Major health reforms in 31 high-income countries in 2018 and 2019; expert informed identification, clustering, and analyses over time of "top-three" national reforms

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Highlights

- With some variation, key 2018-2019 reforms targeted primary care; governance; hospital care
- Digital health and transparency was consistently strong
- Reforms with narrower scope are more likely to be implemented quickly
- Policymakers can learn from similar reforms happening concurrently across countries
- It remains to be seen how Covid-19 will affect reform dynamics

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Conflict of interest

The authors report no conflict of interest.

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Abstract

Background: High-income countries continuously reform their healthcare systems. Often, similar reforms are introduced concomitantly across countries. Although national policymakers would benefit from considering reform experiences abroad, exchange is limited. This paper provides an overview of health reform trends in 31 high-income countries in 2018 and 2019, i.e., before Covid-19.

Methods: Information was collected from national experts from the Health Systems and Policy Monitor network. Experts were asked to report on the three "top" national health reforms 2018 and 2019. In 2019, they provided an update of 2018 reforms. Reforms were assigned to one of 11 clusters and identified as one of seven different reform types.

Results: 81 reforms were reported in 28 countries in 2018. 44/81 went to four clusters: 'insurance coverage & resource generation', 'governance', 'healthcare purchasing & payment', and 'organisation of hospital care'. In 2019, 86 reforms in 30 countries were reported. 48/86 fell under 'organisation of primary & ambulatory care', 'governance', 'care coordination & specialised care', and 'organisation of hospital care'. Most 2018 reforms were reported ongoing in 2019; 27 implemented; seven abandoned. Health agency-led reforms were implemented most frequently, followed by central government-legislated reforms.

Conclusions: Policymakers can leverage international experience of distinct reform approaches addressing similar challenges and similar approaches to address distinct problems. Such knowledge may help inspire or support future successful health reform processes.

Key words: health reform; governance; organisation of care; digital health; reform implementation; top reform areas

Introduction

Many countries are currently reforming their health systems in response to the Covid-19 pandemic. Even before Covid-19, however, health systems faced myriad complex—shared—challenges that persist today. These include gaps in coverage and access, concerns about quality (Busse et al., 2019), integration and continuity of care (Thomson, Foubister, Mossialos, 2009; Busse et al., 2019; Nicol, 2017, p291-292), workforce shortages (Kroezen et al., 2015, p1517-1528; Kroezen, Van Hoegaerden and Batenburg, 2018, p87-93), the epidemiological shift to (multiple) chronic diseases (Tsiachristas, van Ginneken and Rijken, 2018, p1-3; WHO, 2019), emerging viral threats (Ferri et al., 2017, p2857-2876; WHO, 2019; Marston et al., 2014) as well as other "unpredictable exogenous shocks" (Stamati et al., 2024). Worldwide, all health systems also struggle with growing health expenditures, cost containment (Stadhouders et al., 2019, p71-79), and questions around sustainable financing (OECD, 2015a), while being confronted with an increasingly aged and stagnated population and being committed to ensuring universal health coverage (Kieny et al., 2017, p537-539). Furthermore, advancements in technology and populations' rising demand for more and better person-centred care (Santana, 2018, p429-440; Coulter and Oldham, 2016, p114-116; Moore et al., 2017, p662-673; Makhni et al., 2019, p675-680) challenge established approaches to service delivery, regulation, and governance (Oderkirk, 2017; Mckee, van Schalkwyk and Stuckler, 2019, p3-6; Azzopardi-Muscat et al., 2019, p1-2; Fields, 2020, p409-416; Marston et al., 2014). In response, countries continuously introduce reforms to their systems and underlying policies to improve health system structures, processes, and outcomes (Saltman, 2010). This creates much opportunity for cross-country learning as policymakers would benefit from considering reform experiences made abroad when designing and implementing their own policies.

The European Observatory on Health Systems and Policies (the Observatory) aims to promote evidence-informed health policymaking in Europe. Its Health Systems and Policy Monitor (HSPM) network brings together an international group of 40 high profile institutions with a prestigious reputation and academic standing in health systems and policy analysis from more than 30 countries to participate in a wide range of collaborations keeping the health policy community up-to-date on health system developments and contributing their expertise on the dynamics of health systems to reports, studies, and knowledge transfer exercises for a variety of audiences, including ministries of health and international organisations.

