 2019) which defines the *Previne Brasil*. Up until 2019, the federal transfers to the municipalities was based on a mechanism for regular and automatic transfer of federal funds. Every municipality received per capita funds per year to cover the cost of basic health care activities and incentives for implementing programmes recommended by the Brazilian Ministry of Health. Federal transfer consisted essentially of:

- Two capitation components -"PAB Fixo" and "PAB Variável". The PAB Fixo "fixed component" was multiplying a municipality-specific value with the number of residents in the catchment area of municipalities. In 2019, this fixed value varied among municipalities between BRL 23 and 28 depending on some few socio-economic factors such as GDP per capita and the poverty ratio. The variable capitation component depended on the accreditation of FHT, implementation of some

strategies and priority programmes such as the Family Health Strategy or the Community Health Agents Programme;

- A voluntary pay-for-performance bonus based on the National Programme for Improving PHC *Access and Quality* (PMAQ) (described in the next section);

In 2020, a new PHC funding model – *Previne Brasil* – has come into effect. This new funding model substantially modifies the way the federation allocates resources for PHC to the municipalities (Ministério da Saúde, 2019[15]). The objective of the Previne Brasil is to accelerate the expansion of the FHTs (to reach 50 000 FHT by 2022), and to strengthen quality of PHC. The new financing model includes:

- A weighted capitation calculated according to the population registered with the FHT or the PHC team, the socio-economic vulnerability and demographic profile of the registered population, and some geographical factors.
- A Pay-for-performance (P4P) bonuses. The programme is compulsory and focussed on seven priority areas, including prenatal care, women's health, child immunisation and care for chronic conditions (hypertension and diabetes mellitus) (describes in the next section). The P4P programme considers the results of the indicators achieved by the accredited teams and registered in the national register of health facilities.
- Incentives for strategic actions and priority areas, which target 16 programmes (Table 4.1). Actions cover specific characteristics according to the needs of each municipality.

Table 4.1. Incentives for strategic actions in Brazil, 2020

Areas of actions	Actions
Health promotion	Health on the Spot Program, Health at School programme, Academia da Saúde Programme
Dental care	Oral Health Team; Mobile Dental Unit, Dental Specialties Centre, Regional Dental Prosthesis Laboratory
Information and Communication Technology	Computerization of PHC facilities
Medical education	Incentive to municipalities with medical and multi-professional residency
Supporting vulnerable population	Prison PHC Team, Actions for adolescents in situations of deprivation for individual liberty, Ribeirinha FHT, Basic Fluvial Health Unit, Street Office team
Other areas	Community health agents, Microscopist

Source: Ministério da Saúde (2021[16]), Previne Brasil, https://aps.saude.gov.br/gestor/financiamento/incentivosacoes/

The new Brazilian approach to adjust capitation payments in PHC is in line with OECD policies in this area (it is already implemented in Chile, Israel, Portugal, New Zealand, the United Kingdom, or the Netherlands for example). The new capitation formula intends to allocate resources based on needs. The single capitation amount will be applicable to the population registered with family and PHC teams, adjusted for socio-economic, demographic and geographical factors. Low socio-economic status will be identified if people receive benefits from the *Programa Bolsa Familia* or *Beneficio de Prestação Continuada* or have small pensions. The demographic factor identifies children below the age of 6 and people above the age of 64 as those with higher needs. Finally, the municipalities are clustered into five different groups based on their urbanisation using an existing typology from the Brazilian Institute of Geography and Statistics (IBGE).

When it comes to the weighting of patients, the reference patient without low socio-economic status in the age group of 6-64 years registered in the most urban type of municipality (type 1) has a base value of 1. This base value will increase by 30% if the patient has either low socio-economic status or falls outside

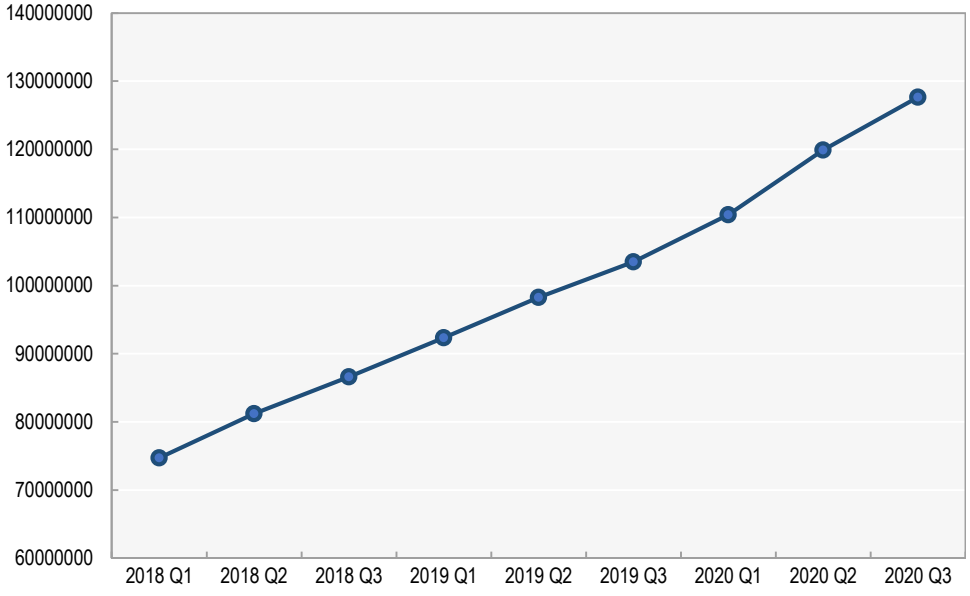
the above-mentioned age group. If a patient is registered in a municipality with medium type of urbanisation (types 2 and 3) the amount received will be multiplied by a factor of 1.45. For the two most rural types of municipalities (types 4 and 5) the amount will be multiplied by a factor of 2. Consequently, the new capitation adjustment is better taking into account differences in need (associated with age) than the previous method. Adjusting the capitated payments according to risk is an important step to make sure municipalities with higher population needs due to higher age and less favourable socio-economic situation receive the resources they need to provide care for everyone. This can limit the risk of increasing inequalities in access to PHC services.

In 2020, the value received by the municipalities from the federation ranged from BRL 51.35 for a patient in middle age (6-64 years) without low socio-economic living in an urban municipality to BRL 133.52 for a patient with either low economic status or an age outside the age bracket 6-64 living in the most rural type of municipality. These calculated amounts can be adjusted downwards if health workers in the FHT lack the required level of qualification.

There are also differences in the registration targets for each FHT based on the degree of urbanisation. In the most urban municipalities, FHTs are expected to register 4 000 people. In the two medium urbanised types of municipalities, this number stands at 2 750. In the most rural municipalities, expectations are that 2 000 people register with FHTs. Variations per FHTs are acceptable within defined limits. The new funding mechanism provides an incentive for FHT to register people in order to include the 50 million people who are not registered yet. Better registration will induce a more adequate identification of people linked to each FHT to encourage more appropriate longitudinal and co-ordinated care.

Already the number of registered people significantly increased since 2018 (Figure 4.1). The number of people registered with a FHT increased by 70% between 2018 and 2020, with around 61% of the population covered by a FHT (reaching 127 million of people registered by November 2020).

Figure 4.1. The number of people registered with a FHT has increased since 2018



Source: Ministério da Saúde (2021[17]), Secretary of Primary Health Care, Individual Records of Family Health Teams.

In 2019, the federal government announced that municipalities will receive BRL 401 million as a financial support for increasing the number of registered people (this will amount to BRL 8 900 for each municipality)

(Ministerio da Saude, 2019[18]). Although several researchers advocate the difficulties for some municipalities to be able to register people with FHTs and the fear of losing federal transfers (Harzheim et al., 2020[19]), it is important to highlight that a more systematic registration system in Brazil will help build a profile of the health needs of the registered population. Registering people with FHTs is a prerequisite for better knowledge and longitudinal monitoring of people. In addition, the threat of receiving discounted capitated amounts if health workers lack the required qualification should encourage municipalities to ensure that health workers are sufficiently qualified.

In 2020, 52% of the budget costs for the provision of PHC was allocated based on weighted capitation, 24% as salaries for community health workers (a subcomponent of the strategic actions), 15% of incentive payments for strategic actions and priority areas and 9% as performance bonuses. In the context of the COVID-19, the federal government decided to maintain the amount of funds received in 2019 for each municipality, and to provide punctual financial assistance to family and PHC teams (Box 4.2 and Table 4.2).

In 2020, the budget allocated to PHC from the federal government was BRL 20.9 billion, compared to BRL 17.5 billion in 2019 (CONASEMS, 2020[20]). In total, the federal government increased its PHC budget by around BRL 3.4 billion between 2019 and 2020.

Box 4.2. Supports provided to family and PHC teams during the COVID-19 pandemic

The Brazilian Federal Government provided punctual financial assistance to family and PHC teams through a series of block grants during the COVID-19 pandemic. These exceptional payments were given on a general basis to ensure a swift and effective PHC to manage COVID-19 cases, and to maintain routine care for non-COVID-19 patients. Municipalities with vulnerable population groups (indigenous groups, or incarcerated individuals) were specifically identified to receive additional funding. Supplementary grants were also given to mental health institutions, with amounts ranging from BRL 28 305 to BRL 400 000, depending on the size and type of psychosocial unit.

Beyond financial support, the Ministry of Health has published multiple guidelines to support family and PHC teams to managing the surge in health care demand while maintaining continuity of care for all patients.

FHTs and PHC facilities are expected to:

- Help diagnose and manage mild COVID-19 patients through testing, and providing care and appropriate exams when available;
- Follow-up people with COVID-19 to help them safely and effectively manage their care at home;
- Facilitate quick and effective referrals to hospitals for deteriorating cases.

As in other OECD countries, special COVID-19 care centres (see Table 4.2) have been established with specific health professionals and equipment to manage patients experiencing mild COVID-19 symptoms. Specific safety standards and protocols were established for high-risk patients. For example, safety protocols for delivery rooms were implemented to ensure staff is asymptomatic. In dental care, a set of ten recommendations were given to municipalities to adapt the delivery of care, including incentivising telemedicine while ensuring the continuity for dental emergencies. Informative campaigns have been developed to provide patient education on COVID-19.

To ensure care continuity, an online tool called “Consultório Virtual de Saúde da Família” has been made available to PHC facilities and FHTs. PHC workers can receive the necessary equipment, training and technical support on a 24 hours basis. PHC workers can also receive psychological support through a telephone helpline.

Table 4.2. Examples of policies introduced in Brazil to maintain care continuity for all patients during the pandemic

	Policy measures
Tele Health	Helpline to assist PHC workers to manage COVID-19 cases
Online teleconsultation platform and TeleSUS	Teleconsultation service to guarantee the continuity of PHC. Around 2 300 professionals were certified to use the system.
COVID-19 Assistance centres	Development of 3 395 centres throughout Brazil. They received special monthly federal funding, ranging from BRL 60 000 to BRL100 000 according to municipal population size.
Community Reference Centers	Community centres responsible for screening suspected COVID-19 cases, providing in-person consultations when necessary, monitoring people at home, testing high-risk patient groups, and disseminating the TeleSUS service. The focus groups for these centres are underprivileged communities and favelas. Around 130 centres were established and BRL 8.2 million spent each month.
COVID-19 contact tracing	Effort aimed at integrating health surveillance and PHC to better identify and follow COVID-19 cases and contacts at local levels
Other use of digital health to maintain access to care for patients with chronic conditions	Three punctual projects implemented in collaboration with the Federal University of Minas Gerais aimed at developing digital platforms to guarantee continuity of care and to provide other digital instruments to reduce referrals to specialist care. The three projects combined amounted to more than BRL 9 million.

