



# MIRROR, MIRROR 2021

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### AUTHORS

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### TOPLINES

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The United States trails far behind other high-income countries on measures of health care affordability, administrative efficiency, equity, and outcomes.

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Lessons from the top-performers can inform the United States and other countries seeking to improve their health care systems.

### ABSTRACT

**Issue:** No two countries are alike when it comes to organizing and delivering health care for their people, creating an opportunity to learn about alternative approaches.

**Goal:** To compare the performance of health care systems of 11 high-income countries.

**Methods:** Analysis of 71 performance measures across five domains — access to care, care process, administrative efficiency, equity, and health care outcomes — drawn from Commonwealth Fund international surveys conducted in each country and administrative data from the Organisation for Economic Co-operation and Development and the World Health Organization.

**Key Findings:** The top-performing countries overall are Norway, the Netherlands, and Australia. The United States ranks last overall, despite spending far more of its gross domestic product on health care. The U.S. ranks last on access to care, administrative efficiency, equity, and health care outcomes, but second on measures of care process.

**Conclusion:** Four features distinguish top-performing countries from the United States: 1) they provide for universal coverage and remove cost barriers; 2) they invest in primary care systems to ensure that high-value services are equitably available in all communities to all people; 3) they reduce administrative burdens that divert time, efforts, and spending from health improvement efforts; and 4) they invest in social services, especially for children and working-age adults.



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## INTRODUCTION

No two nations are alike when it comes to health care. Over time, [each country has settled on a unique mix](#) of policies, service delivery systems, and financing models that work within its resource constraints. Even among high-income nations that have the option to spend more on health care, approaches often vary substantially. These choices affect health system performance in terms of access to care, patients' experiences with health care, and people's health outcomes. In this report, we compare the health systems of 11 high-income countries as a means to generate insights about the policies and practices that are associated with superior performance.

With the COVID-19 pandemic imposing an unprecedented stress test on the health care and public health systems of all nations, such a comparison is especially germane. Success in controlling and preventing infection and disease has varied greatly. The same is true of countries' ability to address the challenges that the pandemic has presented to the workforce, operations, and financial stability of the organizations delivering care. And while the comparisons we draw are based on data collected prior to the pandemic or during the earliest months of the crisis, the prepandemic strengths and weaknesses of each country's preexisting arrangements for health care and public health have undoubtedly been shaping its experience throughout the crisis.

For our assessment of health care system performance in Australia, Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States, we used indicators available across five domains:

- **Access to care**
- **Care process**
- **Administrative efficiency**
- **Equity**
- **Health care outcomes.**

For more information on these performance domains and their component measures, see [How We Measured Performance](#). Most of the data were drawn from surveys examining how members of the public and primary care physicians experience health care in their respective countries. These Commonwealth Fund surveys were conducted by SSRS in collaboration with partner organizations in the 10 other countries. Additional data were drawn from the Organisation for Economic Co-operation and Development (OECD) and the World Health Organization (WHO).

## HOW THE 11 COUNTRIES RANK ON PERFORMANCE

The top-performing countries overall are Norway, the Netherlands, and Australia (Exhibit 1).

### Exhibit 1. Health Care System Performance Rankings

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>OVERALL RANKING</b>	<b>3</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>11</b>
Access to Care	8	9	7	3	1	5	2	6	10	4	11
Care Process	6	4	10	9	3	1	8	11	7	5	2
Administrative Efficiency	2	7	6	9	8	3	1	5	10	4	11
Equity	1	10	7	2	5	9	8	6	3	4	11
Health Care Outcomes	1	10	6	7	4	8	2	5	3	9	11

Data: Commonwealth Fund analysis.

## Change in Rankings Since the 2017 Edition of *Mirror, Mirror*

Readers familiar with the [previous edition](#) of this report (2017) will notice that some of the country ranks have changed. These changes should be interpreted with caution. While most of the 71 measures included in the new edition are identical to those used in 2017, 10 measures were modified because survey items, response categories, or available data changed. We replaced 17 of the 2017 measures with 16 new measures to reflect newly available data as well as to better represent previously defined performance domains and subdomains. An expert advisory panel reviewed the proposed changes. See [Appendix 2](#) for more detail on the changes by domain.

Readers should interpret changes in ranks in the context of the statistical variation in countries' performance scores (as visualized in Exhibit 2, for example). We calculated performance differences as the standard deviation from “average performance” – a measure of the degree of difference between countries given the range of variation in this set of countries.

Depending on the domain, some countries have quantitatively similar performance scores, meaning that very small differences can produce changes in rankings. The U.K.'s drop in rank from #1 to #4 is associated with that country's lower performance on several domains (such as access to care and equity) compared to 2017.

For more on the differences between the 2017 and 2021 editions of this report, please see [How We Conducted This Study](#).

The next three countries in the ranking — the U.K., Germany, and New Zealand — perform very similarly to one another (Exhibit 2). The U.S. ranks #11 — last. Exhibit 2 shows the extent to which the U.S. is an outlier: its performance falls well below the average of the other countries and far below the two countries ranked directly above it, Switzerland and Canada. In fact, the U.S. is such an outlier that we have calculated the average performance based on the other 10 countries, excluding the U.S. (see [How We Measured Performance](#)). The U.S. is last on all domains of performance except care process, on which it ranks #2.

Exhibit 3 shows that while spending as a share of gross domestic product (GDP) has increased in all countries, spending growth in the U.S. — by far the worst performer overall — has greatly exceeded growth in the other 10 nations. In 1980, high-income countries spent between 5 percent and 8 percent of GDP on health care. But as U.S. spending accelerated over the decades, the U.S. was spending a substantially larger share of its GDP on health care by 2019 than every other high-income country.

Exhibit 4 starkly shows just how much the U.S. is an outlier from the other nations when its performance as a health care system is compared to its spending as a share of GDP.

## Access to Care

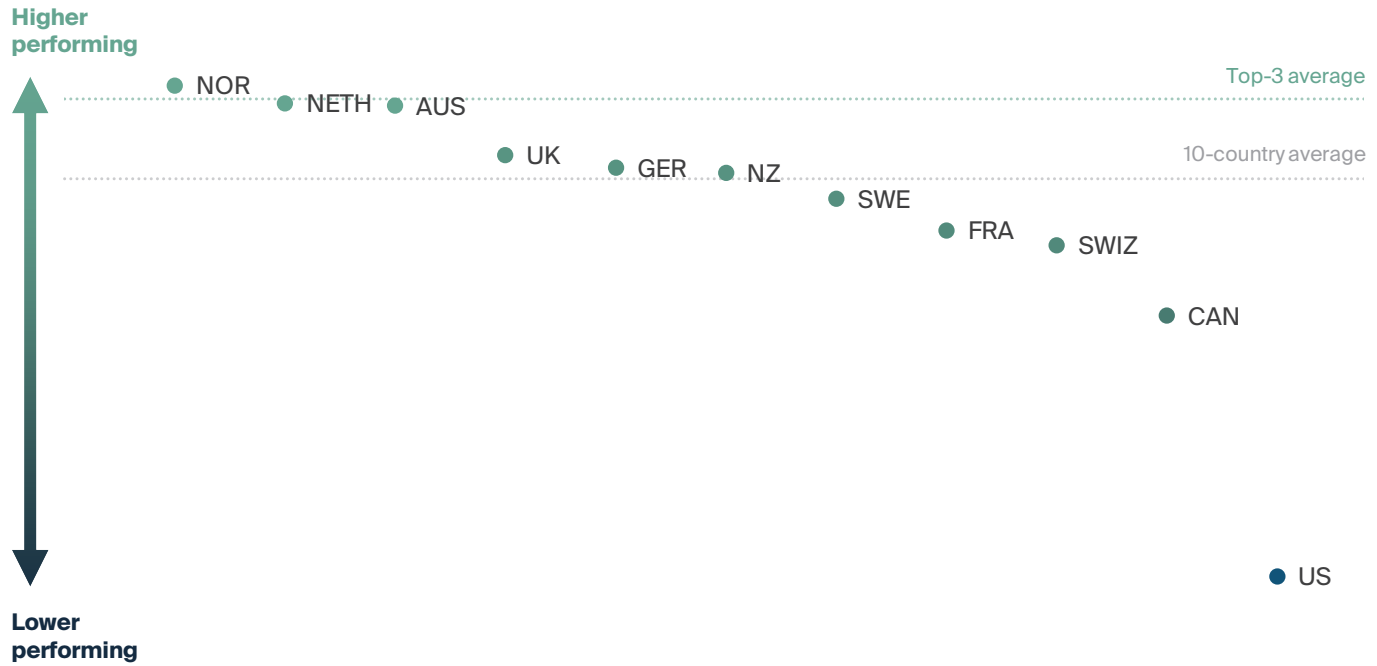
### Universal, Affordable Coverage Is Paramount

**Access to care** includes measures of health care's *affordability* and *timeliness*. The Netherlands performs best on this performance domain among the 11 countries, ranking at or near the top in both subdomains. Norway and Germany also performed well on access to care (Exhibit 1), but all three are outranked on affordability by the U.K. (Exhibit 5).

Overall, the U.S. is #11 — last — on access to care (Exhibit 1). The U.S. has the poorest performance on the affordability subdomain, scoring much lower than even the next-lowest country, Switzerland (Exhibit 5). Compared to residents of the U.S., residents of the Netherlands, the U.K., Norway, and Germany are much less likely to report that their insurance denied payment of a claim or paid less than expected. Residents of these countries are also less likely to report difficulty in paying medical bills ([Appendix 4](#)).

People in the countries performing the best on the timeliness subdomain are more likely to be able to get same-day care and after-hours care. The U.S. ranked #9 on timeliness.

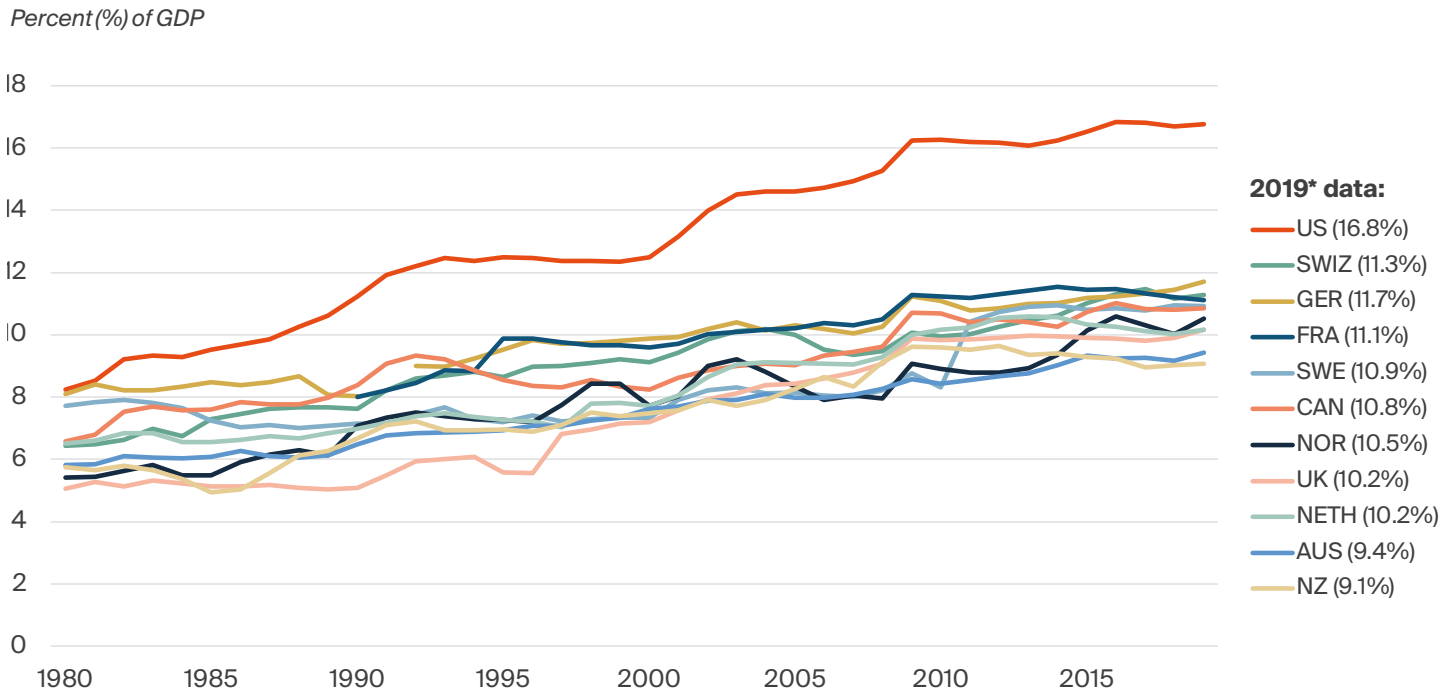
### Exhibit 2. Comparative Health Care System Performance Scores



Note: To normalize performance scores across countries, each score is the calculated standard deviation from a 10-country average that excludes the US. See [How We Conducted This Study](#) for more detail.

Data: Commonwealth Fund analysis.