The work of the Observatory and the HSPM network adds to existing efforts of cross-country exchange on health reforms, like the EU Expert Panel on Effective Ways of Investing in Health (ExPH, Decision 2012/C 198/06, 2012), the State of Health in the EU reports (European Commission, 2020; European Commission, 2019), and multiple other Observatory and OECD studies (Busse and van Ginneken, 2018; OECD, 2020a; OECD, 2020b; OECD, 2020c; OECD, 2018;

OECD, 2015b). However, there is no platform providing a comprehensive overview of current and ongoing reforms of health systems, nor an assessment of reform trends, in high-income countries. This is a significant research gap, and represents an untapped opportunity both to gain a better understanding of healthcare policy activity worldwide and for health systems to learn from each other. Such a review of reforms would contribute to multi-national exchange among researchers and national policymakers and support the identification of – or, at a minimum, a discussion of – best practices for designing and implementing successful health reforms.

This paper aims to present such an overview of key health system reforms among high-income countries in 2018 and 2019. More specifically, the objectives are to (1) map the three "top" reforms in each year as identified by national experts; (2) identify salient reform trends therein; and (3) track and identify patterns of implementation status. Ultimately, we hope to provide relevant evidence for future health system reform decisions, and to strengthen collaboration between health policymakers and researchers across countries to address common and shared health system and population health challenges more effectively.

Methods

Information for this study was collected from national HSPM experts prior to the network's annual meetings in 2018 and 2019. These two-day meetings aim to facilitate exchange of knowledge on and experiences from the various health system activities happening within countries. Participants present and discuss current health reforms and workshop comparative research collaborations that can inform policymaking. In 2018, more than 50 health systems researchers (national experts; experts) from the 31 HSPM member countries were contacted and asked through an email survey, to identify the "top three" reforms that had recently occurred or were in process in their respective countries. All countries are high-income according to World Bank income bracket classification. The English-language survey asked for a short (70 words) description of each reform, including details on what it addresses and how. No limitations were imposed on national experts regarding their choice of reforms, i.e. experts were free to select the three reforms that they felt were the most important in their country in that year. Responses were submitted for 30 countries, with 28 analysed for this paper (Figure 1). For each country, the "top three" reforms brought forward by experts were checked against other national sources to determine whether they were representative of the status of health policy in a given country.Based on nine initial clusters derived from the template for the Observatory's health system reports (HiT; (Rechel, Maresso and van Ginneken, 2019), reforms were grouped based on the content provided by experts by WQ and MH first separately, then together to address discrepancies and for validation. Reforms were always assigned to only one cluster, although several (multifaceted) reforms could potentially fit into more than one. In such cases, researchers selected the cluster that best corresponded to the reform description provided by the national expert.

During this process, the clusters were adjusted inductively and iteratively by the authors. Clustered results were inputted into a matrix in Microsoft Excel and shared with HSPM members during the 2018 annual meeting for comment and further validation of labelling and clustering. Subsequent feedback led to more adjusting of clusters and re-assigning of reforms.

Before the 2019 meeting, the same national experts were contacted and asked to complete an updated survey, with a question on the status of the previous year's reported reforms. The experts were asked to classify these reforms as "implemented", "abandoned", or "ongoing", providing further information to substantiate their assessment. Data from 30 countries were received in English and analysed (Figure 1). The 2018 matrix was updated to include information on implementation progress of 2018 reforms. Then, MH and WQ independently conducted an initial clustering of 2019 reforms, adjusting the 2018 reform clusters based on the details of the 2019 reported reforms. For validation, both these matrices were shared with national experts in advance of the 2019 annual HSPM meeting. To triangulate the clustering, KP merged and integrated the feedback, reviewed, reconciled, and harmonised the reform clusters across years (Annex I). Then KP identified initial sub-categories, representing potential trends in reform activity, in tandem with WQ and MH.

Finally, KP performed an additional classification of reforms based on their different political levels. That is, whether each reform was (1) a central government legislated reform (or change to the constitution); (2) an explicit central government strategy; (3) part of a coalition agreement; (4) a non-legislative central government policy, including decrees, directives, and guidelines; (5) led by a health agency (other than the Ministry of Health) or insurance entity; (6) led by or under the jurisdiction of regional government; or (7) part of political campaigning (Annex II). The classification was informed both by the original national expert reform descriptions and by a review of policy documents, agency websites, and other grey literature to confirm the description of reforms' political levels. WQ reviewed the classifications and, in discussion with the other authors, further refined them. Authors resolved any remaining discrepancies in agreement through discussion and remaining gaps were addressed by further review of grey literature and consultation with HSPM experts. The authors also shared the draft manuscript with the entire group of national experts for their comment and final review, including for accuracy of cross-sectional identification, clustering, and assessing of differences across 2018 and 2019 "top three" reforms.