Several OECD countries have also expanded PHC to reduce pressure on health systems and minimise complications and direct death from the COVID-19 crisis (OECD, 2021[22]):

- Use of COVID-19 community care facilities to manage patients experiencing mild COVID-19 symptoms, provide patient education on COVID-19 and work in close co-operation with other PHC centres, such as in Iceland, Slovenia and the United Kingdom;
- Expanding home-based programmes to improve access to care for all patients during the crisis and to alleviate pressure on hospitals in Canada, Spain or the United States;
- Leveraging telemedicine to support access to essential services and information. Removal of institutional barriers were required during the first wave of the COVID-19 pandemic, such as expanding insurance benefits to include telemedicine (Estonia), expanding provider payments (Canada and Australia), designing new telemedicine services (Canada and Belgium), and lifting requirements for face-to-face encounters prior to being seen virtually (France).
- Rearranging tasks and responsibilities in PHC, notably to allow community pharmacists to extend prescriptions and prescribe chronic disease medications, such as in France, Portugal or the United States.

Source: Brazilian Ministry of Health; OECD (2021[22]), Strengthening the frontline: How primary health care helps health systems adapt during the COVID-19 pandemic, https://dx.doi.org/10.1787/9a5ae6da-en.

4.2.4. The Agency for the Development of PHC is being established

The Agency for the development of PHC (*ADAPS*) is an autonomous social agency created by the Law 13 958 of December 2019. It is a privately incorporated non-profit organisation. The Agency will promote

the execution of policies for the development of PHC at the national level, including the new *Programa Médicos pelo Brasil* (see Chapter 5).

The advisory Board will consist of 12 representatives: six from the Brazilian Ministry of Health, one from CONASS, one from CONASEMS, one from the Brazilian medical association, one from the federal board of medicine, one from the Brazilian National Federation of Physicians and one from the National Council of Health (CNS).

The ADAPS will be responsible for PHC service provision, professional training and qualification, research and extension, incorporation of health care management technology, monitoring and assessment of health care activities, and execution of the new *Programa Médicos pelo Brasil*. It is expected that the new ADAPS will provide support for actions within the municipalities to execute the PNAB. This is a welcome development to provide support to vulnerable municipalities with low capacities and greater health care needs.

4.3. Brazil has put in place a number of initiatives to support improvements in quality of care

Several initiatives have been introduced within SUS to improve the quality and the performance of PHC in Brazil. These include the development of standards of care and guidelines, of health care services portfolio, of pay-for-performance programmes and the production and publication of data underpinning PHC.

4.3.1. Few institutions are responsible for improving quality of PHC

As mentioned in Chapter 2, the Política Nacional de Atenção Básica (PNAB) describes the aspects of the governance, the roles of different actors and other aspects of policy settings and governance for PHC.

The SUS National Audit Department (DENASUS) performs audits of Municipal Health Secretariats to verify the compliance with the PNAB. Based on auditing activities, DENASUS is also responsible for monitoring compliance with the recommendations from the Ministry of Health. The Department proposes and promotes methods to assist the execution and implementation of policies. It can provide technical and methodological support to the states, the federal district, and the municipalities as part of the SUS National Auditing System. However, DENASUS is a central entity of SUS National Auditing System, and does not work as an inspectorate for health to provide independent verification that standards of care are being met.

4.3.2. Standards of care and guidelines help structure the FHT responses to most health problems

In Brazil, practice clinical guidelines are developed by governmental and non-governmental organisations at municipal, state or federal government levels. The Ministry of Health and some professional and scientific societies such as the Brazilian Medical Association, the Brazilian Society of Diabetes or the Brazilian Society of Cardiology are involved in clinical practice guidelines (CPGs).

There are also the PHC Notebooks[1] (*Cadernos de Atencao Basica en Atencao Primaria*) which are clinical practice guidelines specifically designed for FHTs to improve the delivery of high quality PHC (Ministerio de Saude, 2021[23]). They are produced by CONASS to provide guidance on for example how to better meet the health needs of people, ensuring the diagnosis of morbidity, initiating and monitoring the treatment and control of diseases or risk factors. These guidelines are easily available to FHTs.

Many of the PHC Notebooks address specific diseases or risk factors such as care for the smokers (Cadernos de Atenção Básica 40), obesity (Cadernos de Atenção Básica 38), arterial hypertension

(Cadernos de Atencao Basica 37), diabetes mellitus (Cadernos de Atenção Básica 36) and mental health (Cadernos de Atenção Básica 34).

There is one PHC notebook to address chronic diseases (Cadernos de Atenção Básica 35) published in 2014. The notebook highlights the current importance of chronic conditions, the complexity of such diseases and of interrelated risk factors. It addresses concepts common to several chronic diseases and presents guidelines for the organisation of PHC, for example on health promotion and disease prevention common to tobacco consumption and cardiovascular diseases, or common to tobacco consumption and arterial hypertension. The PHC book presents some risk stratification models, and some case studies to guide health professionals. It also includes strategies for changing habits, promoting healthy eating and practicing physical activity, approaches to building and monitoring care plans and support for self-care (Ministerio de Saude, 2014[24]).

While such guidelines are useful, the PHC notebooks are still too narrowly defined and does not meet patients' expectations on integrated health care. There are too few clinical practice guidelines addressing integration of care for high prevalence chronic diseases (see also Chapter 3). In addition, information about their effective use is lacking. Implementation is the responsibility of the municipalities, but there is no mechanism at federal level to monitor compliance, and no systematic incentives to stimulate guideline uptake. Recent evidence show that compliance to clinical practice guidelines are unsatisfactory given inadequate follow-up observation of diabetes control and blood pressure control for people with hypertension (Leite Simão et al., 2017[25]; da Silva Rêgo and Radovanovic, 2018[26]). Another study shows that the degree of compliance with preventive care norms could be improved in Brazil (Guanais et al., 2019[27]). Less than 50% of men in the target population reported a blood pressure check in the last year and a measurement of cholesterol levels in the last five years.

In addition, while high-quality clinical practice guidelines are critical for improving health care management, some studies have noticed the low quality of CPGs in Brazil. Available evidence shows that around 77% of CPGs were deemed "low quality" (de Godoi Rezende Costa Molino et al., 2016[22]). Factors undermining the quality of CPG included a lack of multi-disciplinary team for the development group, no consideration of patients' preferences, a lack of rigor of development and conflict of interest among other (de Godoi Rezende Costa Molino et al., 2016[22]).

4.3.3. The PHC Portfolio defines the protocols and services offered in PHC

The SAPS established the PHC Portfolio (*Carteira de Serviços da Atenção Primária à Saúde,* CaSAPS). The portfolio defines and presents the procedures and services that should be offered in PHC to reduce the heterogeneity of existing practices between municipalities, but also between PHC units in the same municipality. It helps FHTs to organise themselves in the service routine, and seek appropriate competences and skills to offer the actions and services define in the protocol through several actions such as continuous personal development strategies, monitoring, and evaluation (da Cunha et al., 2020[28]).

The CASAPS is one of the most important tools to support municipalities and FHTs to provide high quality care. The portfolio has already been used in Rio de Janeiro, Curitiba and Florianópolis among other places (da Cunha et al., 2020[28]). Rio de Janeiro developed his own portfolio of PHC services to address the issue of having a high concentration of patients at the secondary and tertiary levels of care seeking low complexity procedures, such as ear washing or nail extraction (Salazar, Campos and Luiza, 2017[29]). This is a source of wasted resources for the health care system, overburdening emergencies and hospitalisation services, and reducing the quality of care for PHC conditions (Salazar, Campos and Luiza, 2017[29]).

The portfolio contains 210 actions and services organised in five groups: "health promotion for adults and elderly" (44 items), "Health care for Children and adolescent's (27 items), "PHC procedures" (17 items), and "Oral health care" (21 items). Each item is associated with recommendations, materials for consultation, and lists of inputs for implementation.

The elaboration of the portfolio is based on a review and evaluation of services implemented in Brazilian cities, and on consultations with several bodies including the Ministry of Health, CONASS, CONASEMS, the Professional Associations of the Brazilian Society of Family and Community Medicine (SBMFC) or the Brazilian Association of Family and Community Nursing (ABEFACO) (da Cunha et al., 2020[28]).

In the municipality of Rio de Janeiro, the use of the Services Portfolio was associated with a better performance compared to other municipalities not using similar portfolio (da Cunha et al., 2020[28]).

While the development of such PHC portfolios contributes to strengthen the attributes of a strong and comprehensive PHC sector, an important challenge relates to the need to have appropriate training for PHC providers to be able to deliver high quality actions and services. FHTs need to have the right and sufficient equipment and capacity to execute the PHC procedures and services.

4.3.4. National Programme for Improving PHC Access and Quality had a positive impact on quality

The federal government introduced a pay-for-performance programme (P4P) for FHTs in 2011 called the National Programme for Improving Access and Quality of PHC (PMAQ-BA in Portuguese). The programme defined standards of care in accordance to the PNAB to evaluate the performance of FHTs towards a wide range of structure, process and outcomes indicators.

Three cycles have taken place (in 2011/2013, 2013/2015 and 2015/2019). Although the programme was voluntary, almost 100% of all FHTs, oral health teams, NASFs and dental specialty centres were registered in the third round of the PMAQ (compared to 71% in round 1 and 91% in round 2).

The indicators selected were infrastructure, management for PHC development, worker appreciation, access and quality of health care and user satisfaction. In the 3rd round, more than 650 indicators were included around structural quality of care (for example availability of drugs and equipment), process of care (for example antenatal care and treatment completion rates), quality of care (for example patient satisfaction), utilisation of health care (patient volume), and management processes (proportion of appointments that are scheduled) (Kovacs et al., 2021[30]).

Certification processes consisted of self- and external assessment of the teams, involving facility assessments, examination of health indicators and interviews with health care professionals, municipal managers and service users. External evaluations were conducted by independent academic institutions by collecting indicators, and by conducting interviews (Macinko, Harris and Rocha, 2017[31]). A mean score was then calculated, and grouped according to the overall human development index for their municipalities to create several strata of similar socio-economic environments.

Each team received the bonus according to its ranking compared to a mean score for their stratum:

- Those at or below the mean score for their stratum received 20% of the bonus;
- Those above the mean received 60% of the bonus;
- Those significantly above the mean receive 100% of the bonus.

From 2011 to August 2018, the Ministry of Health has invested BRL 9.85 billion (USD 2.52 billion). The bonus ranges from BRL 1 700 (USD 434.55) to BRL 11 000 (USD 2 811.79) per team and month based on their performance (de Medeiros et al., 2020[32]).

