Strengthening the frontline: How primary health care helps health systems adapt during the COVID-19 pandemic

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Health systems continue to adapt to cope with the COVID-19 pandemic. Much focus has been placed on the scaling-up of hospital capacities. However, the pandemic is also deeply affecting the health of many people who are not infected by the virus. People living with chronic conditions are not only highly vulnerable to complications and death from COVID-19, but they are also suffering from disruptions to their regular care routines. The COVID-19 crisis demonstrates the importance of placing primary health care at the core of health systems, both to manage an unexpected surge of demand and to maintain continuity of care for all. Strong primary health care – organised in multi-disciplinary teams and with innovative roles for health professionals, integrated with community health services, equipped with digital technology, and working with well-designed incentives – helps deliver a successful health system response. The innovations introduced in response to the pandemic need to be maintained to make health systems more resilient against future public health emergencies, and able to meet the challenges of ageing societies and the growing burden of chronic conditions.

Key messages

- The COVID-19 pandemic has physically, mentally, economically and socially damaged the lives of many people and put immense pressure on health systems.
- People with chronic conditions are facing a 'double threat': they are more vulnerable to complications and death from COVID-19, and they experience indirect health effects from disruptions in essential care. Cancer diagnoses, chemotherapy appointments, and the number of visits to ambulatory practices have all decreased.
- To effectively tackle these challenges, policy cannot just focus on 'virus and hospital'. A comprehensive strategy to address all physical, mental and social health needs of populations directly or indirectly affected by COVID-19 is needed.
- For health systems to be resilient against health crises of this magnitude, **strong primary and community health care – the frontline of all health systems – is essential**. Primary health care delivers the first line of care in communities during the acute phase of a health crisis, and helps maintaining continuity of care for people with chronic conditions. Primary health care also reduces pressure on the entire health systems by providing comprehensive and preventive care during and after the crisis.
- Faced with the pandemic, many OECD countries have strengthened the frontline by:
  - **Reorganising the delivery of primary health care services** by establishing team practices and a strong link with community services, such as in France, Iceland, Ireland, Slovenia or the United Kingdom. Expanding home-based programmes has also improved access to care for all patients during the crisis, alleviating pressure on hospitals in Canada, Spain or the United States among others.
  - **Rearranging tasks and responsibilities** in primary health care, notably to allow community pharmacists to extend prescriptions and prescribe chronic disease medications, such as in France, Ireland, Portugal or the United States. However, community health workers have not been mobilised as much as they could have during the pandemic. In the United States, community health workers have provided timely, accurate information about COVID-19 and ensured that all patients obtained access to care and support.
  - **Leveraging digital tools and systems** such as e-Health and telemedicine, for example by new legislation (e.g. Estonia, Poland), new telemedicine services (e.g. Canada, the Slovak Republic), or new guidelines and regulations (e.g. Belgium, France, Japan). Digital tools help maintaining continuity of care for people with chronic conditions and to triage, support and treat patients remotely, containing the spread of the virus.
  - **Add-on payments** for primary health care providers who are facing high workload and risks due to the pandemic, including for teleconsultation services or home visits (e.g. Netherlands, Germany or Italy) or for hygiene and safety measures, in response to the pandemic (e.g. Germany, the United Kingdom).
- **Stronger involvement of patients** in care can help address the needs of people whose lives are impacted most. In the heat of a crisis, the voice of the patient needs to be heard.
- Promising and innovative developments in primary health care have been accelerated during the pandemic. These efforts need to be further expanded to ensure that health systems are more resilient to future public health emergencies but also to meet the challenges of ageing societies and growing burden of chronic conditions.

Introduction

Much policy attention has been devoted to preventing the spread of the SARS-CoV-2 (COVID-19) virus – such as ramping up testing, tracking and tracing capacities, the use of personal protective equipment and physical distancing measures – as well the rapid scaling-up of hospital and workforce capacities to manage sudden surges in care demand and overcrowded Intensive Care Units. However, the pandemic also deeply affects many people who have not contracted the virus. Many non COVID-19 patients were unable to access needed care during the first wave of the pandemic.

People living with chronic conditions, who are already more vulnerable to complications and death resulting from COVID-19, are facing significant indirect health impact. While people with chronic conditions need continuous and accessible routine-care, the COVID-19 pandemic disrupts this essential care. Examples of such indirect health impacts include people with delayed diagnoses, cancelled, foregone and delayed care.

The COVID-19 pandemic shows that for health systems to be resilient[1] to health shocks such as COVID-19, policy responses need to address both these direct and indirect threats. Strong primary and community health care – the frontline of all health systems – plays an essential role in this. Strengthening this frontline by expanding the role of primary and community health care can: a) reduce the pressure on health systems as a whole, alleviating the burden on hospitals; and b) protect people against the indirect threats of pandemics or other health crises. International learning provides opportunities for counties to make better use of the potential of primary and community care.

Strong primary and community health care ensures continuity of care for all patients. Rather than merely providing episodic care and responding to acute health problems, strong primary health care provides regular, preventive and patient-focused care and builds longitudinal patient-care provider relationships. It also serves as an easily accessible entry point to the health system. These services are essential to ensure that peoples' concerns, fears and needs are heard and that potential health problems are managed in an early stage.

This policy brief describes how the COVID-19 pandemic is impacting the lives of people with chronic conditions and how primary health care systems play an essential role in response to the pandemic. Lessons learnt from the COVID-19 pandemic will help countries strengthen their health system's response to health emergencies and ensure continuity of care for people. International patient organisations contributed to the policy brief by sharing their experiences with the pandemic by responding to a rapid survey. International primary health care organisations also shared their views on how they see their role in the times of a health crisis. Finally, policy makers reviewed the paper to ensure its relevance for their countries.

Impacts of COVID-19 on people living with chronic conditions

While even young, low-risk patients with long ongoing symptoms of COVID-19 have signs of multiple organ damage, people with existing chronic conditions[2] are the most hard-hit patient population in the COVID-19 pandemic. Across the OECD, almost one-third of the population above 15 years old lives with two or more chronic conditions. Among people of 65 years and older, this is two-thirds of the population. People living with chronic conditions, who are already more vulnerable to complications and death resulting from COVID-19, also face indirect impacts of the pandemic due to disruptions in continuity of care or foregoing care.

[1] Health systems need to build resilience and the ability to recover from and adapt to health shocks such as COVID-19. Resilience is defined as the ability of a system to perform four functions with respect to adverse events: anticipate; absorb; recover and adapt. Core systems need to take advantage of new or revealed opportunities following crises to implement broader systemic changes (OECD, 2020[56]).