### Exhibit 3. Health Care Spending as a Percentage of GDP, 1980–2019

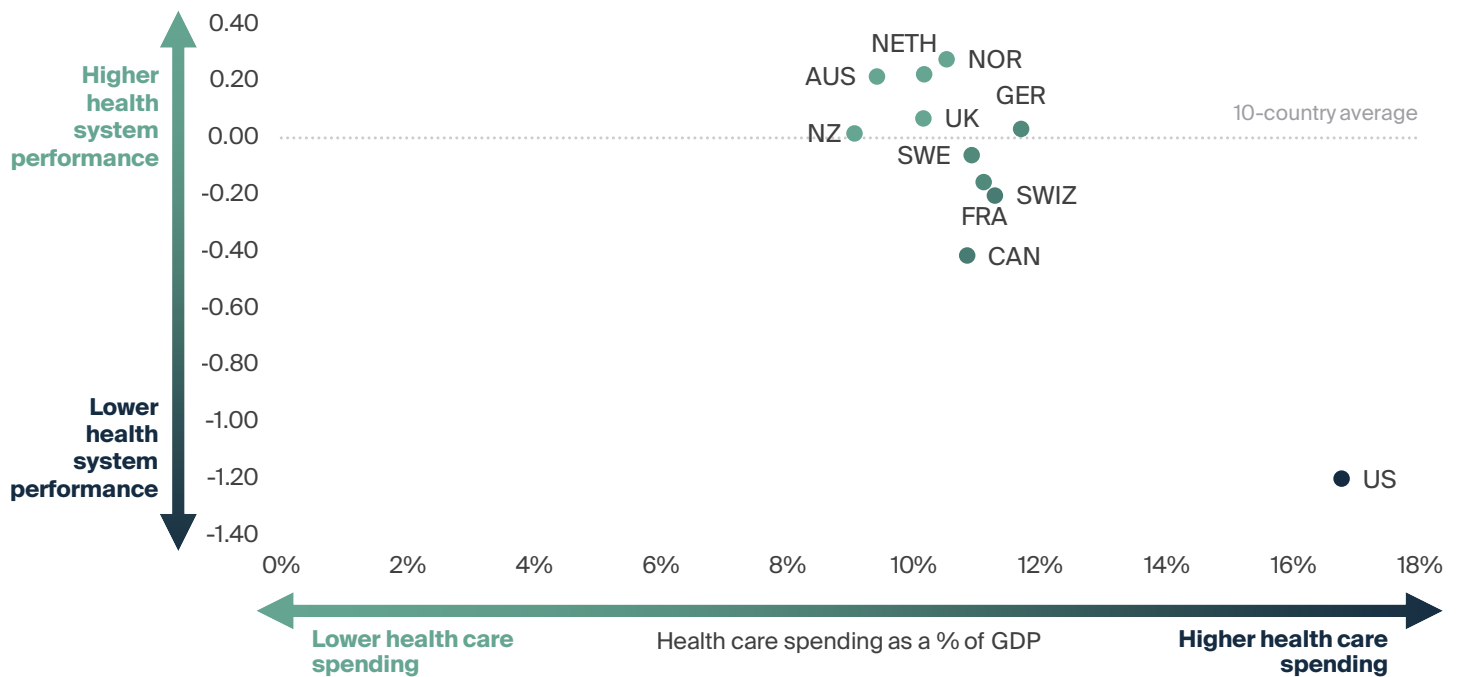


Notes: Current expenditures on health. Based on System of Health Accounts methodology, with some differences between country methodologies. GDP refers to gross domestic product.

\*2019 data are provisional or estimated for Australia, Canada, and New Zealand.

Data: OECD Health Data, July 2021.

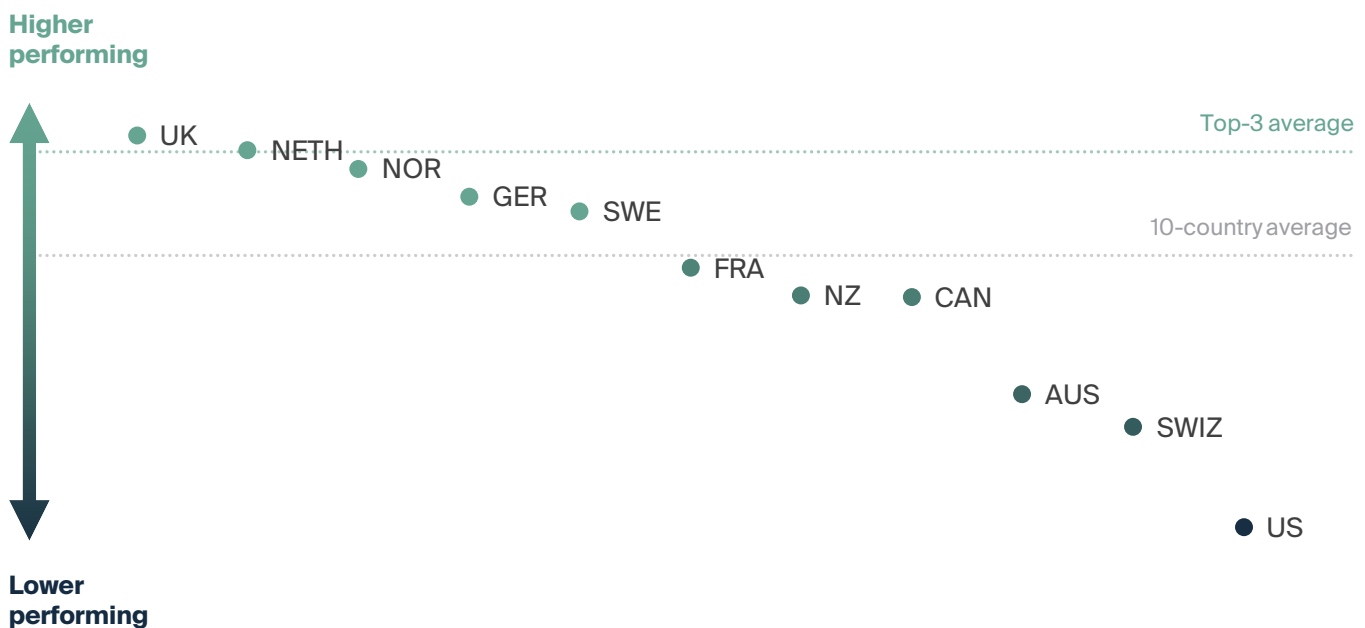
### Exhibit 4. Health Care System Performance Compared to Spending



Notes: Health care spending as a percent of GDP. Performance scores are based on standard deviation calculated from the 10-country average that excludes the US. See [How We Conducted This Study](#) for more detail.

Data: Spending data are from OECD for the year 2019 (updated in July 2021).

### Exhibit 5. Health Care System Performance Scores: Affordability



Note: To normalize performance scores across countries, each score is the calculated standard deviation from a 10-country average that excludes the US. See [How We Conducted This Study](#) for more detail.

Data: Commonwealth Fund analysis.

## Care Process

### The U.S. Compares Favorably on Preventive Care, Safe Care, and Engagement and Patient Preferences

**Care process** includes measures of *preventive care*, *safe care*, *coordinated care*, and *engagement and patient preferences*. The U.S. ranks #2 on this performance domain (Exhibit 1). Along with the U.K. and Sweden, the U.S. achieves higher performance on the preventive care subdomain, which includes rates of mammography screening and influenza vaccination as well as the percentage of adults who talked with their provider about nutrition, smoking, and alcohol use. New Zealand and the U.S. perform best on the safe care subdomain, with higher reported use of computerized alerts and routine review of medications. Still, in all countries, more than 10 percent of adults report experiencing medical or medication mistakes in their care.

New Zealand, Switzerland, and the Netherlands perform best among countries on the coordinated care subdomain. Switzerland, New Zealand, Australia, Norway, and France perform well on measures related to communication between primary care doctors and specialists. No country stood out at achieving good communication between the primary care and hospital, emergency department, and home-based care provider or coordination with local social services providers.

The U.S. and Germany achieve the highest performance on the engagement and patient preferences subdomain, although U.S. adults have the lowest rates of continuity with the same doctor. Among people with chronic illness, U.S. adults are among the most likely to discuss goals, priorities, and treatment options with their provider, though less likely to receive as much support from health professionals as they felt was needed.

Use of web-based portals for communicating medical concerns and refilling medications is highest among adults in Norway and the U.S. In the year prior to the COVID-19 pandemic, primary care clinicians in Sweden and Australia were the most likely to report using video consultations.

## Administrative Efficiency

### Many Countries Simplify Insurance Coverage, Billing, and Payment

**Administrative efficiency** refers to how well health systems reduce documentation (paperwork) and other bureaucratic tasks that patients and clinicians frequently

face during care. The top performers on the administrative efficiency domain are Norway, Australia, New Zealand, and the U.K. (Exhibit 1). The U.S. ranks last.

U.S. doctors are the most likely to have trouble getting their patients medication or treatment because of restrictions on insurance coverage. Compared to most of the other countries, larger percentages of adults in the U.S. say they spend a lot of time on paperwork related to medical bills. For nonemergency care, U.S. and Canadian adults are also more likely to visit the emergency department — a less efficient option than seeing a regular doctor.

## Equity

### Income-Related Disparities Are Largest in the U.S., Canada, New Zealand, and Norway

Our analysis of **equity** focuses on income-related disparities, based on standardized data across the 11 countries, in the *access to care*, *care process*, and *administrative efficiency* performance domains. Similar standardized data are not available for measuring equity in performance with respect to different racial and ethnic groups (see [How We Measured Performance](#) for more detail).

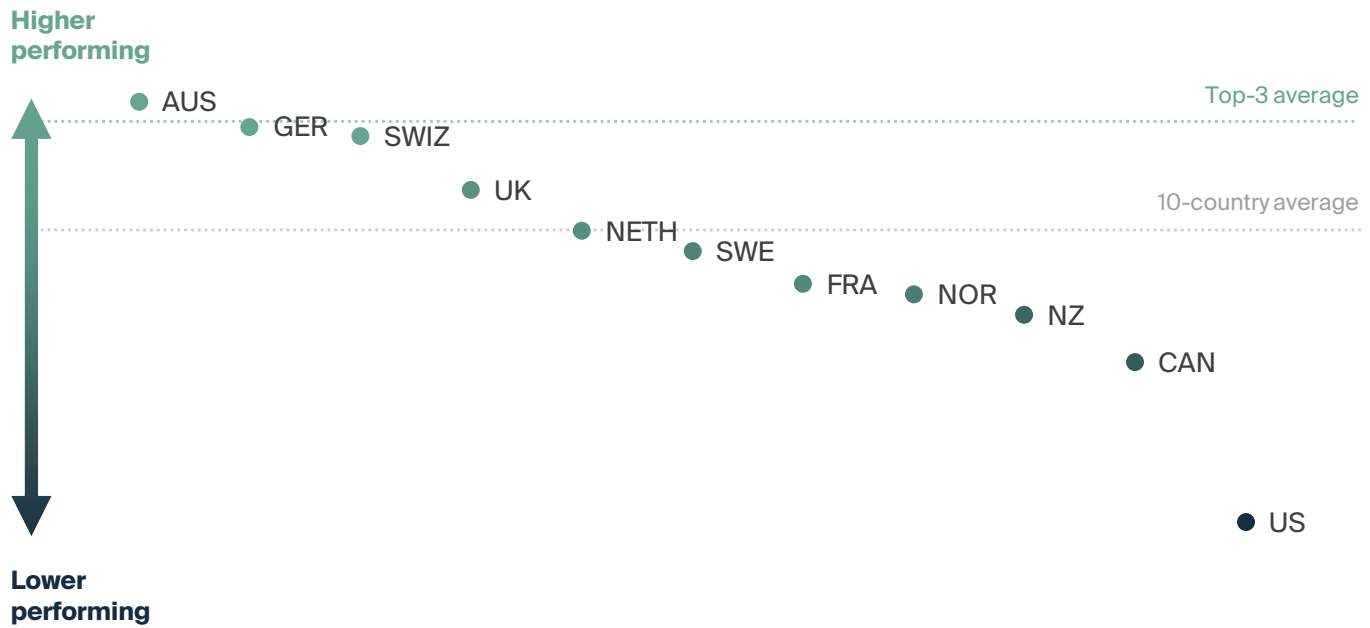
Australia, Germany, and Switzerland rank highest on the equity domain, meaning these countries had the smallest income-related disparities in performance based on the included measures (Exhibit 6).

Within these countries, experiences reported by people in lower- and higher-income groups on 11 indicators in the *affordability*, *timeliness*, *preventive care*, *safe care*, and *engagement and patient preferences* subdomains are less divergent than they are within other countries ([Appendix 7](#)).

In contrast, the U.S. consistently demonstrated the largest disparities between income groups, except for those measures related to preventive services and safety of care. U.S. disparities are especially large when looking at financial barriers to accessing medical and dental care, medical bill burdens, difficulty obtaining after-hours care, and use of web portals to facilitate patient engagement. Compared to the other countries, the United States and Canada had larger income-related inequities in patient-reported experiences.