One important consideration was the fact that each's team score was made publicly available on the Ministry of Health's website. It enhanced transparency and allowed citizens and health managers to see the overall performance of each team and the associated assessments. Each team was compared to municipal, states, and national averages, which helped nurture a quality improvement culture in PHC services.

Available data shows that PMAQ has led to an increase in federal investment for infrastructure, and a large increase in performance incentives (Macinko, Harris and Rocha, 2017[31]). In addition, the PMAQ has been associated with an increase in the provision of care to pregnant women and children under 2 years, with more significant improvement among the worst performing PHC providers (de Medeiros et al., 2020[32]). The positive impact of the PMAQ is also confirmed by a recent evaluation showing positive effects on the quality and access of PHC (Soares and Ramos, 2020[33]). On average, municipalities that adhered to the PMAQ had rates of hospitalisation for chronic conditions 9% inferior to those that did not adhere *ceteris paribus*. The effect of the programme was more pronounced in the Northeast regions of Brazil (rates of hospitalisation for chronic conditions 14% inferior for municipalities that adhered to the programme), and less pronounced for Southeast region (rates of hospitalisation for chronic conditions 5% lower for municipalities that adhered to the programme). Kovacs and al (2021) also showed that existing income inequalities in the delivery of quality PHC were eliminating during the three period of PMAQ implementation, due mainly to the design feature that adjusted financial payments for socio-economic inequalities (poorer municipalities received higher rewards than richer municipalities) (Kovacs et al., 2021[30]).

However, several failures of the programme were noted, including the very large group of indicators used (with almost 900 questions) and a too large focus on structure indicators, with little emphasis on outcomes indicators. According to the Ministry of health, the high number of indicators resulted in monitoring problems and lack of adherence by municipal managers. It is also reported that external evaluation as part of PMAQ was highly criticised, and thus not carried-out by health professionals. Lastly, the payment made by the Ministry of Health were directed towards the municipality and not the FHT. Municipalities were free to provide bonus payments to the team but little is known on the actual practice (Macinko, Harris and Rocha, 2017[31])

Despite these failures, the PMAQ programme had resulted in improvement of quality of PHC, notably because it was possible during the eight years of implementation to monitor improvements in infrastructure, medical supplies, medications and health outcomes.

4.3.5. The Previne Brasil established a new pay-for-performance scheme

With the reform of the PHC financing model, the federal government introduced a new P4P programme in 2020 as part of the *Previne Brasil programme*.

The new P4P programme is compulsory and focussed on fewer priority areas than the previous PMAQ programme. The initial number of indicators used in this programme was set at seven in 2020 and will rise to 21 by 2022.

In 2020, priority is given to prenatal care, women's health, child immunisation and two chronic conditions (hypertension and diabetes mellitus) (Ministério da Saúde, 2019[15]). The selected indicators are:

- Share of pregnant women with six or more prenatal consultations in the first 20 weeks of pregnancy
- Share of pregnant women with tests for syphilis and HIV carried out
- Share of pregnant women with dental examination
- Pap smear test carried out to detect cervical cancer
- Coverage of inactive polio and pentavalent vaccines
- Share of patients diagnosed with hypertension which have their blood pressure measured every six months
- Share of patients with diagnosed diabetes with controlled haemoglobin level.

For each of the seven indicators, weights of 1 or 2 are assigned to calculate the Final Synthetic Indicator. The weights reflect the clinical and epidemiological relevance of the indicator, as well as the level of difficulty in achieving the targets. This translates the effort of managers and teams to carry out actions,

programs and strategies. Table 4.3 presents the overall targets, the targets for 2020 and the weights defined for each indicator.

Table 4.3. Targets and weights assigned for each performance indicator, 2020

	Domains and indicators	Overall targets	Targets for 2020	Weights
Women health	Share of pregnant women with 6 or more prenatal consultations in the first 20 weeks of pregnancy	>=80%	60%	1
	Share of pregnant women with tests for syphilis and HIV carried out	>=95%	60%	1
	Share of pregnant women with dental examination	>=90%	60%	2
	Pap smear test carried out to detect cervical cancer	>=80%	40%	1
Care for children	Coverage of inactive polio and pentavalent vaccines	>=95%	95%	2
Care for chronic diseases	Share of patients diagnosed with hypertension which have their blood pressure measured every 6 months	>=90%	50%	2
	Share of patients with diagnosed diabetes with controlled haemoglobin level.	>=90%	50%	1

Source: Ministério da Saúde (2019[34]), NOTA TÉCNICA Nº 5/2020-DESF/SAPS/MS.

The performance score for each indicator will range from zero to ten, considering the targets for 2020 and the weighting scale. If the result for a given indicator is 30%, while the target is 60% for 2020, the final score for this indicator will be 5.0 (Ministério da Saúde, 2019[34]).

Further indicators to be included in the years 2022 will be discussed after evaluation and will cover the following areas: care for new-borns; care for babies (under 1-year-old); HIV, Tuberculosis, dental care, hepatitis, mental health, breast cancer, multi-professional action, and global measures including patient experience. Patient experience measurement will rely on population-based surveys conducted by the Brazilian Institute of Geography and Statistics (IBGE), which use PHC Assessment Tool (PCATool), the Patient-Doctor Relationship Questionnaire (PDRQ-9) and the Net Promoter Score (NPS) (Ministério da Saúde, 2019[15]).

While all these standards of care are based on scientific evidence, and selected on epidemiological and clinical relevance, there are all process indicators to assess the quality of care delivered.

The P4P programme and related transferred resources correspond to 9% (BRL 1.8 billion) of the budget linked to the *Previne Brasil* Programme. Performance indicators are collected every four months, and bonuses are paid monthly to municipalities based on the performance of their respective teams.

The amount of the performance payment vary according to the classification of team (Ministério da Saùde, 2020[35]). The following performance payment, referring to 100% of the Final Synthetic Indicator, are equivalent to:

- BRL 3 225.00 for the FHT;
- BRL 2 418.75 for the PHC Team Modality II 30h; and
- BRL 1 612.50 for the PHC Team Modality I 20h.

Results are publicly available on the Health Information System for PHC (SIAB) in the form of reports and dashboards, and on the e-Gestor AB web platform so that all municipalities and states can follow and adopt quality improvement strategies (e-Gestor AB, 2021[36]).

4.3.6. The Brazilian Government has invested a lot of efforts in the production and publication of data underpinning PHC

Several initiatives have been implemented to monitor the resources and activities in the PHC sector in Brazil. Within the Ministry of Health, the Department of Health Information (DATASUS) holds several databases including the national register of health facilities (CNES), the National Program of Immunization (SI-PNI), the System for prenatal care (SIPRENATAL) and the PHC Information System (SISAB, previously called SIAB) to mention a few.

The SISAB was established by Ordinance GM/MS N° 1 412 of July 2013 for the financing purpose and for implementing the PNAB. Community health workers collect on a monthly basis health and social data, monitoring of risks groups, priority health problems, child's follow-up, and on certain diseases and risk factors for health including alcoholism, disability, diabetes, epilepsy, hypertension, malaria or tuberculosis (Lopes, Monteiro and Santos, 2020[37]). The SISAB also integrates the information related to social programmes including Health at School Programme (*Saúde na Escola*) or the Health Academy Programme (*Academia da Saúde*).

While the SISAB gathers an impressive amount of indicators underpinning PHC, most indicators are inputs and process indicators including for example the number of FHTs, the number of people registered with a FHT, the number of community health agents, or the number of pregnant women receiving first prenatal care services (SISAB, 2021[38]).

It is fair to note that Brazil has developed some actionable indicators to support quality improvement in PHC, notably through the PMAQ strategy and the newly *Previne Brasil* programme. In 2020, quality indicators designed as part of the P4P programme are process indicators focussing on maternal health, cervical screening programme, immunisation coverage, and management of hypertension and diabetes. Still, they are good measures of the quality of care delivered by each FHT.

Input and process indicators are made publicly available, broken down by Federative Unit and Region, by urban or rural areas and by age group. The data can be presented in various formats such as tables, graphs, maps and technical documents in order to facilitate the interpretation and analysis of the data. This is an important quality initiative in Brazil as open publication promotes transparency within the PHC sector and expand the possibilities for improving care quality. However, the data is not published at more local, granular level. To date, patients are not allowed to monitor activity and quality of PHC at FHT level. Municipal health managers and FHTs have however access to their performance results through the e-Gestor AB portal (e-Gestor AB, 2021[36]).

At the same time, national reports based on the DATASUS databases are publicly available to assess and monitor population health and the health care system. The *Indicadores de Saúde no Brasil: conceitos e aplicações* for example reports data on health expectancy, diseases-specific mortality rates, diseases-specific incidence rates, prevalence of risk factors for health and some health care resources and activities.[2] The 2019 National Health Survey, which was jointly published by the IBGE and the SAPS, focuses in particular on access and use of PHC services.[3] The Survey provides data on access in PHC, it provides some prevalence rates for risk factors for health and some quality indicators around maternal health or cancer screening programmes. Importantly, the PHC module of the survey consisted of 26 items distributed in 10 components based on the PHC Assessment Tool (PCAT) developed by Starfield and Shi (Pinto and Silva, 2021[39]). The use of PCAT allowed to assess the attributes and the characteristics of a strong PHC: first contact access, longitudinal, co-ordination, comprehensiveness, family orientation, and community orientation (the next section of this chapter presents the results of the 2019 National Health Survey). Incorporating a standardised and internationally validated instruments for the evaluation of PHC services is a major step in Brazil to improve the provision of high quality patient centred care. It demonstrates the high political will to strengthen PHC services in Brazil.

It is also important to note that the e-SUS PHC System was developed to be used in multiple computerisation and care settings, ranging from PHC units without computers to those with computers and the internet (Sousa et al., 2019[40]). The e-SUS PHC System is made of two softwares: simplified data collection and individual health records. The simplified data collection has been specifically developed for non-computerised environments. It is a software for entering a set of files that include the work process of FHTs. Today, only around 40% of FHTs do have adopted the individual health records (see also Chapter 6).

While there is lot of data underpinning PHC in Brazil, some studies have noted the poor reliability and quality of the collected information for planning and public decision making (Lopes, Monteiro and Santos, 2020[37]). As municipalities can be penalised with cancellation of their funding resources, the work process is rather motivated by production targets. It is reported that community health workers, responsible for the data collection, have not properly completed the forms because they do not have the knowledge and training to perform the task. So far, these data have not been used to estimate diseases prevalence, characterise the epidemiological profile of the population, assess health status and even more important be linked with other information system. (Lopes, Monteiro and Santos, 2020[37]). This is a challenge also reported by the OECD Brazil Health System review (OECD, 2021[41]).