[2] According to the Centers for Disease Control and Prevention, chronic diseases are defined as medical conditions that last one year or more and require ongoing medical attention or limit activities of daily living or both.

The SARS-CoV-2 virus hits people with pre-existing chronic conditions most

People with pre-existing conditions risk more severe COVID-19 outcomes

People living with certain chronic conditions are at higher risk of severe COVID-19 symptoms. Early in the pandemic, it was shown in China that older patients and those with chronic conditions were more likely to have a severe to critical COVID-19 condition, to show deterioration of their health condition and to die from COVID-19 (Zhang et al., 2020[1]). Among 7 162 reported COVID-19 cases studied by the United States Centres for Disease Control and Prevention (US CDC), 38% of the patients had an underlying health condition. Among patients admitted to Intensive Care Units (ICUs), the percentage of people with underlying health conditions was more than twice as high (78%) and among hospitalised patients not admitted to an ICU this was 71% (Chow et al., 2020[2]). An Italian study published in March 2020 reported that of patients who died from COVID-19 infections in hospitals, 98.5% had a pre-existing condition, and almost half of them had three conditions or more (Onder, Rezza and Brusaferro, 2020[3]). The effects of the virus also appeared most acute for patients already suffering from poor health in the United Kingdom (Office for National Statistics, 2020[4]). Among people who died of COVID-19 in March and April 2020, 90% had at least one pre-existing condition.

The US CDC keeps a regularly updated list of studies of conditions that are associated with severe COVID-19 symptoms (Box 1).

Box 1. Underlying health conditions associated with a higher risk of severe symptoms, hospitalisation and admission to ICU following a SARS-CoV-2 infection according to the U.S. Centres for Disease Control and Prevention

- Cancer
- Chronic kidney disease
- Chronic obstructive pulmonary disease (COPD)
- Heart conditions such as coronary artery disease
- Immunocompromised state (weakened immune system) from solid organ transplant
- Diabetes type 2
- Sickle cell disease
- Obesity

Source: Centres for Disease Control and Prevention (2020[5]), 'People with Certain Medical Conditions", https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html.

People with chronic conditions living in worse social economic circumstances are more likely to be affected by COVID-19 and to experience worse health outcomes

Several countries have reported significant inequalities in prevalence across socio-economic groups and minorities. These groups face an accumulation of risk factors; individuals from disadvantaged socio-economic backgrounds are often in worse health, have higher exposure to risk factors for health and more limited access to the health system (OECD, 2019[6]). The onset of chronic conditions is 10-15 years earlier in the most lower income populations compared to higher income populations (Guthrie et al., 2012[7]). This results in an increased prevalence of multiple chronic conditions in these populations.

The COVID-19 pandemic also has large economic and social impacts on vulnerable people. Increased unemployment, income loss, reduced hours and isolation will disproportionately affect socially and economically disadvantaged groups, exacerbating existing health inequalities (Power et al., 2020[8]; Bambra et al., 2020[9]).

Additionally, structural factors may prevent the poorest and minority communities from practicing social distancing or other protective hygienic measures. Highly dense communities with insecure housing, and with limited access to water or hydroalcoholic gel, may make social distancing and other policy measures ineffective (The Lancet, 2020[10]). In addition, discrimination and poverty increase the risk of socially disadvantaged groups to have high-risks jobs in relation to COVID-19, such as health and social workers, retail grocery workers, or public transit employees. Such key workers are unable to stay at home, increasing their exposure to the virus (Dorn, Cooney and Sabin, 2020[11]).

In the United Kingdom, Office for National Statistics (ONS) analysis revealed that deaths involving COVID-19 in the lowest income areas of England is more than twice as high as those in the highest income areas (Office for National Statistics, 2020[4]). Per-capita COVID-19 hospital deaths among the black Caribbean population are also three times those of the white British people (Platt and Warwick, 2020[12]). In the United States, deaths due to COVID-19 are disproportionately high among African Americans, Latino communities and other ethnic communities compared with the population overall (Dorn, Cooney and Sabin, 2020[11]). In Barcelona (Spain), people in poorer neighbourhoods are six or seven times more likely to contract the virus than those in wealthy areas (Mogi, Kato and Annaka, 2020[13]). In France, alongside disparities by income, immigrants were also disproportionately affected: all-cause mortality rates for immigrants increased by 48% in March-April 2020 as compared with a year earlier – much higher than the 22% increase observed for individuals born in France (Papon and Robert-Bobée, 2020[14]). Similar findings were observed in Sweden: men in the lowest income tercile had a 75% higher risk of dying from COVID-19 than men in the highest income tercile. In addition, immigrants from low- and middle-income countries were more than twice as likely to die as compared with individuals born in Sweden (Drefahl et al., 2020[15]).

The COVID-19 crisis has also indirect impacts on people living with chronic conditions

While people living with chronic conditions are likely to experience poorer health outcomes related to COVID-19, they also are exposed to a number of secondary impacts from the COVID-19 outbreak – whether they are caused by strains on health systems, indirect impacts of needed containment policies, and personal risk mitigation requirements. A number of important issues related to COVID-19, shown in Box 2, have been reported by people living with chronic conditions, including lack of access to care and delays in treatment, among other factors.

In 2017, OECD Health Ministers concluded that health systems need to become more people-centred, organised around the real needs of people and aiming to improve their health outcomes (OECD, 2017[16]). Patients and patient organisations report, however, problems with lack of access and lack of involvement of affected patient groups in policy decisions.

Box 2. Impact of COVID-19 reported by Patient Federations

Consultations with international and national patient federations via the PaRIS Patient Advisory Panel have highlighted both the supply and demand side indirect effects of the COVID-19 crisis on patients living with chronic conditions.

Consulted patient groups and individual patient respondents noted the below indirect effects of COVID-19 crisis on patients living with chronic conditions:

- Decreased financial security
- Increased stress on informal caregivers
- Challenges with protections of individuals with disabilities
- Absenteeism of home care workers
- Delays in care or treatment for chronic conditions
- Reluctance to visit health care settings in person (including primary health care and emergency care)
- Lack of follow-up or appropriate resources for self-management

Indirect effects emerging **as greatest concern** to patients included the following:

- Impacts on mobility due to confinement
- Concerns about drug shortages and access to pharmacies
- Concerns about accessing or using masks, and face coverings for those who have difficulty breathing
- Distress and burnout of health care workforce
- Health disparities based on socio-economic status
- Lack of involvement of patient partners in policy decisions

Source: OECD consultations with international and national patient federations.