Exhibit 7 illustrates the importance of comparing country performance on equity: relatively good performance on a health care measure overall may mask pronounced gaps in the experiences of lower-income versus higher-income groups. It also illustrates the challenge that arises

### Exhibit 6. Health Care System Performance Scores: Equity

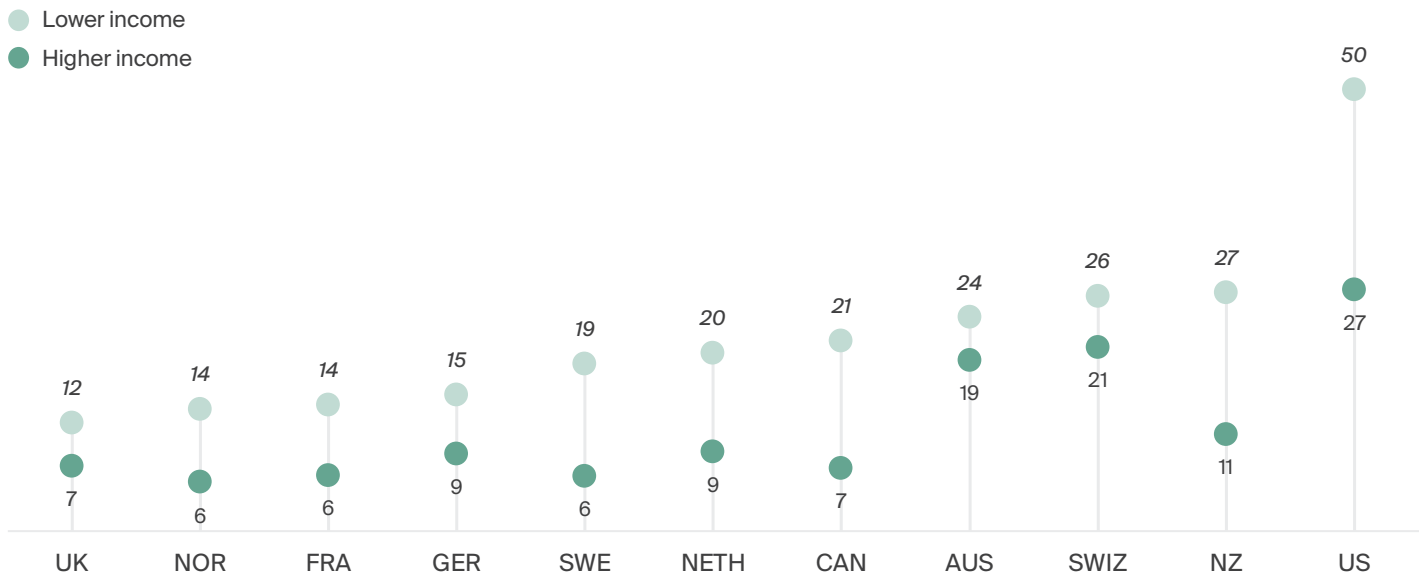


Note: To normalize performance scores across countries, each score is the calculated standard deviation from a 10-country average that excludes the US. See [How We Conducted This Study](#) for more detail.

Data: Commonwealth Fund analysis.

### Exhibit 7. Cost-Related Access Problems Affect Low-Income Populations, Especially in the U.S.

Percent who reported any cost-related access problem to medical care in past year, 2020



Definition of cost-related access problem: Skipped needed doctor visits, tests, treatments, follow-up, or prescription medicines because of cost in the past year.

Data: 2020 Commonwealth Fund International Health Policy Survey of Adults.



in assessing equity without also considering performance overall: income-related differences on a measure may be small, but a nation’s performance may be comparatively poor for both higher- and lower-income groups.

In Exhibit 7, income-related performance disparities in Switzerland and Australia are as small as those in Germany and the U.K. But the cost-related access problems for higher-income residents of Switzerland and Australia resemble the levels seen among lower-income residents of the Netherlands and Canada. Adults with higher incomes in the U.S., Switzerland, and Australia are as likely as, or more likely than, adults with lower incomes in five countries to report cost-related access problems.

## Health Care Outcomes

### Many Countries Achieve Better Outcomes Despite Lower Spending

**Health care outcomes** reported here refer to those health outcomes that are most likely to be responsive to health care. On this domain, Australia, Norway, and Switzerland rank at the top of our 11-nation group (Exhibit 1). Norway has the lowest infant mortality rate (two deaths per 1,000 live births), while Australia has the highest life expectancy after age 60 (25.6 years of additional life expectancy for those who survive to age 60).

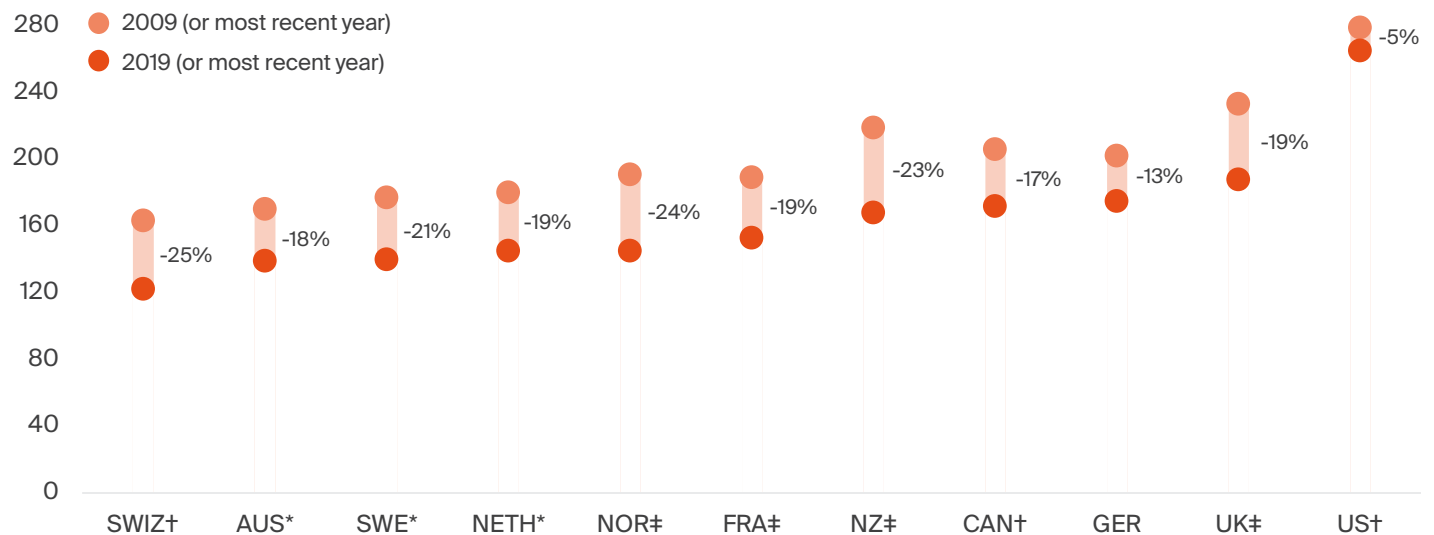
The U.S. ranks last overall on the health care outcomes domain (Exhibit 1). On nine of the 10 component measures, U.S. performance is lowest among the countries (Appendix 8), including having the highest infant mortality rate (5.7 deaths per 1,000 live births) and lowest life expectancy at age 60 (23.1 years). The U.S. ranks last on the mortality measures included in this report, with the exception of 30-day in-hospital mortality following stroke. The U.S. rate of preventable mortality (177 deaths per 100,000 population) is more than double the best-performing country, Switzerland (83 deaths per 100,000).

The U.S. has exceptionally poor performance on two other health care outcome measures. Maternal mortality is one: the U.S. rate of 17.4 deaths per 100,000 live births is twice that of France, the country with the next-highest rate (7.6 deaths per 100,000 live births).

The second is the 10-year trend in avoidable mortality. As depicted in Exhibit 8, all countries reduced their rate of avoidable mortality over 10 years, but the U.S., with the highest level in 2007, reduced it by the least amount — 5 percent reduction in deaths per 100,000 population by 2017 — compared to 25 percent in Switzerland (by 2017) and 24 percent in Norway (by 2016).

## Exhibit 8. Avoidable Deaths and Ten-Year Reduction in Avoidable Mortality Across Countries

Deaths per 100,000 population



Notes: Health status: avoidable mortality. Data years are: 2009 and 2019 (Germany); \* 2008 and 2018 (Australia, the Netherlands, Sweden); + 2007 and 2017 (Canada, Switzerland, US); and ‡ 2006 and 2016 (France, New Zealand, Norway, UK).

Data: Commonwealth Fund analysis of data from OECD Health Statistics, July 2021.

## DISCUSSION

Some high-income nations get more for their health dollars than the U.S. does. As nations strive for better health care and better health for their residents, several basic lessons emerge from our findings.

### ***Achieving better health outcomes will require policy changes within and beyond health care.***

The striking contrast in performance between the U.S. and other high-income countries on avoidable mortality measures points to several intervention or policy targets. How have top-performing countries reduced avoidable mortality? A [comparison of the features](#) of top-performing countries and poorer-performing countries suggests that top-performing countries rely on four features to attain better and more equitable health outcomes:

1. They provide for universal coverage and remove cost barriers so people can get care when they need it and in a manner that works for them.
2. They invest in primary care systems to ensure that high-value services are equitably available locally in all communities to all people, reducing the risk of discrimination and unequal treatment.
3. They reduce the administrative burdens on patients and clinicians that cost them time and effort and can discourage access to care, especially for marginalized groups.
4. They [invest in social services](#) that increase equitable access to nutrition, education, child care, community safety, housing, transportation, and [worker benefits](#) that lead to a [healthier population](#) and fewer avoidable demands on health care.

### **Health Care Outcomes vs. Health Outcomes**

Health outcomes are influenced by a wide variety of social and economic factors, many of them outside the control of health care systems. Policies and public investments in education, employment, nutrition, housing, transportation, and environmental safety shape the health of the population. Our report focuses on health *care* outcome metrics – those outcomes that can be improved by the delivery of health care services.

Compared to other OECD countries, the U.S. [spends relatively less on social programs](#) such as early childhood education, parental leave, and income supports for single parents. The U.S. also spends less on supports for workers, such as unemployment protections and labor market incentives. Labor market policies in particular have been linked to so-called [deaths of despair](#), including suicides and overdose deaths.

U.S. health outcomes could therefore be improved through actions targeting factors beyond health care. [Accountable Communities for Health](#) offer one promising approach to improving health outcomes as well as equity.



Prioritizing maternal health is critical for reducing maternal mortality. Top-performing countries have had success in preventing maternal deaths through the removal of cost sharing for maternal care. They invest in primary care models that ensure continuity of care from conception through the postpartum period, including midwife-led models. They offer social support benefits, including parental leave.

Several additional causes of avoidable mortality are linked to mental health. Higher rates of suicide in the U.S. — rates that have increased every year since 2000 — could be addressed by expanding the capacity of primary care to diagnose comorbid mental health conditions and provide early intervention and treatment as well as promote social connectedness and suicide prevention. Compared to other countries, the U.S. has a comparatively smaller workforce dedicated to meeting mental health needs. Countries like the Netherlands, Sweden, and Australia more frequently include mental health providers on primary care teams.



### ***Improving access to care requires expanding and strengthening insurance coverage.***

The U.S. remains the only high-income country lacking universal health insurance coverage. With nearly 30 million people still uninsured and some 40 million with health plans that leave them potentially underinsured, out-of-pocket health care costs continue to mar U.S. health care performance.

Top-performing countries achieve near-universal coverage and much higher levels of protection against medical costs in the form of annual out-of-pocket caps on covered benefits and full coverage for highly beneficial preventive services, primary care, and effective treatments for chronic conditions. Germany abolished copayments for physician visits in 2013, while several countries have fixed annual out-of-pocket maximums for health expenditures (ranging from about USD 300 per year in Norway to USD 2,645 in Switzerland).

Australia addresses income-related equity through a mix of annual spending caps that are lower for low-income individuals as well as incentives for people to seek primary care. In 2019, 86 percent of Australians faced no out-of-pocket costs for primary care visits.

### ***Improving access to care requires strengthening primary care and extending it to every local community.***

Access to care, however, requires more than insurance coverage. Convenient and timely primary care is also vital. Top-ranking countries like the Netherlands and Norway ensure timely availability to care by phone on nights and weekends (with in-person follow-up at home as needed). In the Netherlands, cooperative “GP posts” are staffed by general practitioners (primary care physicians), who are obligated to provide at least 50 hours of after-hours care (between 5:00 pm and 8:00 am) annually in order to maintain their professional licensure. In Norway, the Patients’ Rights Act specifies a right to receive care within specific timeframes and with maximum wait times applying to covered services, including general practitioner visits, hospital care, mental health care, and substance use treatment.

In top-performing countries, workforce policy is geared to ensuring access within communities, especially those that have been historically marginalized. Norway, with the highest number of doctors per person among the 11 countries in our study, [has a much larger supply of physicians](#) relative to its population than the U.S. has. Outside the U.S., a larger proportion of clinicians are devoted to primary care and are geographically distributed to match population needs. For example, Norwegian local municipalities, which are responsible for the supply of GPs, may apply to the national government for extra funding to ensure they have an adequate number of physicians.



### ***Reducing administrative burden can free up resources to devote to improving health.***

Administrative requirements cost both time and money for patients, clinicians, and managers while also diverting resources away from efforts to improve care. Our results are consistent with [other studies](#) showing that administrative costs are more substantial in the U.S. than in other high-income countries. Many countries have simplified their health insurance and payment systems, usually through legislation, regulation, and standardization. For example, top-ranked Norway determines patient copayments for physician fees on a regional basis, applying the standardized copayments to all physicians practicing in the public sector within a specialty within a geographic area.

In countries where private insurance companies compete for customers, such as the Netherlands, standards including a mandatory minimum basic benefit package, community rating to keep premiums lower for sicker individuals, and cost-sharing caps to simplify choice for beneficiaries. These features create an incentive for insurers to compete on service and quality rather than on avoidance of people with higher health risks, similar to the marketplace insurance plans introduced by the Affordable Care Act. Germany and Canada negotiate provider payments administratively, as the U.S. Medicare and Medicaid programs do. As other countries have demonstrated, collective negotiation and standardized payment for services, at either the national or regional level, can greatly simplify transactions, reducing errors and appeals, and making time and attention available to improve care.

***Smarter spending — not more spending — is required to achieve better health system performance.***

The U.S. continues to outspend other nations on health care, devoting nearly twice as much of its GDP as the average OECD country. U.S. health spending reached nearly 17 percent of GDP in 2019, far above the 10 other countries compared in this report. Moreover, high U.S. out-of-pocket health spending per person, the second-highest in the OECD, makes it difficult for many Americans to access needed care.

The U.S. has managed to keep pace with or exceed other countries on several measures of care process included in the report, such as influenza vaccination rates for older adults, lower rates of postoperative sepsis after abdominal surgery, and more use of patient-facing health information technology for provider communications and prescription filling. But the U.S. still lags other nations on measures of health care outcomes, access to care, equity, and administrative efficiency. What explains the apparent disconnect?