4.4. Outcomes associated with PHC

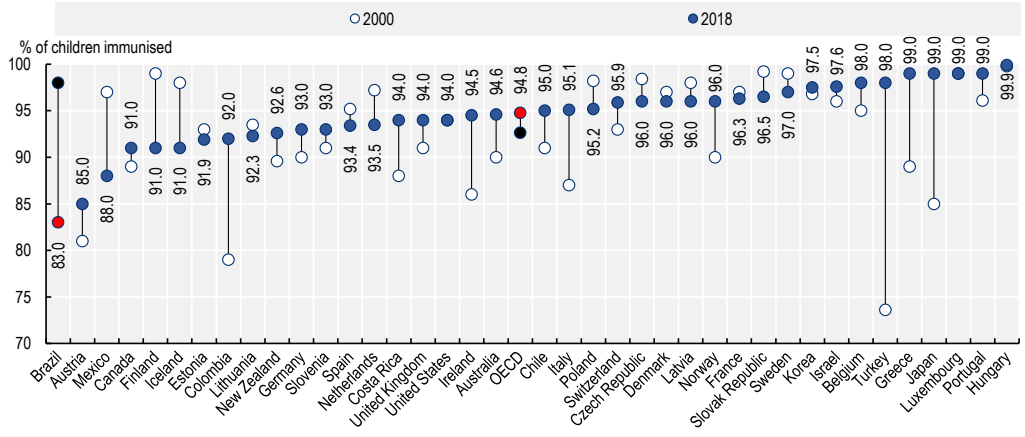
Despite progress, several indicators pertaining to quality of PHC place Brazil among poor performers. PHC in Brazil has traditionally been characterised by providing few low complexity procedures and surgeries. In addition, international figures demonstrate that Brazil lags behind other countries regarding to preventive care and management of chronic conditions. Large regional differences in health care quality also suggest that some remote and vulnerable areas require more attention, more support than others to improve quality of PHC.

4.4.1. Brazil lags behind other countries with regards to preventive care

There is strong evidence that vaccines provide safe and effective protection against diseases such as diphtheria, tetanus, pertussis, measles, and hepatitis B. The proportion of children protected from these diseases can be considered as an indicator of quality in PHC. According to the WHO Global health Observatory, 84% of Brazilian children aged around 1 were vaccinated against measles, below the average in OECD countries (95%). Additionally, 83% of Brazilian children aged around 1 were vaccinated against diphtheria, tetanus, and pertussis, compared with OECD average of 95% (Figure 4.2). In a similar vein, Brazil achieved 83% coverage for vaccination against hepatitis B for children aged around 1, compared with the OECD average of 91%.

There are also significant inequalities in the rates of vaccination against yellow fever in Brazilian states where vaccination has been recommended, ranging, in 2018, from 21.8% in Sergipe to 100% in the Federal District and Roraima (the national average for all states where vaccination is recommended is 64.1%).

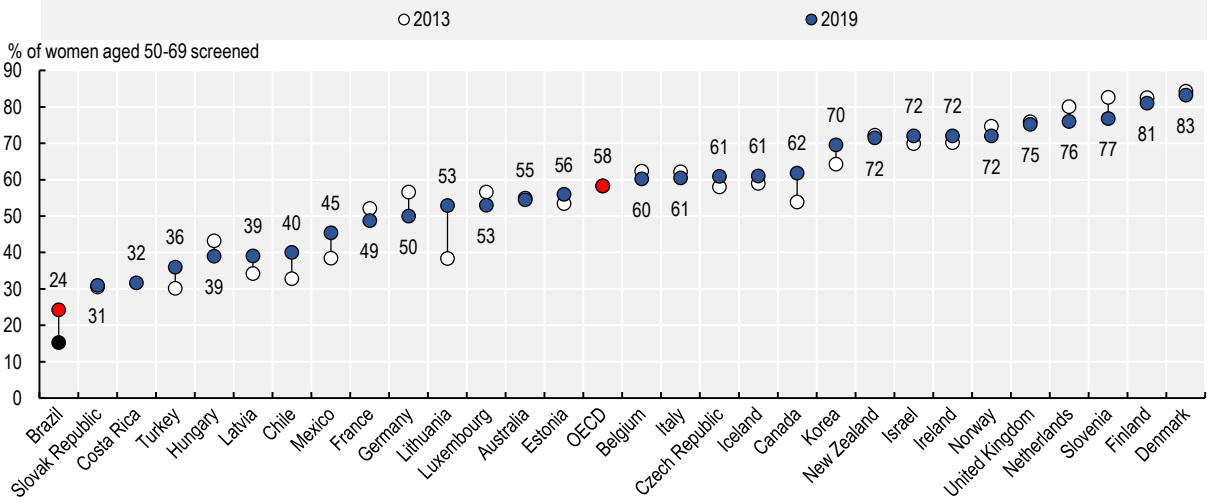
Figure 4.2. Vaccination rates for diphtheria, tetanus toxoid and pertussis (DTP3), children aged around 1, 2000 and 2018 (or latest year available)



Source: OECD (2021[42]), Health Statistics Database, https://www.oecd.org/health/health-data.htm; Brazilian Ministry of Health.

International figures also show that breast and cervical cancer screening needs to improve. Although screening for breast cancer in Brazil has improved in recent years, breast cancer screening coverage in Brazil (at 24%) is very low when compared to OECD countries. Brazil stands below all OECD countries and well below the 58% of average coverage (Figure 4.3). In a similar vein, cervical cancer screening in Brazil stands at 37.1% in 2019, well below the OECD average coverage of 58% (see Chapter 3 on Screening in PHC).

Figure 4.3. Breast cancer screening coverage in Brazil and OECD countries, 2013 and 2019 (or latest year available)



Note: Programme data is used for all countries. Brazil represent years 2014 and 2019.
Source: OECD (2021[42]), Health Statistics Database, https://www.oecd.org/health/health-data.htm; Brazilian Ministry of Health.

Inappropriate preventive care has also been highlighted by previous studies. The use of patient-reported experience measures for the prevention, detection and management of chronic diseases has shown that only around one people over five reported that their PHC physicians sent a reminder for check-up among

SUS users (Guanais et al., 2019[27]). In addition only 22% of SUS users indicated that they had received some recommendation on healthy lifestyles from their family doctor, and less than 40% of public users had a preventive visit in the past two years.

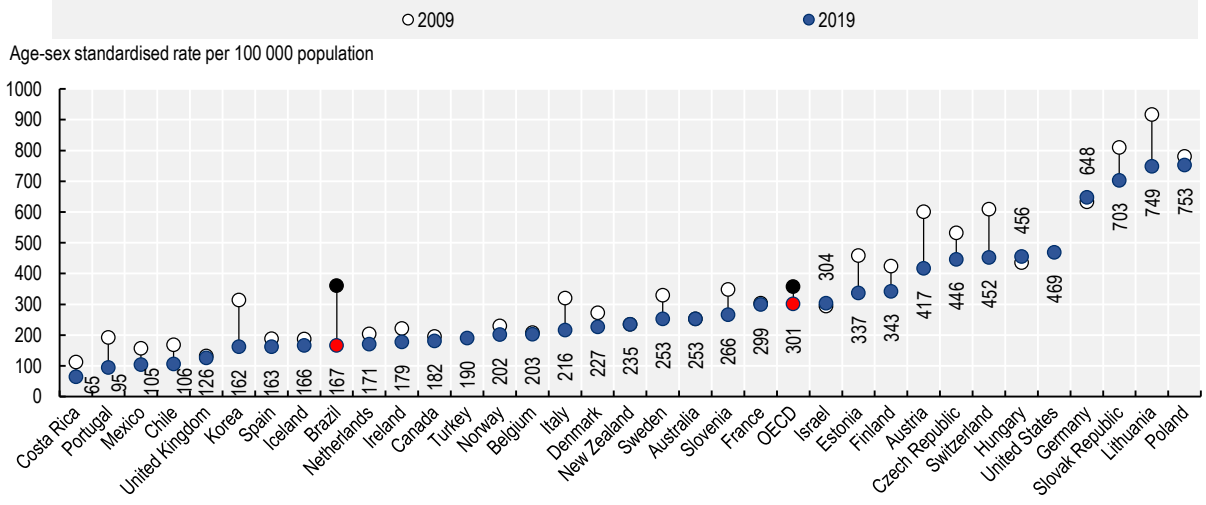
More preventive care is warranted in Brazil at a time when the burden of disease is shifting towards chronic diseases.

4.4.2. Indicators around the management of chronic conditions give some cause for concern

Hospitalisations for chronic conditions, also known as avoidable hospitalisations, are used as an indirect indicator of the overall effectiveness of PHC. There is growing evidence that proactive management of some chronic conditions may prevent or reduce the need for acute hospital admission (OECD, 2020[43]). Ambulatory care sensitive conditions, such as asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure, and diabetes, are conditions for which accessible and effective PHC can generally reduce the risk of complications and prevent the need for hospitalisation. The evidence base for effective treatment for these conditions is well established and much of it can be delivered at a PHC level. Therefore, a high performing PHC system should be able to avoid to a large extent any acute deterioration of the health status of people living with chronic conditions and prevent their admission to hospital.

In Brazil, hospitalisations for chronic conditions are lower than in OECD countries. The rate of diabetes hospital admissions in 2019 was 92 admissions per 100 000 people, below the OECD average of 131 (see Chapter 3). In addition, hospital admission rates for congestive heart failure (CHF) and hypertension are lower in Brazil than the OECD average, but still higher than other LAC countries including Costa Rica, Mexico, or Chile (Figure 4.4).

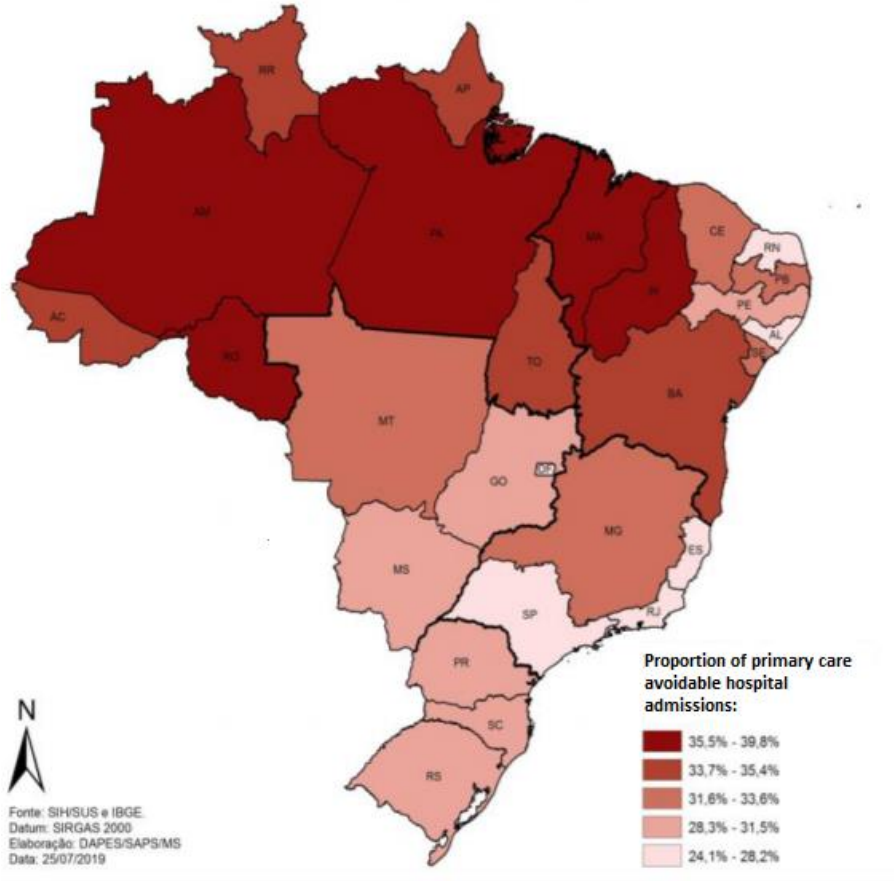
Figure 4.4. Congestive heart failure (CHF) and hypertension hospital admissions in adults, 2009 and 2019 (or latest year available)



Source: OECD (2021[42]), Health Statistics Database, https://www.oecd.org/health/health-data.htm; Brazilian Ministry of Health.