Overburdened health systems during the first wave of the pandemic have resulted in the delay, cancelation, or delivery of sub-optimal health care services for other conditions

At the peak of the first wave of infections, a number of countries scaled back delivery of non-COVID-19 related health services in an effort to increase hospital and health system capacity. For example, in Australia (until the end of April 2020), all non-urgent elective surgeries were cancelled to free up space in hospitals (Australian Government Department of Health, 2020[17]). Similar policies have been implemented in the United Sates, Portugal, and Chile (OECD, 2020[18]). In France, ambulatory surgery has dropped by nearly 80% during the lockdown period (15 March – 11 May 2020) compared to same period in 2019 (Finkel, Séguret and Meunier, 2020[19]). In Germany, hospitals were encouraged to gradually return to "normal activity" (i.e. end the postponement of elective surgeries) in early May 2020, but continued to reserve between 25-30% of ICU capacity for COVID-19 patients (BMG, 2020[20]).

Beyond hospital care, a number of countries also postponed care in other settings during the first half of 2020 as countries implemented policies to reduce non-essential medical care, including ambulatory care, vaccinations, laboratory testing, physical therapy, cancer screening, and other routine care. A recent systematic review of data across 20 countries showed that health care utilisation decreased by a median

of 37% of services overall, 42% for visits, 31% for diagnostics, 30% for therapeutics and 28% for admissions (Moynihan et al., 2020[21]).

Research in the United Kingdom found a 76% decrease in urgent referrals from primary health care for people with suspected cancers and a 60% decrease in chemotherapy appointments for cancer patients in comparison to levels before the COVID-19 crisis (Lai et al., 2020[22]). In Scotland, three cancer-screening programmes (breast cancer, cervical cancer, and bowel cancer) were paused during the first wave of the pandemic, potentially leading to delayed diagnosis (Scottish Government, 2020[23]). Preventive cancer screenings in the United States for breast cancer, colon cancer, and cervical cancer have also dropped between 86% and 94% in March 2020 compared to average volumes in 2017-19 (EHRN, 2020[24]). In Australia, there were around 145°000 fewer screening mammograms conducted by BreastScreen Australia in January to June 2020 compared with January to June 2018 (AIHW, 2020[25]). Further, a recent report from Cancer Australia showed a reduction in diagnostic and therapeutic procedures for skin, breast and colorectal cancers from March to May 2020 (Cancer Australia, 2020[26]). In France also, the number of cancer diagnoses decreased by 35% to 50% in April 2020, as compared to April 2019 (Santi and Pineau, 2020[27]). In Italy, an estimated 1.4 million fewer screening exams were performed during the first five months of 2020 compared to the same period in 2019, leading to fewer cancer diagnoses (Italian National Oncology Association, 2020[28]). Delayed cancer diagnoses and treatments will impact patient's survival rates. Research in the United Kingdom suggested that cancer deaths may increase as much as 20% in the year following the crisis due to delayed diagnoses and treatments (UCLPartners, 2020[29]). In France, delayed diagnoses could lead to an excess mortality of 10%-15% per month of delay (Santi and Pineau, 2020[27]).

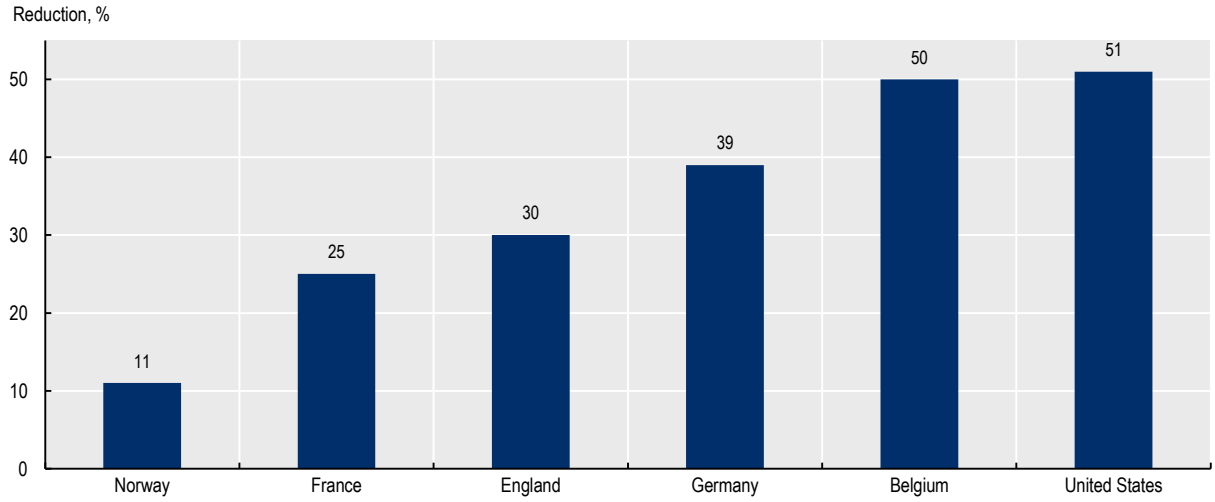
Countries have seen significant reductions in out-patient care visits during the first wave of the pandemic

A number of countries have seen significant reductions in the use of face-to-face outpatient services during peaks of infections. A study from the United States found that the number of visits to ambulatory practices declined by nearly 60% during March 2020, and by around 50% for primary health care visits over the same period (Figure 1) (Commonwealth Fund, 2020[30]). Belgium observed a similar reduction in primary health care consultations in April 2020 as compared to April 2019 (Figure 1). Nationwide data from Santé Publique France indicate a reduction of primary health care consultation of 25% in April 2020 as compared to April 2019. In England, data from the National Health Service (NHS) show that the overall number of primary health care appointments fell by 30% in March 2020. In Norway, primary health care consultations have been reduced by 11% between the end of March 2020 compared with early March 2020.

Primary health care visits have not been decreasing in all countries. An initial study from the Netherlands found that the overall number of consultations with primary health care providers before and during the outbreak in the first half of 2020 was similar, with an added increase of telephone/e-mail and internet consultations – rising from 30.6% in 2019 to 53.3% in March 2020 (Schers et al., 2020[31]).