First, many process measures focus on the care available to people who actually have access to care. For example, a measure of care quality for hospitalized patients focuses on those who had access to hospital care in the first place and ignores those who died before reaching a hospital. It is possible to deliver high-quality care to the population that has access to care and the means to pay for it, while delivering poor-quality care to the smaller share of the population that lacks those means. The result may be an average level of performance overall, but a health system that nevertheless inadequately serves the sickest and most vulnerable.



Second, administrative barriers may disproportionately deter poorer and marginalized individuals from receiving health services. Low-income people who work long hours or those with limited health literacy or support from family, friends, or neighbors may have difficulty navigating complex insurance eligibility rules, a maze of application procedures, or getting online access. In fact, this is why the U.S. is the only country among those compared here that employs health navigators to help direct patients through both insurance and the wider health care system.

Third, the relationship between health care outcomes and care process is inevitably complex, especially if the population is less healthy because of economic and social policies that produce inequities or fail to mitigate their consequences. The U.S. population is **sicker on average** than the populations of other high-income countries, with a high prevalence of chronic conditions like obesity, diabetes, heart disease, and respiratory ailments. This disease burden, coupled with insufficient access to care, partially explains the shorter and declining life expectancy in the U.S. compared to other countries. Even excellent care process, health information technology, and patient engagement may be no match for insufficient access, administrative deterrents, and inadequate chronic disease management. The high U.S. death toll during the COVID-19 pandemic illustrates the difficulty of achieving good health care outcomes if the **population is sicker and access to preventive and primary care is limited**, particularly because of affordability barriers.

It appears, then, that the U.S. health system delivers too little of the care that's most needed — and often delivers it too late — especially for people with complex chronic illness, mental health problems, or substance use disorders, many of whom have faced a lifetime of inequitable access to care.

## CONCLUSION

International comparisons allow the public, policymakers, and health care leaders to see alternative approaches to delivering health care, ones that might be borrowed to build better health systems that yield better health outcomes. Lessons from the three top performers we highlight in this report — Norway, the Netherlands, and Australia — can inform the United States and other countries seeking to improve.

As the COVID-19 pandemic has amply shown, no nation has the perfect health system. Health care is a work in progress; the science continues to advance, creating new opportunities and challenges. But by **learning from what's worked and what hasn't** elsewhere in the world, all countries have the opportunity to try out new policies and practices that may move them closer to the ideal of a health system that achieves optimal health for all its people at a price the nation can afford.

## Additional Resources

Although the U.S. health system has many unique features, there are lessons to be learned from countries that succeed in ensuring access to affordable, quality care. That's why the Commonwealth Fund studies health systems around the world, seeks out policy and practice innovations, and compares health system performance among the U.S. and other high-income nations. For more information go to: <https://www.commonwealthfund.org/international>.

## HOW WE MEASURED PERFORMANCE

**Access to Care.** The *access to care* domain encompasses two subdomains: *affordability* and *timeliness*. The five measures of affordability include patient reports of avoiding medical care or dental care because of cost, having high out-of-pocket expenses, facing insurance shortfalls, or having problems paying medical bills. One 2017 measure was dropped (not available from a recent survey).

The timeliness subdomain includes six measures (one reported by primary care clinicians) summarizing how quickly patients can obtain information, make appointments, and obtain urgent care after hours. The 2021 report includes a new measure of the percentage of respondents who received counseling or treatment for mental health issues if they wanted or needed it. The wording of two survey-based measures was modified since 2017. Five 2017 measures were not included. Two were not available from a recent survey. Three other measures of wait times were excluded because they were asked early in the 2020 COVID-19 pandemic and results were thought to be unreliable.

**Care Process.** The *care process* domain encompasses four subdomains relevant to health care for the general population: *preventive care*, *safe care*, *coordinated care*, and *engagement and patient preferences*.

The preventive care subdomain includes three survey items related to counseling by health professionals on healthy behaviors, three OECD measures of mammography screening and influenza and measles vaccination (new for the 2021 rankings), and three OECD measures of rates (age- and sex-standardized) of avoidable hospital admissions for three prevalent chronic conditions: diabetes, asthma, and congestive heart failure. The wording or timeframe differed slightly for three measures. One 2017 measure was not available from a recent survey.

The safe care subdomain includes three survey items: two indicators of safe care based on patient reports of experiencing medical, medication, or laboratory mistakes, and failure to receive effective prescription medication management, as well as one measure indicating whether primary care doctors receive an electronic alert or prompt to provide patients with test results. One measure's wording was modified since 2017. Two OECD measures related to adverse events occurring after hospital procedures are new in the 2021 report.

The coordinated care subdomain uses seven measures to summarize timely sharing of information among primary care clinicians, specialists, emergency departments, and hospitals. It includes five physician-reported measures of effective communication among primary care clinicians and home care, social service providers, and emergency departments. Wording of four measures was modified slightly since 2017.

The engagement and patient preferences subdomain consists of 13 measures that evaluate the delivery of patient-centered care, which includes effective and respectful clinician–patient communication and care planning that reflects the patient's goals and preferences. New measures in the 2021 report include the percentage of chronically ill patients who felt they got the support they needed from health professionals to manage their health problems, and three measures related to how patients and health care professionals use health information technology (IT) or video consultations. One 2017 measure was excluded because it was not available from a recent survey.

**Administrative Efficiency.** The *administrative efficiency* domain includes five measures. Four assess patients' and primary care clinicians' reports of time and effort spent dealing with paperwork or administrative issues, as well as disputes related to documentation requirements of insurance plans and government agencies. One patient-reported measure evaluates barriers to care because of limited availability of the regular doctor. Two 2017 measures were excluded because they were not included in all of the countries surveyed.

**Equity.** The *equity* domain compares performance for higher- and lower-income individuals within each country, using 11 selected survey measures from the *care process* and *access to care* domains. The analysis stratifies the surveyed populations based on reported income (above-average vs. below-average, relative to the country's median income) and calculates a percentage-point difference in performance between the two groups. A larger percentage-point difference represents lower equity between income groups in that country. A negative percentage-point difference indicates better performance among those with below-average income. Two new 2021 measures are related to patient use of health IT and one measure of patient-reported levels of medical or medication mistakes. Two 2017 measures related to wait times were dropped and one measure was unavailable from a recent survey (see *access to care*, above).

**Health Care Outcomes.** The *health care outcomes* domain includes 10 measures of the health of populations selected to focus on outcomes that can be modified by health care (in contrast to public health measures such as life expectancy at birth, which may be affected more by social and economic conditions). The measures fall into three categories:

- *Population health outcomes* reflect the chronic disease and mortality burden of selected populations. We include two measures comparing countries on mortality defined by age (infant mortality, life expectancy at age 60) and one measure on the proportion of nonelderly adults who report having multiple common chronic conditions (arthritis, asthma or chronic lung disease, diabetes, heart disease, high blood pressure).
- *Mortality amenable to health care* reflects deaths under age 75 from specific causes that are considered preventable in the presence of timely and effective health care. In the 2021 edition of *Mirror, Mirror* we dropped two previous measures replacing them with new standardized and publicly available OECD measures of mortality that consist of deaths considered preventable through effective primary prevention and other public health measures (“preventable mortality”) and of deaths that were considered treatable through more effective and timely health care interventions (“treatable mortality”).<sup>1</sup> OECD combines these two measures to report “avoidable mortality” — for which we report the 10-year trend as an additional new measure.
- *Condition-specific health outcomes* measures include measures on 30-day in-hospital mortality following myocardial infarction and stroke, as well as two new measures in this section: maternal mortality and deaths from suicide. We dropped two OECD measures related to five-year cancer survival rates (breast and colon), because recent data were not available.

## HOW WE CONDUCTED THIS STUDY

The 2021 edition of *Mirror, Mirror* was constructed using the same methodological framework developed for the 2017 report in consultation with an expert advisory panel.<sup>2</sup> Another expert advisory panel was convened to review the data, measures, and methods used in the 2021 edition.<sup>3</sup>

Using data available from Commonwealth Fund international surveys of the public and physicians and other sources of standardized data on quality and health care outcomes, and with the guidance of the independent expert advisory panel, we carefully selected 71 measures relevant to health care system performance, organizing them into five performance domains: *access to care*, *care process*, *administrative efficiency*, *equity*, and *health care outcomes*. The criteria for selecting measures and grouping within domains included: importance of the measure, standardization of the measure and data across the countries, salience to policymakers, and relevance to performance-improvement efforts. We examined correlations among indicators within each domain, removing a few highly correlated measures. *Mirror, Mirror* is unique in its inclusion of survey measures designed to reflect the perspectives of patients and professionals — the people who experience health care in each country during the course of a year. Nearly three-quarters of the measures come from surveys designed to elicit the public’s experience of its health system.

### Changes Since 2017

The majority of measures included in this report are the same as in the 2017 edition of *Mirror, Mirror* ([Appendix 2](#)). Seventeen measures were dropped if a survey question was no longer included in the Commonwealth Fund International Health Policy Survey or if we had reason to believe the response to the measure might be less valid because of effects of the COVID-19 pandemic, such as questions in the timeliness subdomain related to wait times, which were being fielded during the spring of 2020. Ten measures were considered “modified” in the 2021 report because the wording of a survey item was altered since the 2017 version.

We worked to include new measures to fill previously identified gaps in performance measurement across the 11 countries and considered a wide array of potential new measures related to topics such as quality of behavioral and mental health care, hospital care, pediatric care, and safety. We considered the data availability of new measures, how recently they had been updated, and how they correlated with other measures in each domain. In the end we included 16 new measures across the five domains (see [How We Measured Performance](#) for details).



## Data

Data for this report were derived from several sources. Survey data are drawn from Commonwealth Fund International Health Policy Surveys fielded during 2017, 2019, and 2020. Since 1998, in collaboration with international partners, the Commonwealth Fund has supported these surveys of the public's and primary care physicians' experiences of their health care systems. Each year, in collaboration with researchers in the 11 countries, a common questionnaire is developed, translated, adapted, and pretested. The 2020 survey was of the general population; the 2017 survey surveyed adults age 65 and older. The 2020 and 2017 surveys examined patients' views of the health care system, quality of care, care coordination, medical errors, patient-physician communication, wait times, and access problems. The 2019 survey was administered to primary care physicians and examined their experiences providing care to patients, use of information technology, and use of teams to provide care.

The Commonwealth Fund International Health Policy Surveys (2017, 2019, and 2020) include nationally representative samples drawn at random from the populations surveyed. The 2017 and 2020 surveys' sampling frames were generated using probability-based overlapping landline and mobile phone sampling designs and in some countries, listed or nationwide population registries; the 2019 survey was drawn from government or private company lists of practicing primary care doctors in each country, except in France, where they were selected from a nationally representative panel of primary care physicians. [Appendix 9](#) presents the number of respondents and response rates for each survey, and further details of the survey methods are described elsewhere.<sup>4,5,6</sup>

In addition to the survey items, standardized data were drawn from recent reports of the Organisation for Economic Co-operation and Development (OECD) and the World Health Organization (WHO). Our study included data from the OECD on screening, immunization, preventable hospital admissions, population health, and disease-specific outcomes. WHO data were used to measure health care outcomes.

## Analysis

The method for calculating performance scores and rankings is similar to that used in the 2017 report, except that we modified the calculation of relative performance because the U.S. was a distinct and substantial outlier (see below).

*Measure performance scores:* For each measure, we converted each country's result (e.g., the percentage of survey respondents giving a certain response or a mortality rate) to a measure-specific, "normalized" performance score. This score was calculated as the difference between the country result and the 10-country mean, divided by the standard deviation of the results for each measure (see [Appendix 3](#)). Normalizing the results based on the standard deviation accounts for differences between measures in the range of variation among country-specific results. A positive performance score indicates the country performs above the group average; a negative score indicates the country performs below the group average. Performance scores in the equity domain were based on the difference between higher-income and lower-income groups, with a wider difference interpreted as a measure of lower equity between the two income strata in each country.

The normalized scoring approach assumes that results are normally distributed. In 2021, we noted that the U.S. was such a substantial outlier that it was negatively skewing the mean performance, violating the assumption. In 2017, we had included all 11 countries to calculate the mean and standard deviation of each measure. After conducting an outlier analysis (see below), we chose to adjust the calculation of average performance by excluding the U.S., using the other 10 countries as the sample group for calculating the mean performance score and standard deviation. This modification changes a country's performance scores relative to the mean but does not affect the ranking of countries relative to one another.

*Domain performance scores and ranking:* For each country, we calculated the mean of the measure performance scores in that domain. Then we ranked each country from 1 to 11 based on the mean domain performance score, with 1 representing the highest performance score and 11 representing the lowest performance score.

*Overall performance scores and ranking:* For each country, we calculated the mean of the five domain-specific performance scores. Then, we ranked each country from 1 to 11 based on this summary mean score, again with 1 representing the highest overall performance score and 11 representing the lowest overall performance score.

*Outlier analysis:* We applied Tukey's boxplot method of detecting statistical outliers and identified several domains or subdomains (affordability, preventive care, equity, and health care outcomes) in which the U.S. was a statistical outlier. The test identified isolated instances of

other countries as statistical outliers on specific measures, but the pattern for other countries was inconsistent and the outlier differences were smaller than in the U.S.

**Sensitivity Analysis.** We checked the sensitivity of the results to different methods of excluding the U.S. as an outlier (see above). We removed the U.S. from the performance score calculation of each domain in which it was a statistical outlier on at least one indicator (otherwise keeping the U.S. in calculation of other domains where it was not an outlier (see [Appendix 3](#)). In another sensitivity analysis, we excluded the U.S. and other countries from the domains in which they were outliers, but the results were essentially similar.