In Brazil, lower rates of avoidable hospital admissions can be the result of a lower prevalence of chronic conditions than across OECD countries. At the same time, whilst the performance is good on average, there are significant differences across regions. There is a North-South gradient where North and Northeast regions show higher hospitalisation rates for chronic conditions (Figure 4.5).

Figure 4.5. Share of hospital admissions due to conditions that are treatable in PHC, population aged 60 or more by region, 2019

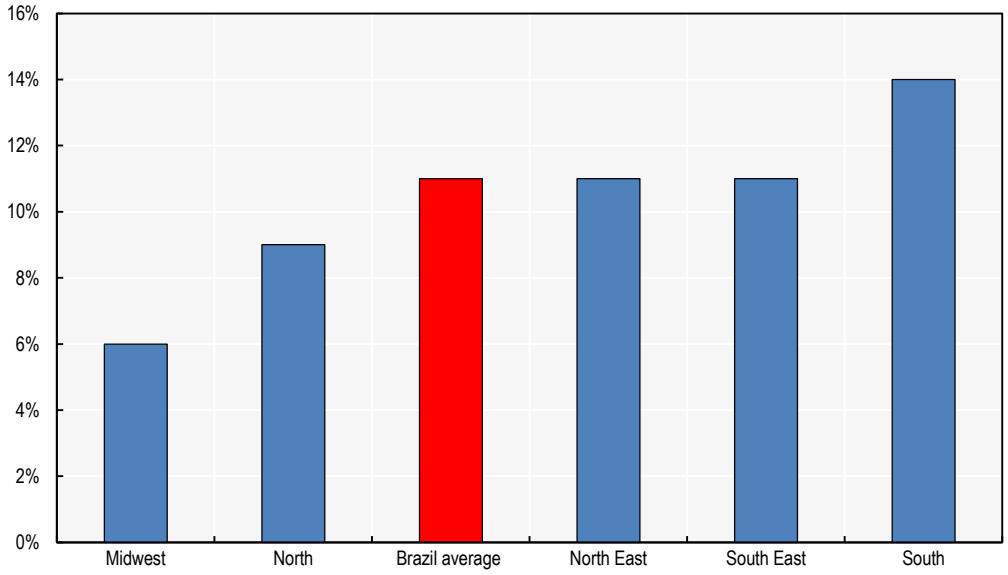


Source: Ministério da Saúde (2020[44]), Plano Nacional de Saúde 2020-23.

The 2019 Health Interview Survey also corroborates the North-South gradient. Accordingly, diabetic patients have a higher likelihood of complications (as measured in hospitalisations) in the Northeast than in the Southeast (IGBE, 2020[45]).

High hospitalisation rates for chronic conditions show that recommended care is not always provided for people with these conditions. This is confirmed by performance indicators reported in the SIAB system. Two indicators relate to whether people with diabetes and hypertension are receiving recommended care or effective management for their conditions. In 2020, only 4% of hypertensive patients had their blood pressure measured every semester, and only 11% of diabetics patients had controlled haemoglobin level (SISAB, 2021[38]). Although such very low performance scores certainly reflect difficulties in recording and monitoring PHC activities by municipalities, it gives some cause for concern. Again, the South and Southeast regions report higher performance score than the North, Northeast and Central-West region regarding to the management of diabetes patients (Figure 4.6).

Figure 4.6. Share of diabetes patients with controlled haemoglobin level, 2020 (Q3)



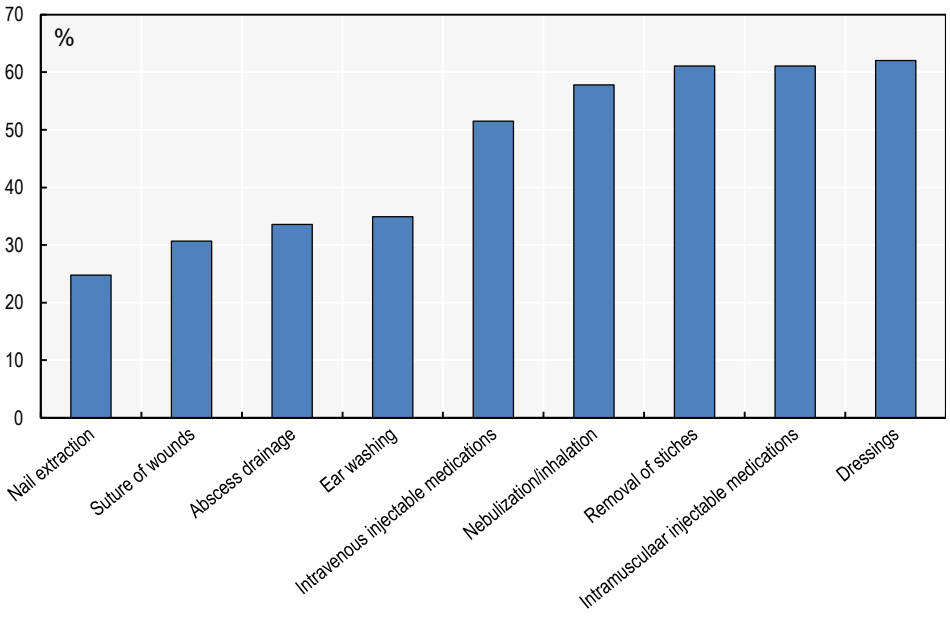
Source: Ministério da Saúde (2021[46]), Secretary of Primary Health Care, Performance indicators by Regions, https://sisab.saude.gov.br/paginas/acessoRestrito/relatorio/federal/indicadores/indicadorPainel.xhtml

Such inequalities in favour of wealthier regions can be explained by a greater supply of PHC services, health workers, equipment and compliance with clinical practice guidelines or standard treatment guidelines. The use of therapeutic guidelines protocol for hypertension, diabetes, tuberculosis, leprosy and mental health service is found to be consistently lower in small geographical areas (Salazar, Campos and Luiza, 2017[47]). Kovacs et al. (2021) also confirmed that FHTs located in poorer areas performed significantly worse than those in richer areas. A PMAQ performance score across 20 income groups has shown that a higher monthly household income of BRL 1 000 was associated with a 1.59 percentage point higher PMAQ score (Macinko, Harris and Rocha, 2017[31]).

4.4.3. Simple procedures and small surgeries are not always provided by family health teams

Simple procedures and surgeries should be widely provided in PHC settings. This is both a matter of striving for better safety and care quality, and an economic necessity. However, available data from the PMAQ programme show that only 62.8% of FHTs performed low complexity procedures or small surgeries in 2012. Worst, only one-third of FHTs performed suture of wounds and abscess drainage. The highest national share for low complexity procedures is around 60% for removal of stiches, dressings, or intramuscular injectable medications (Figure 4.7). Still, this is too few if Brazil wants to increase the responsibility of PHC.

Figure 4.7. PHC has historically offered a low supply of procedures



Source: Adapted from Salazar, Campos and Luiza (2017[47]), The Rio de Janeiro Municipality's Services Portfolio and Health Actions in Primary Care in Brazil, https://doi.org/10.1590/1413-81232017223.33442016.

The low supply of simple procedures and surgeries is a source of care fragmentation and inappropriate referrals to more specialised care. High turnover of medical doctor, inadequate training to practise as PHC physicians, and the lack of equipment or resources are leading factors contributing to the difficulty of performing such procedures for FHTs (Salazar, Campos and Luiza, 2017[47]).

4.4.4. There is scope to improve patient experiences with public PHC services

Recent data from the 2019 National Health survey show that patient experience with PHC in Brazil needs to further improve. PHC obtains an overall score of 5.9 on a scale of 0 to 10, which is below the benchmark value of 6.6 recommended by the PCAT methodology (IBGE, 2019[48]). Some differences appear when considering registered households and non-registered households (Table 4.4). The general score was 6.0 for registered people versus 5.5 for non-registered people. The score was also more favourable among household that received at least one visit from community health workers or other members of the FHT, and for people having chronic conditions. People living in the South region also reported a higher score (6.3) than people living in the North (5.5).

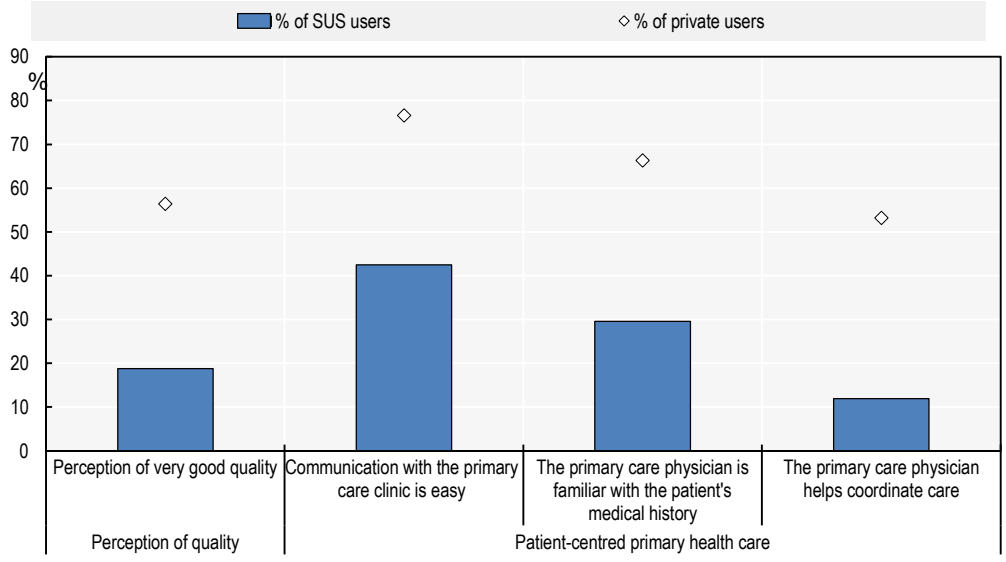
Less recent data looked at people-centeredness of PHC in Brazil. Good provider-patient communication and patient involvement in care and treatment decisions are key dimensions of patient centeredness, alongside the dimension of co-production which entails patients self-management and care co-ordination (OECD, Forthcoming[49]). Results from the PMAQ 2017 cycle showed that around 90% of patients reported that PHC doctors provided easy-to-understand explanation, and involved patients in decisions about care and treatment. An adaptation of the Commonwealth Funds International Health Policy Survey to the LAC context has shown a large variation in patient's experience between public and private users. SUS users were consistently less likely to report a positive experience with PHC compared to private users (Figure 4.8).