Emerging evidence shows that people living with chronic conditions did not seek medical care either because they fear exposure to SARS-CoV-2 or because they worried about seeking care services when the health system is facing constraints. A study of a representative sample of the French population showed that 51% of people with chronic conditions had forgone care in ambulatory care services or at hospitals (Ipsos, 2020[32]). Among people with chronic conditions, 46% did not visit their family doctor or their routine care physician as part of their follow-up, which in normal conditions, they would. In the United Kingdom, it was shown that, as compared with the previous year, emergency room visits in March 2020 decreased by 29% (Appleby, 2020[33]). Findings from California in the United States found that emergency room visits have decreased by 50% in the week following the implementation of stay at home orders, while corresponding with surges in emergency calls for cardiac arrests – suggesting that patients may have been delaying needed care in emergency departments (Wong et al., 2020[34]).

Figure 1. Reduction in primary health care consultations during the first wave of the COVID-19 pandemic



Note: Estimates are based on different tools and are not directly comparable. In Belgium and France, data on consultations compare April 2020 with April 2019; in Germany, the data compare the last week of March 2020 with the same period in 2019. In Norway, the United Kingdom (England) and the United States, reductions uniquely during March 2020 are analysed. In Germany, data are calculated based on billing data. In Belgium, France, Norway, the United Kingdom (England) and the United States, estimates are based on the number of consultations.
Source: Norway (the Norwegian Control and Payment of Health Reimbursement), France (Santé Publique France), the United Kingdom (NHS Digital, 2020[35]); Germany (ZI Zentralinstitut fur die kassenartliche Versorgung in Deutschland, 2020[36]), Belgium (Federale Overheidsdienst Sociale Zekerheid), The United States (Commonwealth Fund, 2020[30]).

Primary health care systems in times of health emergencies

Strengthening primary health care, often considered as the frontline of health care systems, is essential to reduce the indirect negative health impact of COVID-19, as well as alleviating the burden on hospitals. This is also necessary because of the ageing of populations and the growing burden of chronic conditions, which require stronger investment in prevention and stronger primary and community care services.

Strong primary health care helps to cope with the surge in demand while maintaining care continuity

Countries across the OECD have responded rapidly and thoroughly to the pandemic. Understandably, policy responses have first focused on two main objectives: first, avoiding the further spread of the virus; second, ramping up hospital capacity. However, the impacts of this crisis go far beyond the effects of an infectious disease as such: it deeply impacts the lives of people physically, psychologically, economically and socially and disrupts health care systems. In order to fully address this global health crisis, the policy focus needs to be expanded from a 'virus and hospital focus' towards a more comprehensive strategy, addressing the concerns, fears and needs of people contracted by COVID-19 as well as other patients.

Primary health care[3] plays a crucial role in this strategy. A strong primary health care is critical as health systems seek to cope with the surge in demand for patients acutely ill with a new, highly infectious disease,

[3] Primary health care is expected to be the first and main point of contact for most people with the health care system, focused on the people and their communities. It takes into account the whole person and is patient-focused, as

while maintaining care for chronic patients under difficult circumstances and dealing with indirect effects as described above. During the pandemic, primary health care services have a role to play through patient triage in primary health care settings by using existing relationship between family doctors and their patients, identifying patients at risk, contacting and supporting them. Primary health care services can also manage most patients with mild COVID-19 symptoms, protecting hospitals from overcrowding with such patients. For patients with chronic conditions, primary health care services is well placed to assure continuity of care and support initiatives or adjust daily routines to minimise risks for COVID-19 infection. Supporting care co-ordination between primary health care and secondary care is also critical in times of health emergencies. Primary health care professionals are key contributors to care co-ordination and to multi-sectoral work across the professional lines.

According to a survey[4] conducted among primary health care providers, the following priorities for health systems emerged during the COVID-19 pandemic:

- Identifying appropriate resources and making care for people living with chronic conditions a priority by reflecting on an appropriate, safe way to continue this care;
- Supporting advanced care planning and frailty assessment of patients;
- Relying on existing primary health care services with reorganisation rather than investing in new structures;
- Supporting co-operation between primary health care and other care services with involvement of people.

Strong primary health care helps mitigating pressure on the entire health system

While primary health care systems pay off in times of crisis, strong primary health care also helps mitigating pressure on health systems as a whole, notably in the context of an ageing population and the rising burden of chronic conditions. As the first point of contact, primary health care that ensures accessible, comprehensive, continuous, and co-ordinated health care is key to creating resilience in populations by boosting preventive care and screening, treating those who need it, and helping people become more active in managing their own health. It has all the potential to improve health outcomes for people across socio-economic levels and to reduce unnecessary use of more expensive specialised services (OECD, 2020[37]). Such positive outcomes materialise when primary health care is the first point of contact for the majority of patients' needs, and professionals have access to the patients' full medical history and social background, thereby helping them to co-ordinate care with other health services as needed.

By providing the main point of contact for patients and especially for those with complex care needs, primary health care can make health systems more effective, efficient and equitable across OECD countries (OECD, 2020[37]), for example:

- Robust primary health care can delay the onset of chronic conditions and reduce mortality rates through greater prevention.
- Better, more accessible primary health care results in lower rates of hospitalisations and emergency department use.
- Solid primary health care ensures access to vulnerable populations that otherwise can struggle to access medical services.

opposed to disease or organ system-focused, and thus recognises not only physical, but also psychological and social dimensions of health and well-being (OECD, 2020[44]).

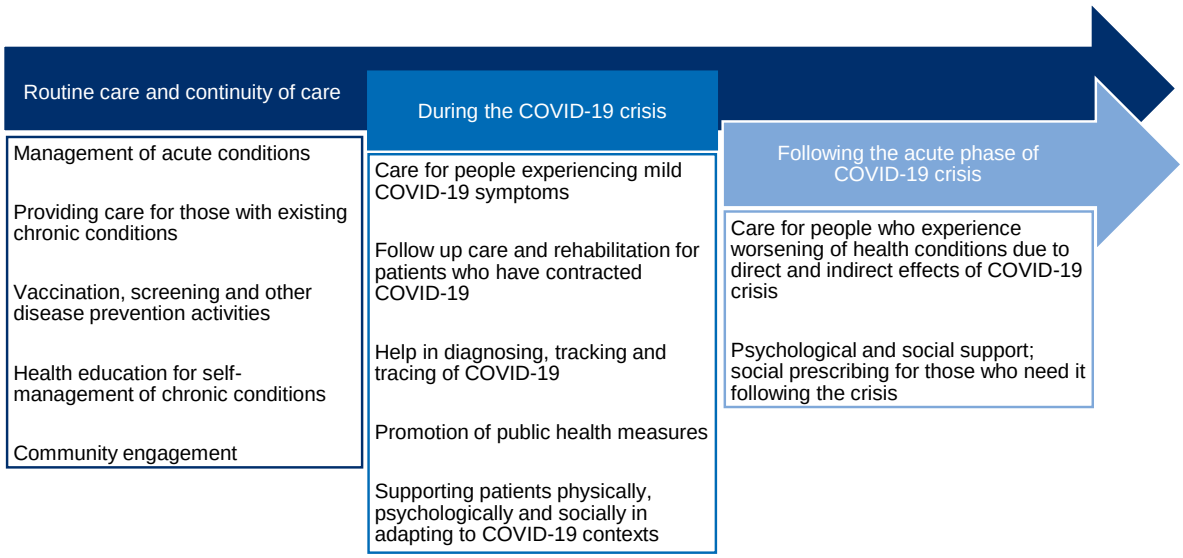
[4] OECD's consultations with the World Organisation of Family Doctors (WONCA), European Network for Quality and Safety in Primary Care (EQUIP) and European Forum for Primary Care (EFPC).