To the extent possible, the authors strove to ensure the validity and generalisability of this study. However, it is important to be aware of the remaining limitations of this study's methods and results. For one, country selection was based on membership in the HSPM network. This group of 31 countries includes predominantly European Union (EU) countries (28/31) as well as Canada, Israel, and the United States (USA). Health systems differ considerably across countries (Reibling, Ariaans and Wendt, 2019, p611-620; Boehm et al., 2013, p258-269) as do national contexts generally (e.g.

history, institutional traditions, mindset of population) (Greene, 2004, p959-980), complicating direct comparisons of reforms and their implementation as well as the comparability of good reform practices. Still, it is important to ensure geographic representation within these constraints, and the countries included in this study offer a high degree of diversity and representativeness regarding European health systems and their characteristics. However, the spectrum of developed country health systems worldwide is not reflected. Canada, Israel, and the USA are interesting examples of non-European high-income health systems, but regions such as East Asia and Oceania, for example, are not represented in this study—and countries in the Middle East and North Africa are underrepresented.

As a descriptive and exploratory study informed by country expert input, this study also faces several potential methodological biases, which influence the approach to clustering and assessing of the differences across reforms. For example, the selection of reforms was determined by national experts based on their own interpretation of "top three", and may be influenced by expert bias, reflecting individual research interests and value judgements as well as workplace priorities. While all national experts are health system researchers, they represent national institutes and university departments, each with their own implicit and/or explicit (political and research) agendas. This as well as differences in language may have shaped not only the choice but also the description of a country's "top three" reforms, leading to differences in interpretation and labelling bias. And though the authors aimed to standardise labelling and validate clustering by first grouping the reforms separately and then together, and by sharing the results with the experts at three points (after 2018 matrix was developed; after the 2019 matrices were developed; and after the paper was drafted), with more than 50 experts and authors, it is unlikely that full standardisation was achieved. Moreover, the year to which a reform was attributed was also left to national experts' discretion, meaning that sometimes a reform was assigned to the year in which it passed, other times to the year it entered into force or was implemented, resulting in additional differences in labelling. Similarly, authors asked the experts for the implementation status of 2018 reforms in 2019. Again, efforts were made to standardise the assessment of implementation status through review of grey literature and feedback loops with experts. But the authors deferred to the national experts when uncertainties arose, with the assumption that, due to their professional and language expertise, the experts were in better positions to determine on-the-ground realities of specific reforms.

(Figure 1 about here)

Results

Annex III provides an overview of all the reforms submitted by national experts for 2018 and 2019, including their type and cluster classification, and, where relevant, implementation status.

Overview of "top three" reform areas in 2018

In 2018, national experts reported on 81 reforms in 28 countries. Most of these reforms were categorised as a central government legislated reform (43; 53%). Twenty (23%) were non-legislative central government policies (sometimes legally binding), including, among others, directives, decrees, pilot programs, and guidelines. Six (7%) were under the jurisdiction of regional governments; and five (6%) were reforms reported to be initiated and/or led by a health agency other than the Ministry of Health, or insurance entity (Figure 2). Regarding reform content, more than half (44; 54%) fell under four clusters: 'insurance coverage & resource generation' (13 countries; 15 reforms), 'governance' (ten countries; 12 reforms), 'healthcare purchasing & payment' (nine countries; nine reforms), and 'organisation of hospital care' (eight countries; eight reforms). Several other reform clusters were (almost) as important, including 'public health', 'organisation of primary & ambulatory care', and 'digital health & transparency' (Figure 3).

(Figure 2 about here)

Insurance coverage & resource generation

National experts from 13 countries reported on 15 reforms in the field of 'insurance coverage & resource generation'. When looking in more detail at the content of these reforms, six countries reported major (planned) changes to population coverage (Table 1). Cyprus introduced a National Health System (NHS), underpinned by a National Health Insurance (NHI) for the entire population. In Ireland, an implementation strategy was passed to deliver the so-called *Sláintecare* reform, which would ensure universal healthcare for the population. Bulgaria reported on plans to overhaul its existing National Health Insurance (NHI) system. In Spain, a new law re-established universal coverage by abolishing the requirement to pay social security contributions, which had been introduced after the economic crisis in 2012. Interestingly, Latvia went in the opposite direction, i.e. linking coverage to the payment of social insurance tax. Finally, in the USA, attempts were made to repeal the Affordable Care Act, even while some states were expanding Medicaid coverage.