We tested the stability of the ranking method by running two tests based on Monte Carlo simulation to observe how changes in the measure set or changes in the results on some measures would affect the overall rankings. For the first test, we removed three measure results from the analysis at random and then calculated the overall rankings on the remaining 68 measure results, repeating this procedure for 1,000 combinations selected at random. For the second test, we reassigned at random the survey measure results derived from the Commonwealth Fund International Health Policy surveys across a range of plus or minus 3 percentage points — approximately the 95 percent confidence interval for most measures — recalculating the overall rankings based on the adjusted data and repeating this procedure 1,000 times.

The sensitivity tests showed that the overall performance scores for each country varied but that the ranks clustered within several groups similar to that shown in Exhibit 2. Among the simulations, Norway, the Netherlands, and Australia were nearly always ranked among the three top countries; the U.S. was always ranked at the bottom, while Canada, France, and Switzerland were nearly always ranked between eighth and tenth. The other four countries varied in order between the fourth and seventh ranks. These results suggest that the selected ranking method was only slightly sensitive to the choice of indicators.

Four OECD indicators from the health care outcomes domain (30-day in-hospital mortality rate following acute myocardial infarction, 30-day in-hospital mortality rate following ischemic stroke, maternal mortality, and deaths from suicides) are included in the OECD measures of treatable and preventable mortality. To evaluate the potential impact of double-counting these four measures,

we examined the correlations between each of the four measures and the two composite measures and recalculated the performance scores after removing these four measures. The correlations were modest or low. We found little difference in the overall performance scores for the 11 countries after removing the four potentially duplicative OECD indicators.

### Limitations

This report has limitations. Some are particular to our analysis, while some are inherent in any effort to assess overall health system performance. No international comparative report can encapsulate every aspect of a complex health care system. As described above, our sensitivity analyses suggests that country rankings in the middle of the distribution (but not the extremes) are somewhat sensitive to small changes in the data or indicators included in the analysis.

Second, despite improvements in recent years, standardized cross-national data on health system performance are limited. The Commonwealth Fund surveys offer unique and detailed data on the experiences of patients and primary care physicians but do not capture important dimensions that might be obtained from medical records or administrative data. Furthermore, patients' and physicians' assessments might be affected by their expectations, which could differ by country and culture. Augmenting the survey data with standardized data from other international sources adds to our ability to evaluate population health and disease-specific outcomes. Some topics, such as hospital care and mental health care, are not well covered by currently available international data.

Third, we base our assessment of overall health system performance on five domains — access to care, care process, administrative efficiency, equity, and health care outcomes — which we weight equally in calculating each countries' overall performance score. Other elements of system performance, such as innovative potential or public health preparedness, are important. We continue to seek feasible standardized indicators to measure other domains.

Fourth, in defining the five domains, we recognize that some measures could plausibly fit within several domains. To inform action, country performance should be examined at the level of individual measures in addition to the domains we have constructed.

## NOTES

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2. Eric C. Schneider et al., *Mirror, Mirror 2017: International Comparison Reflects Flaws and Opportunities for Better U.S. Health Care* (Commonwealth Fund, July 2017).
3. Members of the 2021 advisory panel include: Marc Elliott, M.A., Ph.D., Distinguished Chair in Statistics and Senior Principal Researcher, RAND Corporation; Niek Klazinga, M.D., Ph.D., Head of the Health Care Quality Indicators (HCQI) Project, Organisation for Economic Co-operation and Development Health Division; Jennifer Nuzzo, Dr.P.H., Senior Scholar, Johns Hopkins Center for Health Security; Irene Papanicolas, Ph.D., Associate Professor of Health Economics, Department of Health Policy, London School of Economics and Political Science.
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**APPENDIX 1. Eleven-Nation Summary Scores on Health System Performance, 2021**

	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>OVERALL PERFORMANCE SCORE</b>	0.22	-0.41	-0.16	0.03	0.23	0.02	0.28	-0.06	-0.20	0.07	-1.20
<b>Access to Care</b>	-0.59	-0.63	-0.30	0.62	1.06	-0.02	0.64	-0.27	-0.73	0.26	-1.36
<i>Affordability</i>	-1.06	-0.32	-0.10	0.45	0.81	-0.31	0.66	0.34	-1.32	0.92	-2.09
<i>Timeliness</i>	-0.12	-0.94	-0.51	0.79	1.32	0.26	0.63	-0.88	-0.15	-0.40	-0.64
<b>Care Process</b>	-0.02	0.11	-0.27	-0.18	0.20	0.56	-0.17	-0.28	-0.04	0.07	0.35
<i>Preventive Care</i>	0.15	0.31	-0.39	-0.64	-0.02	0.21	-0.15	0.42	-0.33	0.42	0.39
<i>Safe Care</i>	-0.25	0.16	-0.26	-0.27	0.22	1.03	-0.50	-0.32	-0.07	0.21	0.42
<i>Coordinated Care</i>	-0.20	-0.13	-0.27	-0.29	0.36	0.68	0.19	-0.59	0.38	-0.11	0.13
<i>Engagement and Patient Preferences</i>	0.25	0.11	-0.15	0.49	0.23	0.31	-0.23	-0.63	-0.14	-0.25	0.47
<b>Administrative Efficiency</b>	0.51	-0.20	0.08	-0.69	-0.42	0.50	0.85	0.21	-1.10	0.25	-1.54
<b>Equity</b>	0.74	-0.77	-0.32	0.59	-0.01	-0.49	-0.37	-0.13	0.54	0.23	-1.69
<b>Health Care Outcomes</b>	0.45	-0.58	0.02	-0.19	0.29	-0.46	0.45	0.15	0.32	-0.46	-1.76

Note: The US is excluded from the performance score calculation of the other 10 countries. See [How We Conducted This Study](#) for more detail.

**APPENDIX 2. Number of Measures per Domain: 2017 vs. 2021 *Mirror Mirror* Reports**

Domain	Total number of measures in 2017	Added in 2021	Modified in 2021	Dropped in 2021	Total number of measures in 2021
<b>Access to Care</b>	16	1	2	6	11
<i>Affordability</i>	6	0	0	1	5
<i>Timeliness</i>	10	1	2	5	6
<b>Care Process</b>	29	7	8	2	34
<i>Preventive Care</i>	9	1	3	1	9
<i>Safe Care</i>	3	2	1	0	5
<i>Coordinated Care</i>	7	0	4	0	7
<i>Engagement and Patient Preferences</i>	10	4	0	1	13
<b>Administrative Efficiency</b>	7	0	0	2	5
<b>Equity</b>	11	3	0	3	11
<b>Health Care Outcomes</b>	9	5	0	4	10
<b>Total</b>	72	16	10	17	71

**APPENDIX 3. Calculation of Mean Performance Scores: Adjusting for Outliers**

	Overall performance score excluding US from calculation of every domain mean score <sup>a</sup>	Overall score if US is included <sup>b</sup>	Overall score if US is excluded only from domains in which it is a statistical outlier on one or more measures <sup>c</sup>
AUS	0.22	0.24	0.24
CAN	-0.41	-0.22	-0.36
FRA	-0.16	-0.02	-0.11
GER	0.03	0.17	0.08
NETH	0.23	0.35	0.27
NZ	0.02	0.14	0.03
NOR	0.28	0.33	0.29
SWE	-0.06	0.06	-0.05
SWIZ	-0.20	-0.10	-0.14
UK	0.07	0.19	0.08
US	-1.20	-1.12	-1.20

Notes: In *Mirror, Mirror 2021*, the US performance score is calculated using mean and standard deviation derived from the 10 non-US countries. Under this scenario, the US was excluded from calculation of all domain mean scores because it was a statistical outlier on some measures within the affordability, preventive care, equity, and health care outcomes domains/subdomains. We also tested an approach that excluded the US only from those domains in which the US was a statistical outlier (scores in the rightmost column). <sup>a</sup> Approach used in this report; <sup>b</sup> Approach used in the 2017 report; <sup>c</sup> Domain-specific exclusion approach (not used in this report).

## APPENDIX 4. Access to Care

Indicator	Source	Raw data											Performance score (excluding US)											
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	
<i>Affordability</i>																								
1	Had any cost-related access problem to medical care in the past year	2020 CMWF Survey	21	14	11	11	9	18	8	11	23	10	38	-1.43	-0.15	0.48	0.58	0.79	-0.77	1.01	0.52	-1.81	0.77	-2.50
2	Skipped dental care or check up because of cost in the past year	2020 CMWF Survey	32	27	19	19	10	37	21	22	26	21	36	-1.10	-0.50	0.66	0.57	1.76	-1.81	0.27	0.17	-0.40	0.37	-1.43
3	Insurance denied payment for medical care or did not pay as much as expected	2020 CMWF Survey	17	17	15	13	9	4	2	4	17	3	34	-1.17	-1.03	-0.76	-0.43	0.17	0.98	1.24	0.88	-1.04	1.18	-2.34
4	Had serious problems paying or was unable to pay medical bills	2020 CMWF Survey	9	7	10	4	5	8	6	8	9	4	22	-0.99	-0.04	-1.47	1.40	0.76	-0.35	0.35	-0.23	-0.92	1.48	-2.77
5	Out-of-pocket expenses for medical bills more than USD 1,000 in the past year, USD equivalent	2020 CMWF Survey	28	17	10	16	11	12	12	–	55	7	44	-0.63	0.11	0.60	0.15	0.54	0.41	0.45	–	-2.43	0.80	-1.39
<b>Subdomain score for Affordability</b>												<b>-1.06</b>	<b>-0.32</b>	<b>-0.10</b>	<b>0.45</b>	<b>0.81</b>	<b>-0.31</b>	<b>0.66</b>	<b>0.34</b>	<b>-1.32</b>	<b>0.92</b>	<b>-2.09</b>		
<i>Timeliness</i>																								
6	Have a regular doctor or place of care	2020 CMWF Survey	93	90	95	96	99	96	100	87	93	97	89	-0.39	-1.16	0.18	0.33	1.12	0.40	1.32	-1.95	-0.39	0.53	-1.18
7	Regular doctor always or often answers the same day when contacted with question	2020 CMWF Survey	61	65	63	83	82	67	77	72	78	65	70	-1.26	-0.77	-1.03	1.45	1.27	-0.51	0.73	0.12	0.79	-0.79	-0.17
8	Saw a doctor or nurse on the same or next day, last time they needed medical care	2020 CMWF Survey	65	38	53	75	66	61	47	33	53	52	49	0.84	-1.25	-0.08	1.58	0.93	0.48	-0.57	-1.66	-0.07	-0.20	-0.38
9	Somewhat or very difficult to obtain after-hours care	2020 CMWF Survey	43	57	54	51	26	42	31	54	49	59	51	0.30	-0.95	-0.68	-0.41	1.84	0.39	1.47	-0.65	-0.20	-1.11	-0.34
10	Primary care practice has arrangement for patients to see doctor or nurse after hours without going to ED	2019 CMWF Survey	69	48	75	96	90	92	91	77	56	84	45	-0.54	-1.84	-0.18	1.14	0.75	0.89	0.81	-0.06	-1.36	0.39	-1.65
11	In past 12 months, received counseling or treatment for mental health, among respondents who wanted/needed to talk with health professional about mental health	2020 CMWF Survey	44	44	32	46	56	41	41	34	44	33	40	0.30	0.34	-1.25	0.68	2.00	-0.12	0.00	-1.07	0.33	-1.22	-0.15
<b>Subdomain score for Timeliness</b>												<b>-0.12</b>	<b>-0.94</b>	<b>-0.51</b>	<b>0.79</b>	<b>1.32</b>	<b>0.26</b>	<b>0.63</b>	<b>-0.88</b>	<b>-0.15</b>	<b>-0.40</b>	<b>-0.64</b>		
<b>Domain score for Access to Care</b>												<b>-0.59</b>	<b>-0.63</b>	<b>-0.30</b>	<b>0.62</b>	<b>1.06</b>	<b>-0.02</b>	<b>0.64</b>	<b>-0.27</b>	<b>-0.73</b>	<b>0.26</b>	<b>-1.36</b>		

Notes: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score. – No data for Sweden.

## APPENDIX 5A. Care Process – Preventive Care

Indicator	Source	Raw data											Performance score (excluding US)										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
12 Talked with provider about healthy diet, exercise and physical activity in the past year	2020 CMWF Survey	30	26	16	23	11	22	15	18	17	21	46	1.80	1.11	-0.63	0.46	-1.66	0.34	-0.82	-0.31	-0.48	0.18	2.49
13 Talked with provider about health risks of smoking and ways to quit in the past year, among smokers	2020 CMWF Survey	55	49	57	30	35	62	23	28	35	46	62	0.95	0.50	1.10	-0.85	-0.49	1.50	-1.39	-1.07	-0.52	0.27	1.29
14 During the past 12 months, talked with doctor or other health care professional about your alcohol use, among respondents who drink heavily	2020 CMWF Survey	13	11	8	7	6	17	5	13	9	17	20	0.52	0.16	-0.50	-0.85	-1.07	1.43	-1.36	0.51	-0.36	1.52	1.73
15 Women ages 50–69 with mammography screening in the past two years	OECD	55	62	49	50	76	72	72	90	49	75	77	-0.73	-0.20	-1.13	-1.04	0.79	0.46	0.47	1.79	-1.12	0.72	0.76
16 Children (age 1 and under) with measles vaccination in past year	OECD	95	90	90	97	93	92	96	97	96	92	92	0.44	-1.39	-1.39	1.17	-0.29	-0.66	0.80	1.17	0.80	-0.66	-0.62
17 Older adults (age 65+) with influenza vaccination in the past year	OECD	–	60	52	39	61	62	38	53	–	72	71	–	0.46	-0.23	-1.35	0.56	0.62	-1.40	-0.16	–	1.50	1.15
18 Avoidable hospital admissions for diabetes, age-sex standardized rates per 100,000	OECD	153	96	151	206	59	148	70	76	107	81	226	-0.81	0.39	-0.76	-1.92	1.17	-0.70	0.93	0.82	0.16	0.71	-1.80
19 Avoidable hospital admissions for asthma, age-sex standardized rates per 100,000	OECD	63	14	30	32	37	65	21	16	25	75	37	-1.16	1.10	0.37	0.28	0.04	-1.26	0.75	0.97	0.58	-1.68	0.03
20 Avoidable hospital admissions for congestive heart failure, age-sex standardized rates per 100,000	OECD	214	168	266	394	153	216	166	227	403	108	412	0.18	0.65	-0.35	-1.65	0.80	0.15	0.66	0.05	-1.74	1.25	-1.52
<b>Subdomain Score for Preventive Care</b>													<b>0.15</b>	<b>0.31</b>	<b>-0.39</b>	<b>-0.64</b>	<b>-0.02</b>	<b>0.21</b>	<b>-0.15</b>	<b>0.42</b>	<b>-0.33</b>	<b>0.42</b>	<b>0.39</b>

Notes: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score. – No data for Australia or Switzerland.