During and after the pandemic, strong primary health care can provide comprehensive and continuity of care in three main ways (see Figure 2):

- First, it maintains continuity of care through chronic care management, disease prevention activities, health education for self-management of chronic conditions, and community engagement in the local context.
- Second, it provides the first line of defence by providing care for mild COVID-19 cases and helping to diagnose, track, trace and stop the spread of the outbreak. It can help increase uptake of public health measures, support people psychologically and link with social services during the acute phase of the pandemic.
- Third, it can support those who face deterioration of health conditions due to direct and indirect effects of the COVID-19 crisis and provide psychological and social support after the acute phase of the crisis. Health conditions may worsen following the acute phase of COVID-19 pandemic due to disruption of care, underdiagnosing of potentially urgent health problems, prolonged isolation, and increased risk factors for health. Strong primary health care is best placed to address this surge in care needs.

For all these reasons, primary health care should be the cornerstone of the global response and recovery from current and future public health emergencies. It is the most inclusive, effective and efficient way to protect the health of people and communities.

Figure 2. Primary health care needs to address the surge in care needs in the face of the crisis



Policy levers to strengthen primary health care during COVID-19

Policy responses that help to manage an unexpected surge in demand and maintain continuity of care for all range from reconfiguring primary health care delivery around team-practices, community care centres and home-based programmes, developing innovative roles for pharmacists and community health workers, increasing the adoption of digital technology and well-designed incentives.

Reconfiguring the delivery of primary health care during health emergencies

Multi-disciplinary primary health care teams and strong links with community services supports communities during the pandemic

New configuration of primary health care, which houses multiple professionals with advanced skills working in teams and supported by digital technology, enables seamless co-ordination of care and are proactively engaged in preventive care. Such multi-disciplinary teams often help improving health care access of low-income or underserved populations, who face barriers to using traditional models of primary health care services, as well as patients living with (multiple) chronic conditions.

Models of primary health care based on teams or networks of providers were reported by 17 OECD countries in 2018, including Australia, France, Switzerland, and the United States (OECD, 2020[37]). During the COVID-19 pandemic, multi-disciplinary team practices are critical to provide support in the community, and offer reliable information. In addition, several OECD countries establish COVID-19 community care facilities to work in close co-operation with multi-disciplinary team practices. For example:

- In the United States, some Patient-Centred Medical Homes have reacted quickly during the first wave of the pandemic to provide support and health care in the community. The Tower Health Medical Group, for example, built their response on a co-ordinated care structure already in place and a strong commitment to access and continuity of care. Digital tools played a significant role in this context (see Box 3).
- In Canada, primary health care practices are critical to manage patients experiencing mild COVID-19 symptoms in the community. They are involved in triaging minor acute illnesses and working with patients to manage chronic conditions during the pandemic (European Observatory of Health System, 2020[38]). New billing codes for primary health care physicians are introduced by provinces and territories (such as Nova Scotia, New Brunswick, Ontario or Manitoba for example) to compensate for virtual consultations, and physician bodies establish webinars and toolkits to facilitate uptake of telemedicine or virtual care when possible (European Observatory of Health System, 2020[38]).
- In Iceland, the first point of contact for COVID-19 patients are the multi-disciplinary primary health care centres. Primary health care centres are responsible for identifying high-risk patients, testing patients, and providing patient education. Those who test positive are advised to stay at home as long as possible and are referred to COVID-19 community care units where they are registered and monitored on a daily basis via telemedicine, phone, and video-links (European Observatory of Health System, 2020[38]).
- In Slovenia, entry points for COVID-19 patients are organised in community care units next to the location of 16 primary health care centres to carry out testing, and avoid the crowding of hospital.
- In Austria, primary health care centres play an important role in maintaining health care delivery during the COVID-19 crisis. Multi-disciplinary primary care teams are able to provide care to both COVID-19 and non-COVID-19 patients using its extra-room capacity. Primary health care centres help maintaining care continuity, while providing testing, triage and patient education to contain the spread of infection.
- Australia established family doctor-led respiratory clinics in primary health care during the first wave of the pandemic to move potentially infected people away from other general practices and from emergency departments.
- In France, community care facilities dedicated to COVID-19 patients have been established by multi-disciplinary practices (such as Centres de Santé) from March 2020. The Regional Health Agencies and primary health care professionals agreed on creating these new primary health care services in a gymnasium or festival hall in the community such as CPTS Champigny (*Les*

communautés professionnelles territoriales de santé) (CPTS Champigny-sur-Marne, 2020[39]). There, people with mild COVID-19 symptoms but living with a chronic condition are tested as well as health care professionals with symptoms and symptomatic people with risk.

- In the United Kingdom, COVID-19 community centres such as Southwark COVID-19 Community Centre are established to manage patients experiencing COVID-19 symptoms or acute symptoms who require primary-care level treatment. In these centres, clinical team composed of two teams of family doctors, nurse and medical student respond to the demands of the population.
- In Ireland, Community Assessment Hubs have been established across the country during the first wave of the pandemic. The Community Assessment Hubs are staffed by general practitioners, nurses, other health care professionals and administrators. Persons likely to have COVID-19 or patients with COVID-19 who become unwell can be referred by their general practitioners to attend a scheduled appointment at the Community Assessment Hub for further clinical assessment and appropriate management in the community setting. These referrals allow primary care practices to continue to more effectively manage the demand for non COVID-19 services.

In France and the United Kingdom, the COVID-19 community centres are made available to reach underserved people and make sure that everyone in the community has access to the right health and social support during the crisis (access to food, medicine, advice about education or support for mental well-being).