Table 4.4. Overall mean score of PHC (value from 0 to 10) depending on individual characteristics

Individual characteristics	Yes	No
Arterial hypertension	6.2	5.7
Diabetes	6.3	5.8
Heart disease	6.4	5.8
Depression	6.1	5.8
Is the household registered at the family health facility	6.0	5.5
Visit from community health workers	6.1	5.7
Overall score per Regions		
North	5.5	
Northeast	5.8	
Southeast	5.8	
South	6.3	
Midwest	5.8	

Source: IBGE (2019[48]), Pesquisa Nacional de Saude in Portuguese: Atenção primária à saúde e informações antropométricas, https://biblioteca.ibge.gov.br/visualizacao/livros/liv101758.pdf

Figure 4.8. SUS users consistently report lower patient experiences with PHC than private users, 2013



Note: Prevalence are adjusted for sex, age, level of education and self-reported health status.
Source: Authors, adapted from Guanais et al. (2019[27]), From the patient's perspective: experiences with primary health care in Latin America and the Caribbean.

4.5. Securing a greater quality dividend from PHC in Brazil

4.5.1. Strengthening the gatekeeping system to better recognise the central role of FHTs

While the overarching objective of the Family Health Strategy was to strengthen access to care, 20 years after its implementation only about 65% of the Brazilian population are currently registered with a FHT. The number of registered people is increasing in recent years following the *Previne Brasil* Programme

(Figure 4.1). Still, this is too low to address the new Brazilian's health care needs characterised by rising burden of chronic conditions and risk factors for health.

In addition, many Brazilians have direct access to outpatient specialties and hospitals for minor conditions that could be treated more effectively in primary are settings. The latest Health Information Survey for example found that around 50% of the diabetic population identified basic health units as their last contact to the health system, 11% used public speciality units in hospitals, 6% public urgent care units and 30% private practices or clinics (IBGE, 2020[50]). The later example confirms that a significant proportion of the population uses public speciality units or emergency departments for provision of chronic services, while these types of conditions are best treated in PHC settings. These give strong arguments to strengthen the gatekeeping system in Brazil with a systematic registration system with FHTs, which better control and orient the patient's into specialist care.

Gatekeeping system with a named PHC doctor or a FHT who provide overall care co-ordination can drive better care for patients, particularly for those having chronic diseases. It refers to the arrangement where a patient is only seen by a hospital specialist if authorised by the PHC physician who is responsible for overseeing and co-ordinating the health needs and providing care. In a recent systematic review of the literature, Sripa, Hayhoe, Garg et al. confirmed that gatekeeping was associated with better quality of care and appropriate referral for further hospital visits and investigation (Sripa et al., 2019[51]). Overall gatekeeping resulted in fewer hospitalisations and use of specialist care, but also led to lower patients satisfaction because it limits patient choice (Sripa et al., 2019[51]). In addition, a systematic registration system allow to build a profile of the health needs of the registered population, which improve care continuity through better patients' relationship to PHC providers (Starfield, Shi and Macinko, 2005[52]; Kringos et al., 2010[53]). Having a PHC physician as a regular source of care consistently show benefits for a variety of health and health related outcomes (Starfield, Shi and Macinko, 2005[52]). It allows for the provision of continuous and comprehensive care, focused on prevention and management of long-term conditions.

Box 4.3. Introducing a compulsory registration system in Norway

While before 2000, Norwegian citizens were able to consult GPs without restrictions, the Regular General Practitioner reform introduced a compulsory registration system. Pilot of the reform was undertaken in four municipalities in 1993 prior to national implementation.

With the reform, the general practitioner became responsible for providing and co-ordinating prevention, investigation and treatment of health care needs. He is also responsible for decisions on the need for referral to secondary care, and link with social security and social services when appropriate. The reform also specified that GPs should engage in public health activities, emergency care, out-of-hours care, and supervise students and doctors in training.

National implementation was a success, with close to 100% of Norwegians now registered with a GP. The scheme has been regarded as one of the most successful public services in Norway, with high satisfaction among both patients and GPs (Svedahl et al., 2019[54])

Source: OECD (2014[55]), *OECD Reviews of Health Care Quality: Norway 2014: Raising Standards*, https://dx.doi.org/10.1787/9789264208469-en.

Some OECD countries have introduced a compulsory registration system to encourage the right care at the right place (Box 4.3). In Norway, the Regular General Practitioner reform introduced in 2000 required all citizens to register with a named general practitioner (GP) of their choice. General practitioners became the usual source of care for people, and are now responsible for co-ordinating individual's prevention,

investigation, and treatment of health care needs. This approach is also taken in Chile, Portugal, and Italy: in these countries, the population are required to register with a PHC physician who control access to secondary health care (OECD, 2020[43]). Strengthening the gatekeeping system by requiring all individuals to register with a FHTs is a reform that Brazil wishes to consider in the future to strengthen the role and accelerate the expansion of the FHTs. This would help build accurate patient registers, and better recognise the central co-ordinating role of FHTs.

4.5.2. Expanding the range of health care services provided by FHTs towards disease prevention, treatment and management of long term conditions

In recognition of the challenges set out in Section 4.4, there is an increasing need to support and encourage FHTs to deliver a modern PHC service. A key function of a modern PHC is the provision of continuous and comprehensive care, focused on health promotion, prevention, treatment, follow-up of diagnoses and management of chronic and long-term conditions.

Previous studies have shown that PHC, when well equipped, can deal with a large range of health problems, including health promotion, preventive care, treatment and follow-up of diagnoses and simple technical procedures (Starfield, Shi and Macinko, 2005[52]; Kringos et al., 2010[53]). A comprehensive scope of PHC services is consistently associated with lower hospitalisation for chronic conditions, improved health outcomes and reduce health inequalities (OECD, 2020[43]; Starfield, Shi and Macinko, 2005[52]; Kringos et al., 2010[53]).

Underpinning greater comprehensiveness of PHC services entails delivering actions defined in the PHC Portfolio, and ensuring that all municipalities are able to properly deliver these actions and health care services. In Rio de Janeiro, the Health Services Portfolio has been found to be an important guiding tool to standardise and improve the range of services offered by FHTs (Salazar, Campos and Luiza, 2017[47]). For all defined procedures, Rio de Janeiro reports better performance than national average or other urban centres. An important policy lever has been the use of management agreements to foster compliance with the Health Services Portfolio. One indicator called “rate of implementation of items of the services portfolio” is monitored quarterly as part of the agreement, which enables to highlight problems in the practice and take corrective actions. Such a good practice could be consolidated nationwide. Another option for consideration, would be to monitor compliance rates with the CaSAPs and link it to financial incentives attributed in the Strategic Actions of the *Previne Brasil* Programme.

In a similar vein, although a number of clinical guidelines are produced in Brazil, there are no requirements and few incentives for FHTs to comply with the standard level of care. There is a risk, then, that these guidelines are not adequately adopted by FHTs. Experiences from OECD countries can be useful for Brazil in its efforts to improve compliance to clinical guidelines. Some OECD countries provide grants to municipalities to encourage compliance with clinical practice guidelines. In Sweden, the central government provides grants to regional governments to encourage guideline implementation (OECD, 2013[56]). New guidelines on dementia, for example, were accompanied by grants to be disbursed to local government, which were then free to use the additional funds as they saw fit. This approach maintains local responsibility for effective implementation, whilst drawing in national resources and support (OECD, 2013[56]). Arguably, the Ministry of Health could use the *Previne Brasil* Programme to monitor and encourage more systematic compliance with clinical guidelines.

At the same time, there is a need to support continuing medical education (CME). As earlier mentioned, a number of bodies such as the CONASS, CONASEM, the Brazilian Medical Association or the Brazilian Society of Family Medicine organise several training, conferences and on-line learning. However, a more formal CME framework which makes clear the expectation upon each FHT members, and supports them to meet it will be required to provide comprehensiveness of PHC services, and in line with the best available evidence.

4.5.3. Quality monitoring and benchmarking within PHC needs to improve

A fundamental element within a strengthened PHC sector is a data infrastructure capable of monitoring and benchmarking PHC activities and outcomes in a consistent way at national, municipal and provider level (OECD, 2020[43]).

Brazil collects several indicators on access to PHC, risk factors and quality for maternal health, child immunisation, breast cancer screening and management of hypertension and diabetes a part of the *Previne Brasil* Programme. While it is an important initiative toward quality monitoring, five quality indicators are process indicators, and only 2 indicators are intermediate outcomes measures. Better measurement of patient outcomes and experiences with PHC needs to be a priority in Brazil.

It will be important for Brazil to collect a richer set of quality indicators on a wider array of preventive activities and management of chronic conditions such as alcohol consumption, obesity, cancer screening or mental health. The experience from Portugal can be helpful to inform Brazil on the development of candidate indicators. Portugal has an extensive quality information infrastructure for PHC, which are collected as part of the contracting arrangements with PHC bodies (OECD, 2015[57]). The indicators provide information to senior management to evaluate performance and achievement, benchmarked against other institutions (OECD, 2015[57]). Indicators are collected across several domains – women's health and family planning; maternal health; child and youth health; hypertension; diabetes; cancer screening; mental health or patient experience (Table 4.5).

Table 4.5. Examples of indicators collected in Portugal

Domains	Indicators
Hypertension	Proportion of clients with hypertension, with at least one record of BMI in the last 12 months
	Proportion of users with hypertension with blood pressure recording in each semester
Diabetes	Proportion of users with diabetes, with at least one foot examination of recorded in the last year
	Proportion of clients with diabetes, with record management regimen (three items) in the last year
	Proportion of clients with diabetes, with consultation of nursing surveillance diabetes in the last year
	Proportion of clients with diabetes, with at least two HgbA1c tests in the past year
	Proportion of clients with diabetes, with the last record HgbA1c lower or equal to 8.0%
	Proportion of users with diabetes, with at least one or at least referencing a record of performing examination of the retina, in the last year
Mental health	Proportion of users aged over 18 years and a diagnosis of depression who were prescribed antidepressant therapy
	Proportion of users aged over 65 years who were not anxiolytics or sedatives or hypnotics prescribed in the period
Screening and prevention	Share of women with mammography in recent two years
	Proportion of users aged years with screening for colon and rectal cancer performed
	Proportion of users aged 14 and over, with quantification of smoking habits in the last three years
	Proportion of users aged over 14 years and with smoking, whom smoking-related consultation was held in the last year
	Proportion of users aged 14 and over, with quantification of alcohol consumption, registered in the last three years
Pharmaceuticals	Proportion of users aged over 75 years, with chronic lower than five prescription drugs
	Proportion of packaging billed drugs that are generic
	Proportion of users aged over 65 years with no prescription trimetazidine in the last year
Patient experience	Proportion of users satisfied or very satisfied
	Number complaints per 1 000 medical consultations conducted by doctors or nurses

Source: OECD (2015[57]), *OECD Reviews of Health Care Quality: Portugal 2015: Raising Standards*, https://dx.doi.org/10.1787/9789264225985-en.