Country experts in four other countries reported important (planned) changes in service coverage. In Canada, a Parliamentary Committee report was published and an advisory council set-up to make proposals for the introduction of public coverage of pharmaceuticals (Pharmacare). Israel proposed increasing dental care coverage for adults 75+ and children younger than 18. Romania introduced reforms to enhance palliative care coverage, while Malta focused on improved service coverage for the Lesbian, Gay, Bisexual, Transgender/Transsexual, Intersex, Queer (LGBTIQ) community and

also introduced giving same-sex couples and single women access to *in vitro* fertilisation services. Meanwhile, Estonia enhanced financial protection for people facing high levels of out-of-pocket payments, thus improving cost coverage under the Estonian Health Insurance Fund.

(Figure 3 about here)

(Table 1 about here)

Governance

Experts from ten countries reported on 12 distinct reforms under 'governance'. Four reforms were concerned with centralisation of systems. In Canada, (re-)centralisation of a regional health system in Saskatchewan followed similar reforms to those in other regions. In Lithuania, governance of providers was centralised, enabling the central government to own providers, and giving the Ministry of Health oversight authority for approving the provider network. Austria passed a reform to strengthen central-level governance of the system by merging the nine regional social health insurance funds. In Finland, a reform aimed at centralising governance responsibility for care delivery from 170 primary healthcare authorities to around 20 joint health and social care authorities as part of a major health and social care reform. By contrast, two countries focused on system decentralisation. As a first step in decentralising its health system, Portugal passed a law to establish a framework to transfer primary care competencies to municipalities. Similarly, a government proposal in Denmark sought to decentralize regional governance of providers, creating 21 integrated care clusters merging responsibility for hospital, general practice, and municipal care.

National experts from Norway, Belgium, and Sweden reported on reforms to strengthen or reorient system governance. Norway worked to implement its 2016 approved National Health and Hospital Plan, which among others highlighted mental health and substance abuse (MHSA) as a cross-cutting priority. Belgium introduced a "One world – one health" strategy, linking human and animal health and merging institutions in the health system to improve efficiency. Sweden started a process to introduce trust-based governance. Portugal introduced a new financial governance tool, to control spending, improve monitoring and promote financial sustainability of the health system. Finally, a reform listed for Hungary started a process to strengthen the regulation of private sector activity in its health system.

Healthcare purchasing & payment

Almost all nine reported reforms under 'healthcare purchasing & payment' focused on payment mechanisms. Three aimed to strengthen new models of care, particularly chronic care, with new payment approaches. The Netherlands introduced additional payment options for integrated care led by General Practitioners (GPs). A Czech reform proposed new payment approaches to primary care physicians for chronic care patients, such as patients with type 2 diabetes, while also expanding the

role of performance indicators for payment. France introduced bundled payments for diabetes and chronic renal failure patients, piloting new payment models for chronic care more broadly. Three countries reduced the role of DRG-based financing. France announced that the share of DRG-based payments will be progressively decreased to 50% by 2021; Germany proposed excluding nursing costs from DRG-based payments; and Estonia replaced DRG-based payment with a global budget for a hospital located on the island of *Hiiumaa*. Payment reforms identified in Bulgaria and Cyprus were linked to the major insurance coverage reforms mentioned above. In Bulgaria, one reform proposal included the option for providers to define their own prices for services included in the NHI package. In Cyprus, an important prerequisite for the introduction of the NHS was the negotiation of a new payment system for ambulatory physicians. It was reported that in Romania, health professionals' salaries were increased by approximately 150% to address human resource shortages and that in Spain regional governments would increase their healthcare budgets to reverse cuts implemented during the economic crisis.

Organisation of hospital care

Experts from eight countries reported on reforms in the 'hospital care' sector in 2018. Five of these countries approached a major restructuring of hospital services through concentrating care – in particular, highly specialised care – at fewer hospitals. Belgium, Norway, and Slovakia engaged in a long-term process of reorganising their entire hospital networks, with the aim to reduce fragmentation of service provision and overcapacity to improve both efficiency and quality of care. A specific goal of Norway's hospital network reform was also to centralise highly specialised care and reduce the number of hospitals with full acute care functions (see 2019 reforms). In Finland, the provision of the full scope of specialised and complex out-of-hours/emergency services was centralised at fewer hospitals. Sweden also focussed on the concentration of highly specialised care (defined as care that should be provided by only one or a small number of hospitals in the country).