Box 3. The Tower Health Medical Group in the United States

The Tower Health Medical Group is a Patient-Centered Medical Home, which includes 800 employed physicians and advanced practice providers that support regional hospitals, urgent care centres, and specialty and primary health care practices.

During the first wave of the COVID-19 pandemic, the Tower Health designed its plan very quickly thanks to the co-ordinated structure already in place and a strong commitment to patient-centred access and continuity. First, Tower Health adjusted its patient portal to accelerate portal registrations and enhance the ability of patients to connect with the primary health care team to obtain health information. Second, Tower Health provided health education resources on the portal to inform patients, notably those underserved or fragile. Third, Tower Health set-up a co-ordinated approach for reporting test results. Patients were notified on their COVID-19 testing results but most importantly emergency department, urgent care centres or other specialists had to share the results with the primary health care team. Finally, Tower Health adjusted schedules to provide in-person care appointments to address complex and pre-existing conditions, while encouraging digital consultation for wellness and non-urgent visit.

Source: Based on https://www.towerhealth.org/COVID-19-information-centre.

Integration of primary health care with public health and social care helps to reduce the indirect health effects

Integrating primary health care services with other health care services and essential public health functions helps to diminish the direct effects of the COVID-19 by co-ordinating care for people living with chronic conditions, including organising hospitalisations, intensive care, and post-COVID care after discharge.

Integration of primary health care services with public health, mental health and social care services also helps reduce the indirect effects of COVID-19 on people living with chronic conditions. Strengthening integration of primary health care services with public health can provide better surveillance for public

health and dissemination of public health information for this group. At the same time, continuity of prevention and health education via primary health care services can provide targeted public health information for people living with chronic conditions.

In France, multi-disciplinary primary health care practices in deprived areas such as *Maison de Santé Pluriprofessionnelle Rennes Nord/Ouest* (Avenir Santé Villejean Beauregard, 2020[40]) work with the people from the community to organise weekly newsletters that are distributed in their neighbourhood. These newsletters answer frequently asked questions about the COVID-19 pandemic and provide information about the reorganisation of the primary health care services in the neighbourhood. Information on the self-management of chronic conditions and support materials for people with mental conditions are also part of the regular news. Information about the COVID-19 pandemic is translated into several other languages such as Arabic, Turkish, and English, in line with the demographics of the community.

Home-based programmes reduce the risk of COVID-19 transmission while maintaining care continuity for other patients

The expansion of home-based programmes during the pandemic aims at reducing the risk of COVID-19 transmission but also to maintain high quality care and continuity of care, especially for people living with chronic conditions (OECD, 2020[37]). Such programmes provide primary health care and hospital care at home, but also include social and behavioural health needs. Counselling, health education, and support from digital technologies play an important role.

In Canada, some primary health care teams (such as Ontario Health care team) provide home health care services, ranging from health education to more complex medical needs such as rehabilitative care, medication management for chronic conditions, dementia, and end of life care. In France, hospital-at-home programmes were already well developed to manage some patients with chronic conditions. During the first wave of the COVID-19 pandemic, France introduced the COVISAN experiment, which aims at breaking the many chains of SARS-CoV-2 infection. The objective is to identify potentially infectious individuals through home testing. Beyond home testing, the mobile primary health care units provide to individuals and their family many preventive measures including patient education and support, equipment and accommodation at the hotel if quarantine is necessary. In addition, the French Government is mobilising primary health care team, working in collaboration with secondary care, to organise hospital-at-home for COVID-19 patients in need of oxygen therapy and drug administration.

In a similar vein, in Spain (Barcelona) hospitalisation at home provides safe and effective care for non-severe COVID-19 patients and for patients who have overcome the acute phase of COVID-19 infection (Péricas et al., 2020[41]). Patient care during hospital at home admission was for example organised in a medicalised hotel, it included daily medical and nurse visits (in-person, phone calls, and video calls), usual tests (bloods tests, cultures, EKG and ultrasound), oral or intravenous drug administration (Péricas et al., 2020[41]). In Slovenia, community nurses provided home-based care during the first wave of the COVID-19 pandemic, notably for elderly people having chronic conditions, but also for COVID-19 patients. Health care services included for example health education, prevention, curative and long-term care.

In the United States, hospital-at-home programmes have expanded during the first wave of the pandemic (Weiner, 2020[42]). Atrium Health in North California (a non-profit health care network) launched its hospital-at-home programme specifically to help COVID-19 patients. So far, the health plan has cared for more than 17 000 people in their home. Acute patients receive a self-monitoring kit to measure heart rate and oxygen uptake and to check on their vitals. They also have virtual doctor's appointment, and in-home visits from a paramedic to perform EKGs, lab tests and more advanced treatment.

Rearranging the roles and responsibilities of health care providers

Community pharmacists help in maintaining continuity of care

In many OECD countries, the scope of practice of community pharmacists has been expanded so that they can take on some of the tasks from doctors and allow them to spend their time more effectively on the most complex cases and minimise the number of medical consultations.

In Canada, Ireland, Portugal and the United States, for example, pharmacists have been allowed to extend prescriptions beyond what they were previously allowed to do and to prescribe certain medications (see Box 4) (OECD, 2020[43]; PGEU, 2020[44]). In the United States, community pharmacists have been authorised by the Food and Drug Administration to order and administer COVID-19 tests. In Scotland, community pharmacists performed an enhanced role during the COVID-19 pandemic. Pharmacists were able to support more patients through the extension of Minor Ailment Service (MAS) to reduce the burden across the NHS and ensure patients continue to get the necessary medicines.

Community health workers have a role to play during the COVID-19 pandemic to ensure patients access to needed care

Community health workers who are integrated in the primary health care services can also be beneficial during health emergencies. Well-trained community health workers can deliver information related to protection, raising awareness, countering social stigma as well as self-management of chronic conditions (Ballard et al., 2020[45]).

Community health workers can undertake regular review of vulnerable people at home or virtually depending on need, and when patients become ill, community health workers can undertake simple assessment of the need for more advanced care (Haines et al., 2020[46]). With appropriate training and personal protective equipment, community health workers can monitor physical and mental health during the COVID-19 pandemic, review availability and use of medicines, assess whether individuals have adequate supplies of food and medicines for chronic conditions (Haines et al., 2020[46]). Other important tasks for community health workers include educating communities to prevent the spread of the COVID-19 pandemic; delivering testing, support contact tracing, symptom reporting and monitoring of contacts of patients with COVID-19.