Another best practice example across the OECD is from the National Programme for Quality Indicators in Community Healthcare (QICH). The programme is used to monitor and improve the quality of preventive, diagnostic, and therapeutic PHC services in Israel. The indicators in QICH cover nine clinical areas: health

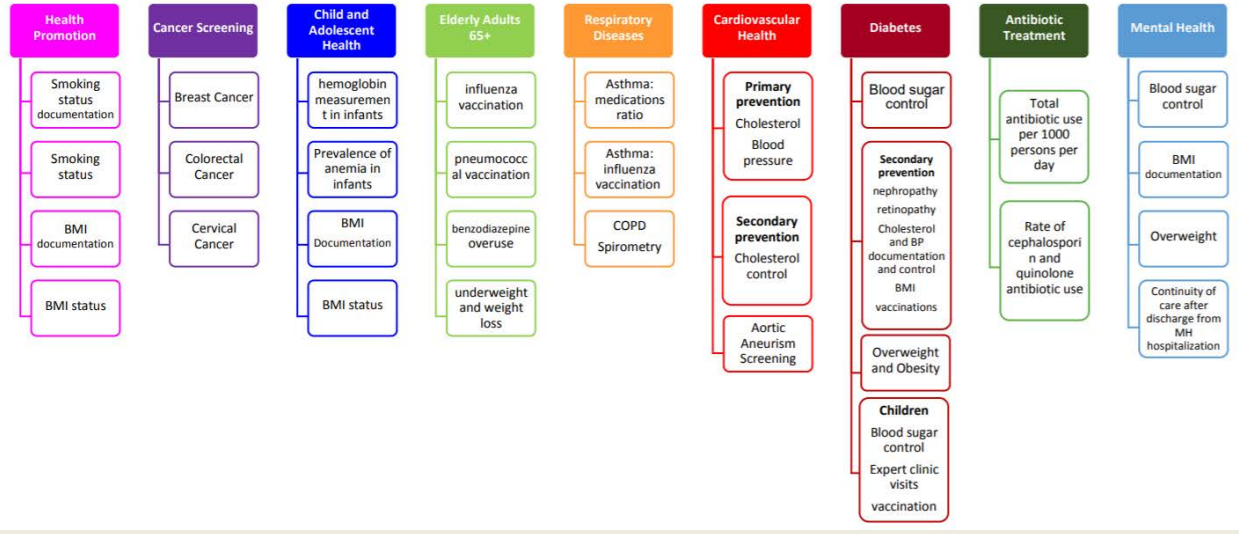
promotion, child and adolescent health, cancer screening (breast, colorectal and cervical cancer), elderly health, respiratory diseases, cardiovascular health, diabetes, antibiotic treatment and mental health. QICH incorporates a focus on primary prevention and management of chronic conditions, as demonstrated by the inclusion of indicators relating to risk factors in the general population, and the focus on COPD and asthma, diabetes, cardiovascular diseases and mental health (Box 4.4). Data quality for QICH is ensured through the use of standard indicator definitions by all health funds, and a systematic data quality audit cycle to ensure validity and comparability. Past evaluations have shown that the quality in community health care has improved over time for almost all categories of care – primary prevention, treatment and effectiveness of care (QICH, 2017[58]). In the area of diabetes care for example, a recent evaluation has found an improvement in most quality indicators (from 53% to 75% for the composite quality score). Declines were noted in rates of blindness, diabetes-related end-stage kidney disease, lower limbs amputations and diabetes-related mortality (Calderon-Margalit et al., 2018[59]). Quality improvements were also observed for elderly health (Podell et al., 2018[60]). The extensive use of electronic health records by health plans are one key successful factor of the QICH.

Regular feedback to providers on quality and outcomes as well as open publication for patients with performance data at municipal level and FHT level could also drive aspiration for continuous improvement. On this front, Brazil will need to improve transparency at granular level, and ensure that patients can monitor activity and quality of PHC at FHT level.

Box 4.4. The National Programme for Quality Indicators in Community Healthcare in Israel

The indicators in QICH cover nine clinical areas: health promotion, child and adolescent health, cancer screening (breast, colorectal and cervical cancer), elderly health, respiratory diseases, cardiovascular health, diabetes, antibiotic treatment and mental health. In total 20-eight indicators are collected (Figure 4.9). These indicators are based on national and international guidelines reflecting the current scientific evidence, international practices, relevance for the Israeli Health care system, and the feasibility of production.

Figure 4.9. The National Programme for Quality Indicators in Community Healthcare



An internal audit is conducted within each health plan, the QICH programme's directorate also performs a data audit, and an external audit is carried-out by a certified external audit. Throughout the auditing

process, methodologies, control processes, documentation, and lessons learned were examined, nurturing a continuous improvement in indicator reporting.

Table 4.6. Performance results at national level for selected indicators, 2017-19

Domains	Indicators	2017	2018	2019
Health promotion	Documentation of BMI components (ages 20-64)	90.33%	89.51%	89.16%
Cancer Screening	Under-screening for cervical cancer (women aged 35-54 who were not screened in the last 5 years)	35.71%	34.64%	32.65%
Child health	Documentation of BMI components in children (age 14-18 years)	74.94%	76.71%	77.54%
Elderly health	Use of long-acting of benzodiazepines in older adults (aged 65 years or older)	2.29%	2.17%	1.88%
Respiratory diseases	Asthma medication ratio (AMR) greater than or equal to 0.5 (ages 5-45 years)	69.71%	70.67%	71.94%
Cardiovascular health	Rate of LDL cholesterol level less than or equal to 160 mg/dL in those at low-risk for heart disease (ages 35-74 years)	90.18%	90.35%	90.49%
Diabetes	Uncontrolled diabetes: HbA1c greater than 9% in individuals with diabetes mellitus (ages 18 years or older)	9.98%	9.60%	9.01%
Antibiotic	Documentation of molecular HCV test among those with a positive serology test	83.34%	85.55%	87.59%
Mental Health	Adequate control of HbA1c in individuals with SMI and diabetes mellitus (ages 18-84 years)	71.15%	71.83%	72.07%

Source: QICH (2017[58]), National Program for Quality Indicators in Community Health Care in Israel, https://en.israelhealthindicators.org/publications.

To support greater patient-centred care, it is also important to collect patient-reported experience measures with PHC (OECD, 2021[61]). This approach is taken internationally. In England for example, the GP Patient Survey assesses patient's experience of health care services provided by GP practices within the National Health Service (NHS) England (OECD, 2020[43]). It assesses experience of access, making appointments, the quality of care received from health care professionals, patient's health and experience of their GP practice. Around 2 million patients registered with a GP practice are surveyed twice a year. The Care Quality Commission uses the results from this survey in their regulation, monitoring, and inspection of GP practices in England. The GP Patient Survey offers a description of each GP practice and its performance based on the latest survey. The analysis tool also provides comparison of performance between GP practices.

In 2017, the OECD launched the Patient-Reported Indicators Surveys (PaRIS) to address the need to understand the outcomes and experiences of people with chronic diseases (Box 4.5) (OECD, 2021[61]). PaRIS is the OECD's Patient-Reported Indicator Surveys initiative where countries work together on developing, standardising and implementing a new generation of indicators that measure the outcomes and experiences of health care that matter most to people. The International Survey of People Living with Chronic Conditions will be the first of its kind to assess the outcomes and experiences of patients managed in PHC across countries. The PaRIS survey aims to fill a critical gap in PHC, by asking about aspects like access to health care, waiting times, as well as quality of life, pain, physical functioning and psychological well-being. The initiative will help open a dialogue with service providers about how to further improve the performance of health services and health systems to become more people-centred. Brazil might want to join the OECD PaRIS survey to understand how the outcomes and experiences of care in Brazil compare with those in OECD countries.

Box 4.5. The OECD PaRIS Survey

In 2017, the OECD launched the Patient-Reported Indicators Surveys (PaRIS) to address the need to understand the outcomes and experiences of people with chronic diseases. PaRIS offers an opportunity for gathering the evidence necessary to transform health care systems into patient-centred systems based on the needs of the people they serve. The initiative includes:

- the collection of validated, standardised, internationally comparable patient-reported indicators in three areas: hip and knee replacements, breast cancer care and mental health care
- the collection of a new set of internationally comparable measures which focus on patients with one or more chronic conditions, who are living in the community, and who are largely treated in PHC or other ambulatory care settings.

Source: OECD (2021[61]), Patient-Reported Indicator Surveys (PaRIS), https://www.oecd.org/health/paris/.

The inclusion of the PCAT Tools in the 2019 National Health Survey is a positive step in Brazil to better understand users' experience with PHC services. This initiative should be maintained over the longer term.

4.5.4. Accreditation system for FHTs could help standardise and improve care quality

To standardise quality across the country, it is warranted to establish accreditation programme for PHC. Accreditation is a control mechanism to assure the quality of health care services, which often feeds into quality improvement (OECD, 2017[63]). It uses explicit standards derived from the best available evidence to assess performance of health care organisation through survey, assessments, or audits. Accreditation is particularly needed when performance data are lacking.

Several OECD countries have established accreditation system in PHC, including Australia, Canada, England, New-Zealand or the United States (Tabrizi and Gharibi, 2019[64]). In these countries, community oriented care, safe-care, high quality care, care continuity and human resource management had the highest priority among accreditation programmes (Tabrizi and Gharibi, 2019[64]).

England's approach to health service accreditation is at the forefront of OECD efforts, and is a model for other health care systems to emulate (Box 4.6). It is unusually comprehensive as it accredits all providers of primary and social care. The accreditation is carry-out by the Care Quality Commission an independent statutory body responsible for registering care providers; monitor, inspect, and rate services, and take action to protect population who use services (Care Quality Commission, 2021[65]). In Australia, the Australian Commission on Safety and Quality in Health Care, in collaboration with the Royal Australian College of General Practitioners, developed the voluntary National General Practice Accreditation Scheme. The Scheme aims to encourage safe and quality general practice in Australia. It involves independent third party review that practices meet the requirements set by the Royal Australian College of General Practitioners, and offer financial incentives to support activities that encourage continuing improvement in quality of care.

A starting point to improving quality in PHC will be to build accreditation system for all FHTs to carry out independent assessment of performance and identify areas that may require improvements. An accreditation system in Brazil could help standardise PHC in municipalities to achieve more consistent quality across the country.

Establishing a national inspectorate for health similar to the Care Quality Commission in England or the Haute Autorité de Santé in France could help to provide independent verification that standards are being met, identify good practice and support weaker centres to improve their standards. The new Agency for

the Development of PHC could also take this role, and act as an inspectorate for PHC. The Agency could for example be responsible for quality monitoring and improvement, and have a prescriptive role in producing overviews of current practice, current performance, and setting standards on performance and performance reporting. It could also develop tools such as evaluation framework, deep dive teams to visit and support municipalities with special needs, and levelling out resources when needed. This Agency could also provide a platform or forum for contact and exchange between municipalities, evaluating innovative practices and consolidating quality initiatives across the country when successful.

Box 4.6. Accreditation system in England is comprehensive

In England, the Care Quality Commission (CQC), an independent statutory body established in 2009, is responsible for the inspection for hospitals, adult social care, general practice, mental health care services, ambulances and community-based services. All providers of regulated activities, including NHS and independent providers, have to register with CQC and follow a set of fundamental standards of safety and quality below which care should never fall. The CQC assesses if providers are meeting these fundamental standards through monitoring and inspection.