While the aims of most hospital network reforms implicitly included the objective to improve efficiency, fragmentation, and quality of care, this was the explicit aim of a reform in Germany, where minimum staffing levels for nurses were introduced for hospital wards, where patient safety is an especially critical issue.

Finally, hospital governance reforms were undertaken in two countries. Linked to the introduction of the NHS, public hospitals in Cyprus were given greater administrative and financial autonomy. In Hungary, new discussions emerged around strengthening financial oversight to address accumulating debts of public hospitals.

Other reform priorities

Three other reform clusters in 2018 were quite active: 'public health' (six countries; seven reforms), 'organisation of primary & ambulatory care' (seven countries; seven reforms), and 'digital health &

transparency' (seven countries; seven reforms). Experts from six countries reported reforms to enhance 'public health'. These regulated 'unhealthy goods', such as alcohol (Finland, Ireland, and Lithuania) and tobacco (Austria) or focussed on strengthening the approach to combatting specific population health threats. For example, Italy expanded the list of mandatory child vaccinations to include measles and set up a national vaccination registry. In Canada, policy responses to the opioid crisis were an important topic. Finally, Ireland introduced new legislation to repeal the eighth amendment of its constitution to expand access to abortion services, as a result of civil society campaigning and a subsequent referendum.

Seven countries reported reforms in 'organisation of primary & ambulatory care'. Austria, Norway, and Poland all supported the establishment of larger GP-clinics or primary healthcare centres widening the range of services delivered with multi-professional teams. The Netherlands' reform explicitly broadened the scope of primary care services and shifted care to lower levels of the system, closer to patients' homes, which has enabled some task-shifting. Two countries were reported to have reforms related to care access and coordination: Sweden aimed to improve continuity of care by designating a permanent medical contact in primary care and Romania sought to improve access to care by strengthening primary and community services, particularly in rural areas. Conversely, Switzerland introduced a law allowing cantons to restrict the number of primary/ambulatory care physicians as a cost containment measure.

Lastly, seven countries undertook reforms in 'digital health & transparency'. Six planned new digital or e–tools to strengthen care access and coordination, to improve transparency and/or performance monitoring. Lithuania set the groundwork for the future development of such tools; Czechia and Latvia introduced e-prescriptions; Israel launched a Drug Registry website; and Poland and Switzerland made plans to launch e-health records. Linked to new payment models, France was reported to be increasing its investment in digital health overall, encouraging the use of telemedicine for certain types of patients (long-term, chronically ill, harder-to-reach locations).

Implementation status of 2018 reforms

Figure 4 provides an overview of the implementation status of 2018 reforms, as reported by the national experts the following year. It distinguishes between "implemented", "abandoned", and "ongoing" reforms as of October 2019. Not surprisingly, a majority of 2018 reform efforts (47/81; 58%) were still ongoing the following year. Twenty-seven of the 81 reforms were reported as having been implemented. Seventeen of these were grounded in legislation or an act of the central government. Six were policies other than legislation that may (e.g., a decree) or may not be binding; and four were led by a health agency/insurance fund. Looking at it another way, in 2018, reforms which were led by health agencies other than the Ministry of Health or insurance funds had the highest rate of implementation at 80% (4/5). Those underpinned by central government legislation

had a 40% (17/43) implementation rate and other government policies were at 30% (6/20) implementation. Meanwhile, government strategies, reforms included in coalition agreements, and under the jurisdiction of regional governments did not have any reforms implemented in 2018.

In almost all countries, except Estonia, Portugal, and Lithuania, at least one reform was still ongoing. In Czechia, Estonia, and Portugal, all three 2018 reforms were reported as implemented. Lithuania and Slovakia reported two reforms as implemented and one as abandoned. A total of seven countries reported all three 2018 reforms as ongoing in 2019. Reforms related to system governance had the highest frequency of abandonment (3/12; 25%). Public health interventions saw the highest rate of implementation (5/7; 71%). Reforms related to health insurance coverage and resource generation also had a relatively high rate of implementation (7/15; 47%), as did those in digital health (4/7; 57%) and health insurance purchasing & payment (4/9; 44%). All primary and ambulatory care-related reforms were reported as ongoing in 2019.