## APPENDIX 5B. Care Process – Safe Care

Indicator	Source	Raw data											Performance score (excluding US)											
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	
21 Experienced a medical or medication mistake in the past two years	2020 CMWF Survey	13	10	10	12	10	10	15	12	12	11	13	-0.96	0.77	0.83	-0.24	1.25	0.72	-2.05	-0.56	-0.11	0.37	-0.57	
22 Primary care physician receives alert or prompt to provide patients with test results using computerized system	2019 CMWF Survey	69	40	23	18	16	47	41	28	33	56	69	1.88	0.17	-0.82	-1.13	-1.24	0.58	0.21	-0.54	-0.22	1.11	1.53	
23 Health care professional did not review medications in past year, among those taking two or more prescription medications	2020 CMWF Survey	25	24	57	31	41	24	48	49	30	24	16	0.82	0.87	-1.77	0.37	-0.48	0.90	-0.99	-1.10	0.43	0.94	1.34	
24 Postoperative sepsis after abdominal surgery, rate per 100k hospital discharges	OECD	3996	1473	–	2526	1507	421	1551	764	2036	3773	1045	-1.62	0.43	–	-0.42	0.40	1.29	0.37	1.01	-0.03	-1.43	0.72	
25 Postoperative pulmonary embolism in hip and knee replacement discharges, rate per 100k hospital discharges	OECD	523	525	267	347	211	152	357	405	402	347	478	-1.40	-1.42	0.72	0.05	1.18	1.67	-0.03	-0.42	-0.40	0.06	-0.93	
<b>Subdomain Score for Safe Care</b>												<b>-0.25</b>	<b>0.16</b>	<b>-0.26</b>	<b>-0.27</b>	<b>0.22</b>	<b>1.03</b>	<b>-0.50</b>	<b>-0.32</b>	<b>-0.07</b>	<b>0.21</b>	<b>0.42</b>		

Notes: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score. – No data for France.

### APPENDIX 5C. Care Process – Coordinated Care

Indicator	Source	Raw data											Performance score (excluding US)											
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	
26 Primary care doctor usually or often receives a report with the results of the visit within 1 week after patient sees specialist	2019 CMWF Survey	43	50	66	47	61	52	72	45	73	26	65	-0.69	-0.22	0.87	-0.46	0.52	-0.12	1.27	-0.61	1.32	-1.87	0.71	
27 Primary care doctor usually or often receives information about changes to a patient’s medication or care plan after patient sees specialist	2019 CMWF Survey	94	87	96	73	88	97	92	76	90	96	82	0.64	-0.23	0.85	-1.90	-0.06	0.98	0.36	-1.56	0.11	0.81	-0.79	
28 Specialist lacked medical history or regular doctor not informed about specialist care in the past two years	2020 CMWF Survey	24	28	34	27	28	19	30	25	25	35	29	0.67	-0.16	-1.35	0.18	-0.15	1.82	-0.46	0.44	0.62	-1.60	-0.37	
29 Experienced gaps in hospital discharge planning in the past two years	2020 CMWF Survey	38	36	47	51	31	28	64	50	39	40	24	0.37	0.56	-0.41	-0.84	1.08	1.40	-1.98	-0.70	0.33	0.19	1.43	
30 Primary care physician is usually notified when patient is seen in ED	2019 CMWF Survey	40	48	24	40	84	85	55	14	46	66	48	-0.44	-0.09	-1.14	-0.45	1.44	1.51	0.22	-1.55	-0.19	0.70	-0.09	
31 Primary care physician usually communicates with home-based nursing care providers about patients’ needs and services to be provided	2019 CMWF Survey	14	24	36	29	27	18	43	46	32	30	33	-1.56	-0.60	0.61	-0.09	-0.32	-1.17	1.32	1.61	0.22	-0.01	0.29	
32 Practice frequently coordinates care with social services or community providers	2019 CMWF Survey	38	42	21	74	47	52	57	12	51	65	40	-0.42	-0.19	-1.33	1.50	0.05	0.31	0.58	-1.80	0.29	1.01	-0.30	
<b>Subdomain score for Coordinated Care</b>												<b>-0.20</b>	<b>-0.13</b>	<b>-0.27</b>	<b>-0.29</b>	<b>0.36</b>	<b>0.68</b>	<b>0.19</b>	<b>-0.59</b>	<b>0.38</b>	<b>-0.11</b>	<b>0.13</b>		

Note: “Performance score” is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score.

### APPENDIX 5D. Care Process – Engagement and Patient Preferences

Indicator	Source	Raw data											Performance score (excluding US)										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
33 Regular doctor always or often knew important information about their medical history	2020 CMWF Survey	87	83	81	89	87	79	77	52	82	72	86	0.71	0.39	0.21	0.96	0.76	0.00	-0.16	-2.50	0.29	-0.67	0.57
34 Regular doctor always or often spent enough time with them and explained things in a way they could understand	2020 CMWF Survey	84	78	76	84	85	82	75	63	82	68	80	0.86	0.00	-0.19	0.87	0.97	0.57	-0.40	-1.97	0.62	-1.33	0.29
35 With same doctor for five years or more	2020 CMWF Survey	49	57	61	71	71	51	57	46	61	64	43	-1.14	-0.28	0.28	1.39	1.48	-0.92	-0.16	-1.47	0.24	0.56	-1.51
36 Doctors always treated the patient with courtesy and respect during their hospital stay	2020 CMWF Survey	75	74	87	72	83	85	72	74	69	73	71	-0.19	-0.40	1.73	-0.67	1.09	1.31	-0.70	-0.35	-1.23	-0.59	-0.77
37 Nurses always treated the patient with courtesy and respect during their hospital stay	2020 CMWF Survey	73	71	85	70	79	84	79	76	74	71	69	-0.51	-0.92	1.63	-1.21	0.47	1.47	0.46	0.03	-0.45	-0.98	-1.16
38 Chronically ill patients discussed with health professional their main goals and priorities in caring for their condition in the past year	2020 CMWF Survey	63	61	44	73	58	59	46	55	59	59	73	0.66	0.42	-1.65	1.90	-0.01	0.14	-1.38	-0.34	0.15	0.11	1.56
39 Chronically ill patients discussed with health professional their treatment options, including side effects in the past year	2020 CMWF Survey	56	59	42	61	51	52	38	41	54	55	67	0.66	1.02	-1.13	1.28	0.04	0.16	-1.62	-1.26	0.34	0.50	1.64
40 Chronically ill patients who feel they definitely have had as much support from health professionals as needed to help manage health problems	2020 CMWF Survey	68	61	66	66	66	68	58	48	62	61	55	0.93	-0.28	0.58	0.60	0.59	0.94	-0.72	-2.35	-0.01	-0.27	-1.05
41 Had a written plan describing treatment they want at the end of life, among adults age 65 and older	2017 CMWF Survey	33	43	13	62	16	18	4	5	36	15	53	0.47	1.00	-0.62	2.03	-0.46	-0.35	-1.11	-1.04	0.60	-0.52	1.33
42 Had a written plan naming someone to make treatment decisions for them if they cannot do so, among adults age 65 and older	2017 CMWF Survey	49	63	18	68	18	33	7	7	37	32	64	0.74	1.37	-0.69	1.60	-0.69	-0.01	-1.23	-1.22	0.17	-0.05	1.27
43 In past two years, used a secure website, patient portal, or mobile app to communicate/email with regular practice about medical question or concern	2020 CMWF Survey	9	7	5	6	9	20	32	24	7	12	37	-0.46	-0.63	-0.90	-0.74	-0.45	0.80	2.07	1.18	-0.70	-0.16	1.92
44 In past two years, used a secure website, patient portal, or mobile app to request Rx refills from regular practice	2020 CMWF Survey	6	7	5	7	16	19	40	28	4	22	34	-0.81	-0.68	-0.89	-0.69	0.07	0.29	2.05	1.03	-0.96	0.60	1.32
45 PCP or other health care professionals in practice frequently or occasionally use video consultations	2019 CMWF Survey	25	16	10	4	4	9	12	33	4	9	20	1.27	0.37	-0.31	-0.89	-0.88	-0.35	-0.04	2.12	-0.89	-0.40	0.74
<b>Subdomain score for Engagement and Patient Preferences</b>												<b>0.25</b>	<b>0.11</b>	<b>-0.15</b>	<b>0.49</b>	<b>0.23</b>	<b>0.31</b>	<b>-0.23</b>	<b>-0.63</b>	<b>-0.14</b>	<b>-0.25</b>	<b>0.47</b>	
<b>Domain score for Care Process</b>												<b>-0.02</b>	<b>0.11</b>	<b>-0.27</b>	<b>-0.18</b>	<b>0.20</b>	<b>0.56</b>	<b>-0.17</b>	<b>-0.28</b>	<b>-0.04</b>	<b>0.07</b>	<b>0.38</b>	

Note: “Performance score” is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score.

## APPENDIX 6. Administrative Efficiency

Indicator	Source	Raw data											Performance score (excluding US)										
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
46 Primary care doctors report time spent on administrative issues related to insurance or claims is a major problem	2019 CMWF Survey	27	25	43	52	44	31	11	81	61	34	58	0.69	0.79	-0.11	-0.56	-0.15	0.52	1.49	-1.98	-1.01	0.34	-0.77
47 Primary care doctors report time spent getting patients needed medications or treatment because of coverage restrictions is a major problem	2019 CMWF Survey	12	33	16	45	35	13	7	12	22	24	63	0.78	-0.88	0.48	-1.87	-1.08	0.69	1.25	0.81	0.01	-0.18	-2.21
48 Primary care doctors report time spend on administrative issues related to reporting clinical or quality data to government or other agencies is a major problem	2019 CMWF Survey	15	14	19	44	37	25	22	15	42	24	36	0.94	1.00	0.61	-1.61	-1.01	0.07	0.35	0.95	-1.44	0.14	-0.86
49 Patients who visited ED for a condition that could have been treated by a regular doctor, had he/she been available, in past 2 years	2020 CMWF Survey	30	39	25	28	31	26	28	28	36	31	39	0.00	-1.95	1.28	0.47	-0.27	0.95	0.52	0.56	-1.33	-0.23	-1.58
50 Spent a lot of time on paperwork or disputes related to medical bills	2020 CMWF Survey	5	6	12	6	5	5	4	3	12	2	19	0.16	0.02	-1.83	0.12	0.42	0.26	0.63	0.72	-1.72	1.21	-2.28
<b>Domain score for Administrative Efficiency</b>												<b>0.51</b>	<b>-0.20</b>	<b>0.08</b>	<b>-0.69</b>	<b>-0.42</b>	<b>0.50</b>	<b>0.85</b>	<b>0.21</b>	<b>-1.10</b>	<b>0.25</b>	<b>-1.54</b>	

Note: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score.