The findings of such assessments are shared with the public, and citizens are encouraged to share their experience or report concerns to the CQC.

England's health care system is one of the few in the OECD to have a comprehensive accreditation programme for PHC. By Mars 2020, 7 237 GP services have been inspected and rated, while only 1 461 sites have not. Detailed individual practice inspection reports are publicly available on a website (Figure 4.10). The core services being inspected are urgent and emergency services, medical care, surgery, critical care, maternity and gynaecology, services for children and young people, end of life care, outpatients' services and diagnostic imaging. After inspection, the GP services must respond to areas of concern that was identified, develop an action plan to address them and make improvements. Detailed individual practice inspection reports are publicly available on a website.

Figure 4.10. Example of a CQC inspection in a GP surgery

Source: Care Quality Commission (2021[66]), CQC inspection ratings for GP services, https://www.cqc.org.uk/search/services/doctors-gps?sort=default&distance=15&mode=html.

4.5.5. Designing smarter payment for PHC

The *Previne Brasil* scheme is an important scheme to drive quality improvement in Brazil. In the years to come, it will be important to maintain and even expand the scheme. Compared to other OECD countries, the incentivised priority areas in Brazil have a stronger focus on child and maternal health. In OECD countries, the management of chronic conditions is frequently put at the centre of P4P schemes (OECD, 2020[43]). The *Previne Brasil* programme plans to expand the number of indicators by 2022 to include other indicators around mental health, breast cancer, multi-professional action, and patient experience (Ministério da Saude, 2020[67]). This will be an important step given the rising burden of chronic conditions and the need to address some risk factors for health including obesity. The experience from Portugal or England could inform the development of candidate indicators to be incorporated to the *Previne Brasil* programme.

A second key difference between the Brazilian P4P compared to most OECD P4P schemes is the fact that bonus payments are not made to the individual physician or the structure that he/she works for but to the municipalities that employs him/her, with no obligation for municipalities to pass on their bonuses to staff. This is not common in OECD countries in PHC. Generally, research suggests that P4P schemes with bonus payments aimed directly at professionals are more effective (Eijkenaar et al., 2013[68]).

Table 4.7. New forms of payment for PHC across the OECD

Add-on payments	Bundled payments	Population-based payments
Australia, Austria, Canada, Denmark, France, Germany, Iceland, Israel, Italy, Mexico, Sweden	France, Italy, the Netherlands, Canada, Australia, Belgium	United States (Accountable Care Organisations), Germany (Gesundes Kinzigtal GmbH)

Source: OECD (2020[43]), Realising the Potential of Primary Health Care, https://doi.org/10.1787/a92adee4-en.

Lastly, there are successful experiences across the OECD where innovative forms of payment for PHC have been introduced to encourage greater prevention, management of chronic disease and incentivise providers to effectively work together. Beyond P4P programme, there are three innovative forms of payments across OECD countries (OECD, 2020[43]) (see also Table 4.7):

- Add-on-payments: Additional payments to remunerate specific activities in order to target some dimensions of the care provisions such as establishment of care plans, collaborative care meetings or the provision of patient education. In 2018, 11 OECD countries used add-on payments to pay for co-ordination or prevention. In Denmark, general practitioners get pay-for-co-ordination, notably when they have more responsibility for treatment of chronically ill patients (e.g. diabetes).
- Bundled payments: The objective is to bundle separate health care activities into a single tariff for chronic conditions. The single tariff should cover the cost of all health care services provided by the full range of providers during a specific time period. In this type of arrangement, a group of health care providers is collectively responsible for the delivery of a wide range of activities for a pre-defined population group, typically involving at least PHC and secondary care. Evidence shows that bundled payments lead to better collaboration within and across care settings and can contribute to a greater standardisation of care and to the development of sophisticated IT systems. In 2018, 5 OECD countries used bundle-payments. The Netherlands have for example established bundled payments to care groups for patients diagnosed with Diabetes type 2, COPD and cardio-vascular diseases.
- Population-based payments: This payment scheme is an extension of bundled payment, being not restricted to particular episodes of care or conditions. It consists of one payment made to groups of health providers as well as management companies to cover most health care services for a

defined group of the population. Rather than paying providers in "silos", the money follows the patients across providers, covers most health care services and has a more comprehensive view of population well-being. In 2018, only two OECD countries used population-based payments, including for example the "Gesundes Kinzigtal" Initiative in Germany.

4.5.6. Expand the development of Rede de Atenção à Saúde to promote integrated care

Given the context of an epidemiological transition towards longer lives and increasing prevalence of chronic conditions, an important challenge in Brazil is to shift the focus of health care services towards addressing longer episodes of health care needs. To this end, greater integration between PHC, emergency care, specialist care and social care services is needed. Interactions between various health care providers about patient cases, and transitions from one service to another, should be timely, safe, and seamless for the patient and its family (OECD, Forthcoming[69]). PHC needs to play a key role in achieving this goal.

The impact of integrated care include better access, improved satisfaction for patients and health professionals, more appropriate care, enhanced preventive care, reduced avoidable hospital admissions, prolonged independent living and delayed admission to institutional care, improved health status and quality of life (Nolte and Pitchforth, 2014[70]; Curry and Ham, 2010[71]).

In Brazil, the *Rede de Atençao à Saúde* (RAS) are ambitious health care network aimed at reducing health fragmentation within the Brazilian health system. As earlier mentioned, the implementation of RAS is supported by Planificação da Atenção à Saúde (PAS) and Chronic Conditions Care Model (MACC) developed by CONASS (CONASS, 2020[13]; CONASS, 2018[14]). RAS is included in the scope of the Regioes de Saúde, with technical, logistics and managerial support to encourage effective integration.

However, implementation of RAS in Brazil is challenged by bureaucratic governance model and weak institutional leadership, workforce issues such as inadequate training and qualification toward inter-professional collaboration and co-ordination, a weak information system and payment policies that do support integrated care (Ministério da Saude, 2014[72]). These have resulted in low and uneven diffusion of RAS initiative across the country. Brazil will need to work on these four fronts to promote integrated care and ensure effective implementation of RAS (Box 4.7).

Brazil could learn from other OECD countries, which have embarked on different pathways to operationalise the integration of care, such as the Spain Basque Country with Integrated Care Organisations, the United Kingdom with PHC Networks and the United States with Accountable Care Organisations.

Box 4.7. Promoting integrated care and ensuring effective implementation of RAS in Brazil

Stronger leadership and governance model

The importance of leadership and management for the successful implementation of integrated care as well as integrated care service delivery as already been demonstrated in recent studies (Borgermans and Devroey, 2017[73]). While there is no one size fit all models, consolidated strategies seem often to be developed based on consultations with main stakeholders so that they can be implemented effectively by holding them collectively accountable and committed to achieving the common goals of promoting integrated care delivery.

Better workforce planning and modern educational training

To ensure that PHC workers work together with other health care professionals, there is a need to increase effort to develop appropriate training towards multi-disciplinary teams, case management, and

developing new roles for care co-ordination. In Germany, a national training programme focussing on case management was made available for nurses to strengthen their role in delivering care co-ordination. The Basque country in Spain created new roles such as liaison nurses and referral internists to co-ordinate and organise care. In Australia also, care co-ordinators for cancer patients or patients with chronic long-term conditions have been established to liaise health professionals, interface with the patient's health care team, help arrange health screenings, resolve barriers to accessing the health networks, and source follow-up health education.

Stronger data and information systems

Strong data and information systems are critical to support integrated care. With growing number of patients with complex needs receiving care by various services over long episodes of care, such systems can help improve communication and co-ordination between patients and their providers, increase the accuracy of diagnoses and clinical decision-making, help monitor and deliver appropriate services remotely, and provide patients more access to their health history. In Brazil data linkage remains insufficient, undermining information sharing in the context of integrated care (see (OECD, 2021[41]).

Smarter payment models

Payment models need to incentivise providers from different health sector to effectively work together. Fragmented governance in Brazil may undermine resource allocation across health care, hinder integrated care delivery. At the same time, there are some good providers' payment mechanisms that encourage greater co-ordination and integration of care – such as add-on payments, bundled payments or population-based payment. Add-on payments reward more co-ordinated, safer and effective care, and are widespread across OECD countries in PHC (Table 4.7). Population based payment for example pool into a single payment all services delivered to patients including prevention and treatment across hospitals, primary and long-term care. In the United States, ACO receive a virtual budget for a wide range of services and they are incentivised by shared savings contracts by payers to co-ordinate care across different levels efficiently.

Source: OECD (2020[43]), Realising the Potential of Primary Health Care; OECD (Forthcoming[69]) Strengthening Performance of Integrated Care Delivery across OECD countries.

4.6. Conclusion

Looking to expand access to high quality PHC, Brazil has been taking important steps to improve the distribution of doctors, develop new forms of service organisations and introduce new financing models for PHC. The development of guidelines and health care services portfolio; and the production and publication of data underpinning PHC are also important steps towards ensuring high quality care across the country. All these developments are well aligned with the experiences of OECD countries, and have led to large improvements in access to PHC and population health outcomes.

However, the Brazilian PHC system is still characterised by a relatively low population coverage. A significant proportion of the population also have direct access to outpatient specialties and hospitals for minor conditions, perhaps because PHC has traditionally provided few low complexity procedures and surgeries. Available evidence also points to the need for enhancing the contribution of PHC to prevention and management of chronic conditions, notably in North and Northeast regions which present consistently poorer health care.

These shortcomings give strong arguments to strengthen the gatekeeping system in Brazil with a systematic registration system with FHTs, which will control and orient the patient's into specialist care. This is a prerequisite to accelerate the expansion of FHTs, helping to build a profile of the health needs of the registered population, and better recognise the central co-ordinating role of FHTs. Actions are also needed to support FHTs to deliver a more modern PHC service provision, focused on prevention, treatment, follow-up of diagnoses and management of chronic conditions. The federal government will need to play a more prescriptive role to strengthen comprehensive PHC evenly across the country. These would include ensuring that all municipalities are well equipped and trained to properly deliver actions and services defined in the CaSAPs. There are also opportunities to monitor and encourage compliance with clinical guidelines and CaSAPs using the *Previne Brasil* Programme – either through the Strategic Actions or the P4P component. Collecting a richer set of quality indicators on a wider array of preventive activities and management of chronic conditions (such as alcohol consumption, obesity, cancer screening or mental health, and patient experience) would also support greater patient-centred PHC. An accreditation system in Brazil could help standardise PHC quality – notably in municipalities having low capacity and high vulnerability – to identify areas that may require greater financial and organisational support. The new Agency for the Development of PHC could act as an inspectorate for PHC, for example to provide independent and external verification that standards are being met, identify good practice and support weaker centres to improve their standards.

Going forward, Brazil will have to establish strong oversight and good management, develop appropriate training, alongside strong data and information systems for the successful implementation of RAS. Appropriate payment models would be critical to incentivise providers from different health sectors to effectively work together. While this may come too early at the moment, the introduction of add-on payments or bundled payments is certainly something Brazil could consider in the future.

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