(Figure 4 about here)

Overview of the most important reform areas in 2019

In 2019, national experts from 30 countries reported on 86 reforms. Of these, 44 (47%) were classified as being a central government legislated reform (or change to a constitution). Twenty-four (26%) were non-legislative central government policies, and nine (10%) were explicit central government strategies (Figure 5). More than half (48/86; 56%) fell into four reform areas: 'organisation of primary & ambulatory care' (14 countries; 14 reforms), 'governance' (11 countries; 13 reforms), 'care coordination & specialized care' (12 countries; 12 reforms), and 'organisation of hospital care' (ten countries; ten countries). 'Digital health & transparency' remained relatively high on reform agendas across countries, with 'human resources' following closely (Figure 6).

(Figure 5 about here)

(Figure 6 about here)

Organisation of primary & ambulatory care

Experts for 14 countries reported on reforms to reorganise primary care provider networks (see also Table 2). In Spain, a new strategic framework to enhance primary care was published by the government in 2019. Six countries targeted reforms to provision structures, aiming to increase the size and role of primary care providers to provide more interdisciplinary and integrated care to wider populations. In Norway, a large reform process aims to replace the traditional family-doctor type practice with more team-based care provision models. In Austria, as part of the ongoing reform process to establish primary care centres throughout the country (reported under 2018 reforms), the government allowed physicians to employ other physicians. Finland's reform agenda aims to integrate health and social care services in 'health and social care centres' to improve prevention,

integration of services, and access to care. In Malta, primary care provision network is strengthened through the development of new or refurbished clinics. In Czechia, primary care is expanded to focus more on chronic care, particularly for patients with stabilised Type 2 diabetes and patients who have recovered from cancer. Finally, in the United Kingdom (UK), programmes were established to strengthen GP practices through formal collaboration as part of primary care networks to serve larger populations. Other important reforms reported were the introduction of gatekeeping in Cyprus (linked to the introduction of NHS) and the easing of regulations around private providers in primary care in Croatia.

While the aims of several of these large-scale reforms include the objective to improve access to care, reforms in five other countries had this as the primary purpose. In Germany, a new law introduced three different measures to improve access, including longer opening hours for GP practices, a primary care hotline, and additional financial incentives to motivate GPs to work in rural areas. Reforms in Sweden and Romania introduced several measures to improve care access, including extra resources for GPs, expanding digital care (Sweden), and reducing bureaucracy (Romania). Experts described how Israel and Italy introduced reforms to tackle waiting times for services.

(Table 2 about here)

Governance

The second-largest reform category was governance, with national experts for 11 countries reporting on reforms in 2019. Five countries had reforms around organisation and architecture of the health system, potentially with a major impact also on care organisation and provision. In the UK, legislative proposals suggested abolishing the purchaser-provider split both locally and nationally, thereby removing the internal market in England to encourage integrated care and better align incentives to control activity growth. In the Netherlands, sectoral agreements between health insurers, providers, and the government around budgeting and care quality were expanded in 2019 to focus on quality of care stewardship and include more care areas, e.g., home nursing, prevention, and paramedical care, besides the already covered areas of hospital care and primary care. Bulgaria introduced two governance changes, one around the responsibility for health technology assessment (HTA) and the other to merge two executive agencies – on medical audits and transplantation – into one new agency on medical supervision with broader responsibilities. In Poland, the governing parties campaigned during the 2019 elections on the promise of introducing a new Polish model of the welfare state, including more funding for health and a stronger role for primary care.

Four countries introduced reforms that reassign responsibilities for healthcare provision to different decentralised levels. In France, the law on the organisation and transformation of the health system introduced a major reorganisation, assigning responsibility for primary care teams to the local level,

supporting the development of local hospitals (focusing on day care provision), and reinforcing territorial hospital groups for specialised care. In Finland, a new government, made a renewed start for a health and social care reform (abandoning the previous' governments proposal, see 2018 reforms), which would reassign responsibility for primary care, secondary, and tertiary care to new administrative levels. Similarly, in Ireland, plans were announced as part of the large-scale *Sláintecare* reform (see 'insurance coverage & financing reforms' 2018) to establish six Health Regions in the country, responsible for the provision and financing of primary care and hospital care from a common budget. In Portugal, municipalities received new responsibilities for the provision of primary healthcare, while the 2019 Health Basic Law underlined the central role of the NHS.