## APPENDIX 7. Equity

Indicator	Source	Raw data												Raw data											
		Below-average income												Above-average income											
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US		
<i>ACCESS TO CARE – Affordability</i>																									
51	Had any cost-related access problem to medical care in the past year	2020 CMWF Survey	24	21	14	15	20	27	14	19	26	12	50	19	7	6	9	9	11	6	6	21	7	27	
52	Skipped dental care or check up because of cost in the past year	2020 CMWF Survey	35	40	26	23	19	45	28	29	34	27	51	30	16	11	17	8	33	16	17	18	18	21	
53	Had serious problems paying or was unable to pay medical bills	2020 CMWF Survey	10	13	16	9	12	14	11	16	14	7	36	5	2	3	2	3	4	2	2	3	3	9	
<i>ACCESS TO CARE – Timeliness</i>																									
54	Somewhat or very difficult to obtain after-hours care	2020 CMWF Survey	48	64	57	55	35	53	43	54	49	62	58	42	55	50	51	24	41	26	53	48	59	44	
55	Have a regular doctor or place of care	2020 CMWF Survey	94	89	96	96	98	96	100	87	95	97	85	94	94	95	94	99	97	100	86	92	99	92	
<i>CARE PROCESS – Preventive Care</i>																									
56	Talked with provider about healthy diet, exercise and physical activity in the past year	2020 CMWF Survey	34	26	16	26	15	26	15	19	20	25	46	27	30	19	20	9	20	16	17	15	17	47	
<i>CARE PROCESS – Safe Care</i>																									
57	Experienced a medical or medication mistake in the past two years	2020 CMWF Survey	16	14	12	14	17	10	24	17	12	16	17	10	9	9	13	7	9	8	11	10	11	9	
<i>CARE PROCESS – Engagement and Patient Preferences</i>																									
58	Regular doctor always or often spent enough time with them and explained things in a way they could understand	2020 CMWF Survey	86	75	73	84	81	71	72	61	82	65	74	87	80	83	84	88	89	79	64	85	72	85	
59	Regular doctor always or often knew important information about their medical history	2020 CMWF Survey	84	81	80	87	84	71	83	59	81	68	81	89	86	85	89	90	85	78	48	82	75	90	
60	In past two years, used a secure website, patient portal, or mobile app to communicate/email with regular practice about medical question or concern	2020 CMWF Survey	10	6	3	5	9	21	32	19	6	10	30	9	9	8	9	9	22	33	26	7	12	48	
61	In past two years, used a secure website, patient portal, or mobile app to request prescription refills from regular practice	2020 CMWF Survey	6	7	4	7	16	18	39	24	4	21	29	6	8	5	8	15	21	43	28	3	26	42	

**APPENDIX 7. Equity (continued)**

Indicator	Source	Percentage-point difference between above-average and below-average income*											Performance score (excluding US)																					
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US											
<i>ACCESS TO CARE – Affordability</i>																																		
51	Had any cost-related access problem to medical care in the past year	2020 CMWF Survey	5	14	8	7	11	16	8	13	6	5	23	1.10	-1.26	0.33	0.64	-0.48	-1.66	0.25	-0.84	0.86	1.08	-2.18										
52	Skipped dental care or check up because of cost in the past year	2020 CMWF Survey	5	25	15	6	10	12	12	12	16	8	29	1.32	-2.22	-0.49	1.06	0.30	0.03	-0.04	0.06	-0.67	0.65	-2.12										
53	Had serious problems paying or was unable to pay medical bills	2020 CMWF Survey	6	11	13	7	9	9	9	14	10	4	27	1.14	-0.61	-1.16	0.70	0.12	-0.08	0.03	-1.52	-0.37	1.74	-2.64										
<i>ACCESS TO CARE – Timeliness</i>																																		
54	Somewhat or very difficult to obtain after-hours care	2020 CMWF Survey	6	9	7	3	11	12	18	0	1	3	15	0.17	-0.31	0.09	0.68	-0.80	-0.95	-1.92	1.19	1.11	0.74	-1.22										
55	Have a regular doctor or place of care	2020 CMWF Survey	-1	5	-1	-2	1	1	0	-1	-3	2	7	0.27	-2.17	0.60	0.94	-0.30	-0.55	0.04	0.52	1.35	-0.71	-2.03										
<i>CARE PROCESS – Preventive Care</i>																																		
56	Talked with provider about healthy diet, exercise and physical activity in the past year	2020 CMWF Survey	-7	3	2	-6	-5	-6	1	-2	-5	-7	1	1.03	-1.62	-1.39	0.61	0.53	0.57	-1.02	-0.26	0.53	1.03	-0.84										
<i>CARE PROCESS – Safe Care</i>																																		
57	Experienced a medical or medication mistake in the past two years	2020 CMWF Survey	6	5	3	1	10	1	16	6	2	5	8	-0.09	0.04	0.52	1.01	-0.96	1.02	-2.26	-0.15	0.78	0.10	-0.48										
<i>CARE PROCESS – Engagement and Patient Preferences</i>																																		
58	Regular doctor always or often spent enough time with them and explained things in a way they could understand	2020 CMWF Survey	1	5	11	0	8	18	7	3	3	7	11	1.03	0.13	-0.86	1.20	-0.31	-2.20	-0.09	0.68	0.57	-0.15	-0.92										
59	Regular doctor always or often knew important information about their medical history	2020 CMWF Survey	4	5	5	3	5	14	-4	-11	0	7	8	-0.23	-0.30	-0.35	0.02	-0.36	-1.68	1.06	2.05	0.38	-0.59	-0.76										
60	In past two years, used a secure website, patient portal, or mobile app to communicate/ email with regular practice about medical question or concern	2020 CMWF Survey	-1	3	5	3	0	1	1	6	1	2	18	1.24	-0.40	-1.27	-0.61	0.99	0.62	0.61	-1.83	0.43	0.23	-2.76										
61	In past two years, used a secure website, patient portal, or mobile app to request request prescription refills from regular practice	2020 CMWF Survey	-1	1	0	1	-1	3	3	4	0	5	13	1.13	0.28	0.50	0.24	1.15	-0.57	-0.77	-1.27	0.93	-1.62	-2.59										
<b>Domain score for Equity</b>													<b>0.74</b>	<b>-0.77</b>	<b>-0.32</b>	<b>0.59</b>	<b>-0.01</b>	<b>-0.49</b>	<b>-0.37</b>	<b>-0.13</b>	<b>0.54</b>	<b>0.23</b>	<b>-1.69</b>											

\* A higher percentage-point difference means larger inequity between people with below-average income and those with above-average income. A negative performance score means worse performance among those with below-average income.

Note: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score.

## APPENDIX 8. Health Care Outcomes

Indicator	Source	Raw data											Performance score (excluding US)																					
		AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US											
<i>Population Health</i>																																		
62	Infant mortality, deaths per 1,000 live births	OECD	3.3	4.4	3.8	3.2	3.6	4.7	2	2.1	3.3	3.7	5.7	0.13	-1.15	-0.45	0.24	-0.22	-1.50	1.64	1.52	0.13	-0.34	-1.94										
63	Adults age 18 to 64 with at least two common chronic conditions	2020 CMWF Survey	11	16	6	10	7	11	13	7	8	10	21	-0.46	-1.96	1.35	0.16	0.90	-0.24	-1.07	0.88	0.55	-0.11	-2.29										
64	Life expectancy at age 60 in years	WHO	25.6	25.2	25.3	24.4	24.1	24.8	24.7	24.5	25.4	24.1	23.1	1.47	0.61	0.96	-0.74	-1.34	0.03	-0.28	-0.57	1.12	-1.25	-2.11										
<i>Mortality Amenable to Health Care</i>																																		
65	Treatable mortality, deaths per 100k	OECD	46	56	48	62	49	62	47	49	39	69	88	0.73	-0.36	0.51	-1.01	0.40	-1.01	0.62	0.40	1.49	-1.77	-2.33										
66	Preventable mortality, deaths per 100k	OECD	93	116	105	113	96	106	98	91	83	119	177	0.76	-1.19	-0.25	-0.93	0.51	-0.34	0.34	0.93	1.61	-1.44	-2.70										
67	10-year trend in avoidable mortality, deaths per 100k	OECD	-31	-34	-36	-27	-35	-51	-46	-37	-41	-45	-14	-0.99	-0.58	-0.31	-1.53	-0.45	1.72	1.04	-0.18	0.37	0.91	-2.18										
<i>Condition-Specific Health Outcomes</i>																																		
68	30 day in-hospital mortality rate following acute myocardial infarction, deaths per 100 patients	OECD	3.2	6.4	7.2	8.3	4	7.7	6.4	6.8	8.9	8.1	9.3	1.91	0.16	-0.27	-0.87	1.47	-0.54	0.16	-0.05	-1.20	-0.76	-1.24										
69	30 day in-hospital mortality rate following ischemic stroke, deaths per 100 patients	OECD	5.4	9.2	7.1	6.2	5.7	11.7	7.8	9.8	8.2	12	4.1	1.24	-0.38	0.52	0.90	1.11	-1.44	0.22	-0.63	0.05	-1.57	1.49										
70	Maternal mortality, deaths per 100,000 live births	OECD	3.9	7.5	7.6	3.2	5.3	6.6	0.0	5.2	6.8	6.5	17.4	0.58	-0.95	-0.99	0.87	-0.02	-0.57	2.23	0.03	-0.65	-0.53	-2.57										
71	Deaths from suicides, deaths per 100,000 population	OECD	12.3	11.0	12.3	9.2	10.0	12.0	11.6	12.2	11.3	7.3	14.5	-0.84	-0.05	-0.84	1.05	0.56	-0.66	-0.42	-0.78	-0.23	2.21	-1.72										
<b>Domain score for Health Care Outcomes</b>													<b>0.45</b>	<b>-0.58</b>	<b>0.02</b>	<b>-0.19</b>	<b>0.29</b>	<b>-0.46</b>	<b>0.45</b>	<b>0.15</b>	<b>0.32</b>	<b>-0.46</b>	<b>-1.76</b>											

Note: "Performance score" is based on the distance from the 11-country average, measured in standard deviations. The US is excluded from the performance score calculation of the other 10 countries. US results are included when calculating its score.

## APPENDIX 9. Sample Sizes of Commonwealth Fund International Health Policy Surveys

SAMPLE SIZES	AUS	CAN	FRA	GER	NETH	NZ	NOR	SWE	SWIZ	UK	US
<b>2017 Commonwealth Fund International Health Policy Survey of Older Adults</b>	2,500	4,549	750	751	750	500	750	7,000	3,238	753	1,392
<b>2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians</b>	500	2,569	1,287	809	788	503	661	2,411	1,095	1,001	1,576
<b>2020 Commonwealth Fund International Health Policy Survey of Adults</b>	2,201	5,089	3,028	1,004	753	1,003	607	2,513	2,284	1,991	2,488
Adults ages 18–64	1,438	3,615	2,240	706	506	737	397	1,597	1,746	1,370	1,912
Adults with a regular doctor or place of care	2,073	4,698	2,880	973	748	961	607	2,227	2,117	1,951	2,215
Adults who saw or needed to see specialist in the past two years	1,350	2,820	2,061	772	390	456	338	1,255	1,279	974	1,498
Adults with a regular doctor or place of care and who saw or needed to see specialist in the past two years	1,311	2,683	1,991	752	389	454	338	1,152	1,212	962	1,402
Adults who wanted/needed to talk with health professional about mental health	662	1,452	591	183	158	234	129	653	470	552	987
Adults who were hospitalized in past two years	467	726	546	269	110	168	120	436	433	352	410
Adults with at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease, including heart attack; hypertension or high blood pressure	929	1,980	959	403	300	332	225	898	627	758	1,043
Adults who take two or more prescription medications regularly	901	2,179	971	396	300	321	251	1,109	785	825	1,251
Adults who smoke/use tobacco every day or some days	289	971	763	271	157	123	153	514	565	414	460
Adults who have had 4–5 alcoholic drinks on one occasion monthly, weekly, daily, or almost daily in the past year	638	1,267	1,042	286	280	335	177	535	677	737	515
<b>Equity</b>											
Adults with below-average income	822	1,632	1,165	347	140	222	163	639	1,061	587	1,100
Adults with above-average income	741	2,066	1,096	407	420	488	323	1,235	670	803	903
Adults with below-average income with a regular doctor or place of care	777	1,481	1,116	337	138	213	163	576	1,002	575	943
Adults with above-average income with a regular doctor or place of care	694	1,952	1,030	386	417	474	323	1,076	610	796	833
<b>RESPONSE RATES</b>											
2017 Commonwealth Fund International Health Policy Survey of Older Adults	25%	23%	24%	19%	52%	26%	15%	29%	45%	22%	19%
2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians	15%	39%	20%	15%	49%	16%	34%	42%	43%	27%	21%
2020 Commonwealth Fund International Health Policy Survey of Adults	18%	17%	23%	24%	25%	14%	19%	30%	49%	14%	14%

Note: This appendix shows the sample size in each country for each survey, as well as the sample sizes for any indicators with restricted bases. Data for the indicators used in the Equity domain come from the 2020 Commonwealth Fund International Health Policy Survey of Adults and are stratified between respondents who reported having below-average and above-average income.



## APPENDIX 10. Measure Descriptions and Source Notes

*Note on measures from Commonwealth Fund International Health Policy Surveys:* Base includes full sample of survey unless indicated otherwise.

*Note on linked vs. unlinked OECD measures:* A number of OECD indicators can be calculated using either unlinked or linked data. Unlinked data refers to hospital data used for indicator calculation that come from a single hospital admission. These data are not linked to other hospital admissions or death outside the hospital using a unique patient identifier. Linked data refers to hospital data used for indicator calculation that are linked to other hospital admissions or death outside the hospital using a unique patient identifier. When both versions were available for a country, we included the linked data. Unlinked data was included for countries where linked data was not available. For more detail see: [OECD Health Care Quality and Outcomes \(HCQO\) 2018–19 Data Collection: Guidelines for Filling in the Data Collection Questionnaires and Using SAS Programs](#).

### Appendix 4. Access to Care

#### Affordability

1. Percent of adults who reported they had a cost-related access problem in the past year, including at least one of the following: did not fill a prescription or skipped doses; skipped recommended medical test, treatment, or follow-up; or had a medical problem but did not visit doctor or clinic in the past year because of cost. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
2. Percent of adults who skipped dental care or checkup because of cost in the past year. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
3. Percent of adults whose insurance denied payment for medical care or did not pay as much as expected in the past year. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
4. Percent of adults who had serious problems paying or were unable to pay medical bills in the past year. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
5. Percent of adults whose out-of-pocket expenses for medical bills were more than USD 1,000 in the past year. No data for Sweden. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.

#### Timeliness

6. Percent of adults who had a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
7. Percent of adults whose regular doctor or place of care “always” or “often” answered the same day when contacted with a question. Base: Has a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
8. Percent of adults who reported that the last time they were sick or needed medical attention, they were able to see a doctor or nurse on the same or next day. Base: Excludes those who did not need to make an appointment to see a doctor/nurse. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
9. Percent of adults who reported it was “very” or “somewhat” difficult to get medical care in the evening, weekend, or on a holiday without going to the emergency room. Base: Excludes those who did not seek after-hours care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
10. Percent of primary care physicians who reported their practice has an arrangement for patients to see a doctor or nurse when the practice is closed without going to the emergency room. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
11. Percent of adults who reported they received counseling or treatment for mental health in past year. Base: Among respondents who wanted or needed to talk with health professional about mental health. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.