While community health workers provide opportunities to ensure that patients are connected to health care systems, they have not been mobilised as much as they could during the first wave of the COVID-19 pandemic. Only few OECD countries made the best of community health workers to provide timely, accurate information about COVID-19 and ensure that people obtained access to care and support. The United States and the United Kingdom are two exceptions.

In the United States, community health workers played a critical role as frontline health care workers during the first wave of the COVID-19 pandemic. In New York for example, community health workers provided educational sessions to patients with chronic conditions or at risks for chronic conditions to help them manage their conditions. They have also made home-visits, conducted wellness checks over the phone, helped people enrolling in online patient portals and prepared them for tele-health appointments. They served as support in navigating the health care systems, and mitigating fear and correcting misinformation in disadvantaged communities (Peretz, Islam and Matiz, 2020[47]). The United Kingdom also proposed to use community health workers to provide support for vulnerable people (Haines et al., 2020[46])). The overarching objective is to train community health workers to support people in their home, initially the most vulnerable but with potential to provide a long-term model of care (Haines et al., 2020[46]).

Box 4. Expanding the scope of community pharmacy practice during the first wave of the COVID-19 pandemic

Austria: To ensure the supply of prescription medicines to patients during the COVID-19 pandemic, the social insurance enables patients to receive their prescription medicines at the community pharmacies through telemedicine services (except for narcotic drugs). Health insurance physicians have the temporary option of issuing prescription even without personal contact with the patients. The information about which medication should be dispensed is sent electronically to the pharmacy via e-medication.

Canada: Pharmacists have been allowed to extend prescriptions beyond what they were previously allowed to do and to prescribe certain medications to allow doctors to focus on the more important cases and minimise the number of medical consultations.

Croatia: Pharmacies have been temporarily authorised to dispensing medicines in short supply and haemophilia drugs. Home delivery of drugs to vulnerable people was also intensified.

France: Community pharmacists were given an exceptional authorisation to renew prescriptions of drugs for chronic conditions.

Ireland: Some temporary changes to the way in which prescriptions can be renewed have been introduced to enable pharmacists to ensure the continuity of care of patients without necessarily requiring a new prescription. In addition, new regulations have been passed to allow for influenza vaccination to be administered by registered pharmacists in places other than the premises of the retail pharmacy business in which they carry on their professional practice.

Italy: A decree authorised community pharmacists to deliver oxygen to patients (including at home), and enabled patients to receive their prescription medicines at the community pharmacies through e-prescription.

Portugal: Community pharmacists were given an exceptional authorisation to dispense medicines for chronic patient even if the patient cannot present the prescription. This dispensing service is limited to a quantity that cannot exceed three months' of medicines per patient.

Spain: The dispensing of certain specialty medicines was allowed in community pharmacies while until the crisis it was reserved to hospital pharmacies. At the same time, community pharmacists are authorised to renew prescriptions for chronic patients via the electronic prescription system.

The United Kingdom: In Scotland, pharmacists were able to support more patients through the extension of Minor Ailment Service (MAS), which aims at improving access to advice and medicine for common illness, promoting patient care within community pharmacy and shifting balance of care from family doctors and nurses to community pharmacists. Pharmacy contractors were able to offer MAS consultations to anyone presenting to the pharmacy who is registered to a general practice in Scotland on a permanent basis or registered with Defence Medical Services. The objective is to reduce the burden across the NHS and ensure patients continue to get the necessary medicines.

The United States: Community pharmacists were authorised to order and administer COVID-19 tests that have been approved by the Food and Drug Administration.

Source: OECD (2020[43]) and PGEU (2020[44]), "PGEU overview of the expansion of community pharmacy services/activities in relation to COVID-19".

The development of telemedicine and digital tools to provide continuity of care for all and support the most vulnerable

Telemedicine has expanded exponentially, supporting access to essential health care services and health information

While full-scale use of digital technologies was not the norm across OECD before the pandemic, the acceleration in digital transformation is striking. In many countries, people with mild symptoms are able to receive medical consultations from their homes, avoiding potentially infecting others and reserving physical capacity in health care units for critical cases and people with serious health conditions.

In Norway, the share of digital consultations in primary health care rose from 5% before the pandemic to almost 60% during the pandemic. In France similarly, the number of teleconsultations reached close to 1 million per week in April 2020 compared to around 10 000 per week before March. In Germany, an estimated 19 500 teleconsultations were performed in March, compared to 1 700 teleconsultations per month in January and February 2020.

Overall, telemedicine services were made available in 23 countries during the COVID-19 pandemic (as of June 2020). Several strategies have been employed to scale-up telemedicine during the first wave of the COVID-19 pandemic, ranging from providing new legislation (Costa Rica, Peru, Estonia, and Poland), expanding provider payments (Canada, Estonia, the Slovak Republic, Poland, Japan, Belgium, Australia), designing new telemedicine services (Canada, the Slovak Republic, Greece, Israel, Turkey, Luxembourg, Brazil, Chile and Spain), to developing new guidelines and regulations (Belgium, Canada, France, the United States and Japan) (OECD, 2020[43]).

In France, for example, patients are now authorised to consult remotely with any doctor that uses telemedicine, whether or not they have consulted that doctor face-to-face in the past. In Germany, the Federal Joint Committee eased regulations outside of traditional face-to-face outpatient practice. A temporary provision was introduced to allow physicians to issue or renew prescriptions, referrals, or sick notes digitally or by phone, and to offer video consultations. At any rate, scaling up telemedicine requires high-level political will and support. In Canada for example, the federal government is putting in place new investments to create digital platforms and applications, improve access to virtual mental health supports, and expand capacity to deliver health care virtually, including projects to reach vulnerable Canadians.

E-health applications help maintain care continuity

E-Health applications – such as home monitoring, ePatient portals and self-management applications – help maintaining care continuity and the delivery of primary health care services during the pandemic.

South Korea and Israel use wearables and communication technologies to remotely monitor patients with COVID-19 at home, catching signs of possible deterioration, and adding to health researchers' understanding of how the disease develops (OECD, 2020[43])**.** In Germany, an online tool is available to support people to assess symptoms and uncertainties around COVID-19. It allows people to get initial assessments of their situations. In France, the COVID-19 reference health care centres of the AP-HP hospital group develops the e-Health application Covidom to enable COVID-19 patients to benefit from home-based tele-monitoring via medical questionnaires (AP-HP, 2020[48]). It provides tele-monitoring for patients not requiring hospitalisation, relieving pressure on hospitals and enabling medical doctors to concentrate on more severe cases. In the area of mental health, Canada uses the Wellness Together application to provide mental health and substance use support, resource and counselling with a mental health professional.