Switzerland and Romania undertook reforms that targeted the management and governance of organ donation, while Lithuania aimed to strengthen patient rights through a "no fault" compensation scheme.

Care coordination & specialised care (12 reforms)

Twelve countries were reported to be undertaking reforms in 'chronic & other specialised care' in 2019, aiming to improve integration or coordination of care and/or targeting specific areas, such as mental health, palliative care, or long-term care (see Table 2). In Hungary, a reform introduced a vertical approach to tackling five different care areas – cardiovascular disease, oncology, child health, mental health, and locomotor diseases, with programmes cutting across different levels of provision for better integrated care. Improving integration and coordination of care was the primary objective of reforms in Canada, Denmark, and Norway. In Canada, reforms in several jurisdictions focused on better integration of care. In Denmark, a new government was reported to be delivering proposals for further expansion of regional/municipal health houses, while in Norway, a long-term, multifaceted coordination reform was under way to better align primary and specialist care, potentially giving municipalities a greater role, and introducing common electronic health records for primary care and hospitals. In Latvia, cancer care pathways, which had been introduced for primary care in 2018, were extended to secondary and tertiary care.

Reforms in three countries were described as improving care for mental health conditions. Finland and Malta introduced official mental health strategies; Switzerland introduced the right of psychotherapists to practice independently in order to improve care access. Meanwhile, Croatia and Czechia introduced reforms to improve access to and quality of palliative care. LTC was addressed by reforms in the Netherlands and Portugal. While the Netherlands continued efforts to improve the quality of formal LTC services, Portugal legislated around the status of informal carers of disabled persons and chronically ill.

Organisation of hospital care (ten reforms)

Experts in ten countries reported on reforms within the hospital care sector in 2019. In addition to France, whose hospital reform was reported as a component of a governance reform (see above), five countries were undertaking reforms of hospital networks, including creating regional networks and re-organising emergency care. Belgium and Latvia were in the process of creating regional hospital networks defining different levels of hospitals within each region in order to avoid duplication of capacities and support collaboration and coordination of care. Czechia and Lithuania targeted establishing networks of hospitals with clear responsibilities for emergency care. In Norway, the organisation of emergency and maternal care was up for discussion as the country was in the process of revising its National Hospital Plan. Meanwhile, two countries focused on improvements to hospital care quality and access. A priority of the Slovenian government was to reduce waiting times, mostly by providing additional incentives to health professionals. In Sweden, a 2018 law, rolled out in 2019, targeted improved hospital discharge processes.

Three countries made changes to hospital governance: Cyprus introduced the State Health Service Organisation, an autonomous body of public hospitals and healthcare institutions to compete in its new NHS. Slovakia introduced several measures to optimise hospital expenditures, including a stratified hospital network and streamlining of treatment processes as well as changes related to curbing expenses, optimising revenue services, and improving reimbursement mechanisms. Meanwhile, in Ireland, the *De Buitleir Report* offered a pathway for removing private care from public hospitals over a ten-year period to address inequities.

Other reform priorities

Two other reform areas saw substantial activity in 2019 as reported by national experts: 'digital health & transparency' (eight countries, eight reforms) and 'human resources' (seven countries, seven reforms). Within 'digital health & transparency', seven reforms related to new tools to improve care management, including e-vaccination records (Austria), e-health records (France, Malta), and e-prescriptions (Israel and Poland). In addition, digital solutions were sometimes part of other reforms, e.g., of the coordination reform in Norway (see above). Other countries issued plans to enhance digital access to care and health information—for care coordination and research—via, for example, online portals and national data exchanges (e.g., France, Israel, Malta). Quite uniquely, Germany's new Digital Healthcare Act (DVG) opens up a structured path to have digital health applications reimbursed by SHI funds. While other countries, such as the UK introduced new plans to increase the utilisation of digital tools for care provision. Italy proposed a new national health system performance monitoring system with a view to improving transparency of care provision.

Seven countries undertook reforms under 'human resources', amongst others to reform education of professionals, increase staffing levels, and/or expand the roles and responsibilities of certain health

professionals, including through task-shifting, to adapt health professional roles and resources to evolving population health needs.