## APPENDIX 10. Measure Descriptions and Source Notes (continued)

### Appendix 5a. Care Process — Preventive Care

12. Percent of adults who talked with any doctor or other health care professional in the past 12 months about a healthy diet and healthy eating, and exercise or physical activity. Excludes those who have not seen/talked to a doctor or other health care professional in the past 12 months. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
13. Percent of adults who talked with any doctor or other health care professional in the past 12 months about health risks of smoking and ways to quit. Base: Smokes or uses tobacco every day or some days. Excludes those who have not seen/talked to a doctor or other health care professional in the past 12 months. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
14. Percent of adults who talked with any doctor or other health care professional in the past 12 months about alcohol use. Base: Had four drinks (women) or five drinks (men) on one occasion monthly, weekly, daily, or almost daily in past year. Excludes those who have not seen/talked to a doctor or other health care professional in the past 12 months. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
15. Percent of women ages 50–69 with mammography screening in the past two years, 2019 or nearest year. Data from 2019 for Australia, France, the Netherlands, New Zealand, Norway, the UK, and the US; 2018 for Canada and Germany; 2017 for Switzerland; and 2014 for Sweden. Results are based on program data for all countries except Sweden, Switzerland, and the US, which are based on survey data. Source: OECD Health Statistics, July 2021.
16. Percentage of children under 1 year of age who have received at least one dose of measles-containing vaccine in a given year, 2018. Data for all countries are from 2018. Source: OECD Health Statistics, July 2021.
17. Number of people age 65 and older who have been immunized against influenza (or “flu”) during the past 12 months divided by the average annual population age 65 and older, 2019 or most recent year. Data from

2019 for Canada, France, Germany, the Netherlands, New Zealand, Sweden, the UK, and the US; and 2018 for Norway. No data for Australia or Switzerland. OECD Health Statistics, July 2021.

18. Avoidable hospital admissions for diabetes, population age 15 and older, age-sex standardized rates per 100,000, 2019 or nearest year. Data from 2019 for Canada, Germany, Norway, Sweden, Switzerland, and the UK; 2018 for Australia and the US; 2016 for the Netherlands; 2015 for France; and 2014 for New Zealand. Source: OECD Health Statistics, July 2021.
19. Avoidable hospital admissions for asthma, population age 15 and older, age-sex standardized rates per 100,000, 2019 or nearest year. Data from 2019 for Canada, Germany, Norway, Sweden, Switzerland, and the UK; 2018 for Australia and the US; 2016 for the Netherlands; 2015 for France; and 2014 for New Zealand. Source: OECD Health Statistics, July 2021.
20. Avoidable hospital admissions for congestive heart failure, population age 15 and older, age-sex standardized rates per 100,000, 2019 or nearest year. Data from 2019 for Canada, Germany, Norway, Sweden, Switzerland, and the UK; 2018 for Australia and the US; 2016 for the Netherlands; 2015 for France; and 2014 for New Zealand. Source: OECD Health Statistics, July 2021.

### Appendix 5b. Care Process — Safe Care

21. Percent of adults who reported experiencing a medical, medication, or lab mistake in the past two years, including at least one of the following: been given the wrong medication or wrong dose by a doctor, nurse, hospital or pharmacist; reported had a time they thought a medical mistake was made in their treatment or care; experienced delays in being notified about abnormal results; and/or been given incorrect results for diagnostic or lab test. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
22. Percent of primary care physicians who report their practice routinely receives an alert or prompt to provide patients with test results using a computerized system. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

**APPENDIX 10. Measure Descriptions and Source Notes (continued)**

23. Percent of adults who reported that a health care professional had not reviewed with them all the medications they take in the past year. Base: Taking two or more prescription medications regularly. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
24. Postoperative sepsis after abdominal surgery discharges, population age 15 and older, rate per 100,000 hospital discharges, 2019 or nearest year. Data from 2019 for Canada, Germany, Sweden, Switzerland, and the UK; 2018 for Australia and the US; 2016 for Norway; and 2015 for the Netherlands and New Zealand. All data are linked except for Australia, Germany, the UK, and the US. No data for France. Source: OECD Health Statistics, July 2021.
25. Postoperative pulmonary embolism in hip and knee replacement discharges, population age 15 and older, rate per 100,000 hospital discharges, 2019 or nearest year. Data from 2019 for Canada, Germany, Sweden, Switzerland, and the UK; 2018 for Australia and the US; 2017 for Norway; and 2015 for France, the Netherlands, and New Zealand. All data are linked except for Australia, France, Germany, the UK, and the US. Source: OECD Health Statistics, July 2021.
- Appendix 5c. Care Process — Coordinated Care**
26. Percent of primary care physicians who reported that when a patient has been referred to a specialist, they “usually” (75%–100% of the time) or “often” (50%–74% of the time) receive a report back with the results of the specialist visit within one week of service. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
27. Percent of primary care physicians who reported that when a patient has been referred to a specialist, they “usually” (75%–100% of the time) or “often” (50%–74% of the time) receive from the specialist information about changes made to the patient medication or care plan. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
28. Percent of adults who reported that, in the past two years, there was a time when: a specialist did not have basic medical information or tests results from their regular doctor about the reason for visit; OR after they saw a specialist, their regular doctor did not seem informed and up to date about the care they received. Base: Regular doctor or place of care and saw or needed to see a specialist in past two years. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
29. Percent of adults who reported experiencing any hospital discharge coordination problem for their most recent hospitalization, including at least one of the following: hospital staff did not review all prescribed medications, *including* those taken before hospital stay, before leaving the hospital; did not make arrangements for follow-up care with a doctor or other health professional upon leaving the hospital; and did not provide written information during hospital stay about symptoms or health problems to watch out for after leaving hospital. Base: Hospitalized in past two years. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
30. Percent of primary care physicians who reported they “usually” (75%–100% of the time) receive notification that a patient has been seen in emergency department. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
31. Percent of primary care physicians who reported their practice “usually” (75%–100% of the time) communicates with home-based nursing care providers about their patients’ needs and the services to be provided. Base: Excluding those who responded “does not apply.” Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.
32. Percent of primary care physicians who reported their practice “frequently” coordinates care with social services or community providers. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

**APPENDIX 10. Measure Descriptions and Source Notes (continued)****Appendix 5d. Care Process — Engagement and Patient Preferences**

33. Percent of adults who reported their regular doctor “always” or “often” knows important information about their medical history. Base: Has a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
34. Percent of adults who reported their regular doctor “always” or “often” spends enough time with them, and explains things in a way they could understand. Base: Has a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
35. Percent of adults who reported seeing same regular doctor for five years or more. Base: Has a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
36. Percent of adults who reported that doctors “always” treated them with courtesy and respect during their hospital stay. Base: Hospitalized in the past two years. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
37. Percent of adults who reported that nurses “always” treated them with courtesy and respect during their hospital stay. Base: Hospitalized in the past two years. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
38. Percent of adults with a chronic condition who reported that a doctor or health care professional discussed with them their main goals or priorities in caring for their condition in the past year. Base: Has at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension or high blood pressure. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
39. Percent of adults with a chronic condition who reported that a doctor or health care professional discussed with them their treatment options, including side effects, in the past year. Base: Has at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension or high blood pressure. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
40. Percent of adults with a chronic condition who reported they “definitely” feel they have had as much support from health professionals as needed to help manage their health problems. Base: Has at least one of the following chronic conditions: asthma or chronic lung disease; diabetes; heart disease; and hypertension or high blood pressure. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
41. Percent of adults age 65 and older who reported they had a written plan or document describing the health care treatment they want or do not want at the end of their life. Source: 2017 Commonwealth Fund International Health Policy Survey of Older Adults.
42. Percent of adults age 65 and older who reported they had a written document that names someone to make treatment decisions for them if they cannot make decisions for themselves. Source: 2017 Commonwealth Fund International Health Policy Survey of Older Adults.
43. Percent of adults who reported they used a secure website, patient portal, or mobile phone app to communicate/email with their regular practice about a medical question or concern in the past two years. Base: Has regular doctor or place of care. Excludes those who said they did not have email, a smartphone, or a computer. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
44. Percent of adults who reported they used a secure website, patient portal, or mobile phone app to request prescription refills from their regular practice in the past two years. Base: Has regular doctor or place of care. Excludes those who said they did not have email, a smartphone, or a computer. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.
45. Percent of primary care providers or other health care professionals who reported their practice “frequently” or “occasionally” uses video consultations. Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

## APPENDIX 10. Measure Descriptions and Source Notes (continued)

### Appendix 6. Administrative Efficiency

46. Percent of primary care physicians who reported the time they and their staff spend on administrative issues related to insurance or claims was a “major” problem. Base: Excluding those who responded “not applicable.” Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

47. Percent of primary care physicians who reported the time they and their staff spend getting patients needed medications or treatment because of coverage restrictions was a “major” problem. Base: Excluding those who responded “not applicable.” Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

48. Percent of primary care physicians who reported the time they and their staff spend on administrative issues related to reporting clinical or quality care data to government or other external entities such as health insurance plans was a “major” problem. Base: Excluding those who responded “not applicable.” Source: 2019 Commonwealth Fund International Health Policy Survey of Primary Care Physicians.

49. Percent of adults who visited the emergency room for a condition that could have been treated by their regular doctor or staff at their usual place of care, had doctor/staff been available. Base: Has a regular doctor or place of care. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.

50. Percent of adults who reported spending a lot of time on paperwork or disputes related to medical bills. Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.

### Appendix 7. Equity

51. See #1.

52. See #2.

53. See #4.

54. See #9.

55. See #6.

56. See #12.

57. See #21.

58. See #34.

59. See #33.

60. See #43.

61. See #44.

### Appendix 8. Health Care Outcomes

62. Infant mortality rate, defined as the number of deaths of children age less than 1 year in a given year per 1,000 live births, 2019 or latest year. Data from 2019 for Australia, Canada, France, Germany, the Netherlands, Norway, Sweden, Switzerland, and the UK; 2018 for the US; and 2017 for New Zealand. Source: OECD Health Statistics, July 2021.

63. Percent of adults ages 18–64 with at least two common chronic conditions: arthritis, asthma or chronic lung disease, diabetes, heart disease including heart attack, hypertension, or high blood pressure Source: 2020 Commonwealth Fund International Health Policy Survey of Adults.

64. Life expectancy at age 60 in years, 2019. Source: WHO Global Health Observatory Data Repository, 2020.

65. Treatable mortality, deaths per 100,000 population, 2019 or nearest year: Causes of death that can be mainly avoided through timely and effective health care interventions, including secondary prevention such as screening, and treatment (i.e., after the onset of diseases, to reduce case-fatality). Data for the calculation of treatable and preventable mortality are drawn from the WHO Mortality Database. Annual data on treatable and preventable deaths are provided in absolute numbers and as standardized death rates according to age. The standardization is based on the 2010 OECD Standard Population. Data are from 2019 for Germany; 2018 for Australia, the Netherlands, and Sweden; 2017 for Canada, Switzerland, and the US; and 2016 for France, New Zealand, Norway, and the UK. Source: OECD Health Statistics, July 2021.

**APPENDIX 10. Measure Descriptions and Source Notes (continued)**

66. Preventable mortality, deaths per 100,000 population, 2019 or nearest year: Causes of death that can be mainly avoided through effective public health and primary prevention interventions (i.e., before the onset of diseases/injuries, to reduce incidence). See #65 for additional details on data source and standardization. Data are from 2019 for Germany; 2018 for Australia, the Netherlands, and Sweden; 2017 for Canada, Switzerland, and the US; and 2016 for France, Norway, New Zealand, and the UK. Source: OECD Health Statistics, July 2021.
67. 10-year change in avoidable mortality, deaths per 100,000 population. Avoidable mortality is the sum of time series for both treatable (#65) and preventable (#66) mortality. Data years: 2009 and 2019 (Germany); 2008 and 2018 (Australia, the Netherlands, Sweden); 2007 and 2017 (Canada, Switzerland, the US); and 2006 and 2016 (France, Norway, New Zealand, and the UK). Authors' calculation based on data from OECD Health Statistics, July 2021.
68. 30-day in-hospital mortality rate following acute myocardial infarction, population age 45 and older, age-sex standardized rates, deaths per 100 patients, 2019 or most recent year. Based on linked data where available. Based on unlinked data for Australia and Germany. Data from 2019 for Canada, Germany, New Zealand, Norway, Sweden, and the UK; 2018 for Australia; 2017 for France; 2016 for the Netherlands; 2014 for the US; and 2012 for Switzerland. Source: OECD Health Statistics, July 2021.
69. 30-day in-hospital mortality rate following ischemic stroke, population age 45 and older, age-sex standardized rates, deaths per 100 patients, 2019 or most recent year. Based on linked data where available. Based on unlinked data for Australia, France, Germany, and the US. Data from 2019 for Canada, Germany, New Zealand, Norway, Sweden, and the UK; 2018 for Australia and the US; 2016 for the Netherlands; 2015 for France; and 2012 for Switzerland. Source: OECD Health Statistics, July 2021.
70. Number of maternal deaths, all causes, per 100,000 live births, 2019 or most recent year. Data from 2019 for Australia, Canada, Germany, the Netherlands, Norway, and Sweden; 2018 for Switzerland and the US; 2017 for New Zealand and the UK; and 2015 for France. Source: OECD Health Statistics, July 2021.
71. Number of deaths caused by intentional self-harm (suicides), age-sex standardized rates, per 100,000 population, 2019 or most recent year. Data from 2019 for Germany; 2018 for Australia, the Netherlands, and Sweden; 2017 for Canada, Switzerland, and the US; and 2016 for France, Norway, New Zealand, and the UK. Source: OECD Health Statistics, July 2021.



# The Commonwealth Fund

*Affordable, quality health care. For everyone.*

## **About the Commonwealth Fund**

The mission of the Commonwealth Fund is to promote a high-performing health care system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including low-income people, the uninsured, and people of color. Support for this research was provided by the Commonwealth Fund. The views presented here are those of the authors and not necessarily those of the Commonwealth Fund or its directors, officers, or staff.