Financial incentives and compensation to support primary health care during the COVID-19 crisis

Encouraging primary health care to work in teams, to use digital technology and to better focus on prevention, continuity of care, and care transitions requires intelligent forms of remuneration. Traditional remuneration systems, based on either fee-for-service or capitation payment are not adapted to the current crisis, and increased pressure, workload and even risks may go hand in hand with a loss of revenue for primary health care providers. When properly designed and implemented, add-on payments – which remunerate specific activities – can provide a good compensation for primary health care providers to make best use of their capacity.

A number of examples can be found across the OECD to financially compensate primary health care teams for telephone or video consultations (Table 1), home visits and for additional costs incurred as a direct result of COVID-19 pandemic (staffing, hygiene or safety measures) (Table 2).

Table 1. Payments or reimbursements for teleconsultation services in primary health care during the COVID-19

	Add on payments for teleconsultations
Australia	New Medicare Benefits Schedule items have been introduced to allow some health care professionals to provide telehealth services.
Belgium	The cost of teleconsultation is EUR 20. There is a limitation of maximum four times per month per patient. Primary health care providers can provide these services.
Canada	Billing codes have been expanded, but these vary significantly by province and territory.
Germany	Compensated by public insurance if teleconsultation is provided by a primary health care provider in the public service.
Italy	Compensated by public insurance if teleconsultation is provided by a primary health care provider in the public service. There are also private insurance companies which provide the service.
Spain	Compensated by public insurance if teleconsultation is provided by a primary health care provider in the public service. There are also private insurance companies which provide the service.
Switzerland	Controlled by the central pricing system. Compensated by public insurance if teleconsultation is provided by a primary health care provider in the public service. There are also private insurance companies which provide the service.
United States	The cost of teleconsultation varies between EUR 25-35 per consultation. Teleconsultations are performed by telehealth contractors who recruit family doctors for these services.
United Kingdom	Compensated by public insurance if teleconsultation is provided by a primary health care provider in the NHS.

Note: NHS: National Health Service.
Source: OECD (2020[18]), *Country Policy Tracker,* https://www.oecd.org/coronavirus/country-policy-tracker/.

Table 2. Add-on payments for primary health care physicians during the COVID-19 crisis

	Add-on-payment due to extra hygiene costs or loss of usual activity
Australia	For the primary health care practices that provide services for COVID-19 patients, an additional payment of EUR 50 per patient.
Germany	Reimbursement of expenses on personal protective equipment and hygiene products for SHI patients, EUR 14.75 add-on-payment for PHI patients. In terms of loss in income, budgeted SHI patients private practices income is maintained by SHI funds, unbudgeted is compensated if income falls by more than 10% compared to the same quarter in 2019.
Greece	Both primary health care providers in public and private service receive EUR 600 additional payment if they complete an online continuous education module.
Netherlands	A one-time payment of EUR 10 per listed patient in primary health care practices, an additional EUR 15 per hour for out-of-hour general practice services.
Slovenia	Additional payment from March to May
United Kingdom	A guaranteed minimum level of income for all NHS providers and separate arrangements for providers who claim exceptional additional costs due to the COVID-19 crisis

Note: SHI: Social health insurance, PHI: Private health insurance.
Source: OECD (2020[18]), *Country Policy Tracker,* https://www.oecd.org/coronavirus/country-policy-tracker/.

In Denmark, the regions and the family doctors' organisation have agreed on a fee for consultation by telephone with patients having mild symptoms to encourage primary health care teams to handle these cases by phone. In Canada, new billing codes for all physicians have been introduced to be compensated for virtual consultations (although some juridictions already had some codes in place – e.g. British Columbia), but these vary significantly by provinces and territories. Australia also introduced new Medicare Benefits Schedule items to allow doctor, nurses, midwives and allied health care professionals including mental health care professionals to provide telehealth services.

In the United Kingdom, all NHS providers have a guaranteed minimum level of income (based on average monthly expenditure). There are also separate arrangements for providers to claim exceptional additional costs reasonably incurred as a direct result of COVID-19 pandemic. For example, all NHS providers can claim reimbursement on genuine additional costs due to COVID-19 including evidenced increases in staffing costs, temporary staffing to cover sickness, and additional costs of dealing with COVID-19 activity (such as extra costs of equipment to deal with the response to the virus; extra costs of decontamination; higher testing volumes in acute-based laboratories; and community-based swabbing services).

In the Netherlands, family doctors now have permission to claim home visits to people who are possibly infected with the virus as an 'intensive health care visit', meaning EUR 44 instead of EUR 15 when a visit is shorter than 20 minutes and EUR 77 instead of EUR 25 when it is more than 20 minutes. In addition, family doctors receive a one-time payment of EUR 10 per listed patient in primary health care practices and an additional EUR 15 per hour for out-of-hour general practice services.

In Germany, extra compensation for hygiene and safety has been included. For the treatment of Private Health Insurance (PHI) patients for example, a new item for 'hygiene' was introduced in the fee schedule (EUR 14.75) billable once per in-person consultation covering all kinds of equipment and hygiene costs.

Conclusion

The COVID-19 crisis has direct and indirect effects on all, including people living with chronic conditions. While much policy attention has fallen on hospitals and containment strategies, the importance of continuous and routine care for people with underlying health conditions does not get enough attention. Many non COVID-19 patients did not seek medical attention or were unable to access needed care during the first wave of the pandemic, which resulted in delayed diagnoses, delayed care or foregone care.

Strong primary health care has the capacity to mitigate these indirect effects during the pandemic, but also to reduce the pressure on the entire health system by providing comprehensive and preventive care. Expanding primary health care services is critical to make health systems more resilient to future public health emergencies, but also to better address the challenges of an ageing population and the growing burden of chronic conditions.

Country experiences demonstrate a number of innovative policy solutions. Strong primary health care – organised in multi-disciplinary teams and with innovative roles for health professionals, integrated with community health services, equipped with digital technology, and working with well-designed incentives – is key for successfully managing the health system response.

The COVID-19 pandemic accelerates transformation of health systems, and stimulates many innovative primary health care systems. Promoting the wider adoption and sustainability of these innovations will require both technical leadership and managerial support to enable legislation and regulation, and introduce the right incentives to accelerate change. Measurement, benchmarking, sharing good practice examples and lessons learnt from COVID-19 will provide the basis for building blocks of resilient health care systems.

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