Discussion

This study provides an overview of concurrent health reforms in multiple high-income countries in Europe and North America (and Israel) in 2018 and 2019. The results illustrate considerable reform activity and overlap among countries. The three most important reform areas, i.e., those with the greatest number of reforms across both years, were 'organisation of primary & ambulatory care', 'governance', and 'organisation of hospital care'. 'Digital health & transparency' was also a frequent area of reform. Relatively limited reform activity was reported in 'pharmaceuticals' and 'allocation and pooling'. Most 2018 reforms were still ongoing in 2019; however, there were marked differences across reform areas. Most reforms in 'public health' and 'digital health & transparency', were reported as implemented in 2019, while no reforms were reported as implemented in 'human resources' and 'organisation of primary & ambulatory care'. Of the reforms that were reported as implemented, 17 (63%) were grounded in a legislative act, while six (22%) were central government policies other than legislation. There seems to be an association between the type of reform and the chances of implementation: Reforms under the jurisdiction of health agencies or insurance entities had the highest rate of implementation, followed by those underpinned by central government legislation. By contrast, government strategies, reforms included in coalition agreements, and those under the jurisdiction of regional governments were not implemented between 2018 and 2019.

Each reform cluster included a range of different sub-categories of reforms, and some major trends can be identified that will likely have a large impact on the future configuration of health systems in included countries. For example, an important trend in primary care reforms (e.g., in Austria, Finland, Norway, Portugal, UK) is a strong emphasis on the development of multi-professional group practices or health centres (i.e., increasing the size of service providers) with the aim of improving integration and coordination of health – and sometimes social – care services, improving waiting times and bringing care closer to the patient. This trend is in line with international recommendations and evidence on the benefits of integrated and multidisciplinary care, which shows that these models can enhance patient satisfaction, increase perceived quality of care, and enable access to services (Baxter, et al., 2018; Saint-Pierre et al., 2018).

Furthermore, these primary care reforms were often related to reforms in other areas, including (1) human-resource reforms, which aim at changing the skill-mix of professionals in primary care (e.g. in Israel, Malta, Norway, and Spain); (2) payment reforms introducing new payment options for primary care providers (e.g. in Canada, especially Ontario, the Netherlands or Czechia) (Marchildon and Hutchison, 2016, p732-738); or (3) reforms in the area of 'chronic & other specialised care' as better care for patients with chronic illnesses is often amongst the rationales for primary care

reforms. This illustrates the complexity of making health reforms, i.e. changes in one area often demand multi-faceted adjustments in other areas to enable achievement of reform objectives.

In the area of hospital care, several countries are in the process of restructuring their hospital networks, strengthening hospital planning (e.g., Belgium, Slovakia), centralising highly specialised and emergency care (e.g. Finland, Norway, Sweden) and re-defining the role of smaller (urban and rural) hospitals. These reforms are often linked to aims such as improving quality and access of care and cost or expenditure containment. Furthermore, the centralization of care is in line with international recommendations and evidence of a positive relationship between outcome quality and the number of procedures performed in a hospital (Luft et al 1979; Pohle et al. 2018; Jeschke et al. 2017; Nimptsch and Mansky, 2017).

Governance reforms often aim to support developments in primary and hospital care but there does not seem to be a clear trend about the appropriate administrative level that should take responsibility for primary and/or hospital care. France shifted responsibility for primary care to the municipal level while strengthening regional governance of hospitals. Ireland (re-)allocated responsibility for primary and hospital care to the same administrative level to enable integrated planning and financing, while Denmark abandoned a similar reform. The Netherlands and UK seem to be in the process of strengthening control of central level governance through new sectoral agreements (Netherlands) or by abolishing the internal market (UK).

The main implication of our study is the potential for cross-country learning that exists for health system reform. However, the focus on "top three" reforms limits to an extent the comparability of the identified reforms across countries because it is possible more than three reforms were introduced in a country during these years and some reforms which were reported among the most important in one country may not have made it into the top three in another. This is in part due to the biases described in the methods section, but also depends on the breadth and depth of the health reform portfolio of a country during the study's timeframe as well. Thus, relevant reforms may have been missed. Similarities across countries could be greater (or smaller) when considering all reforms implemented in a particular year. For example, as in Italy in 2019 (Casula and Toth, 2020), a mandatory measles vaccine was introduced (for medical staff) in Germany in 2018, but was not reported for that year, leading to a potential missed opportunity for exchange (HSPM, 2020a). And while Austria and Slovenia reported changes in tobacco product regulation in 2019, Belgium also increased the age of sale for tobacco, but did not list this (HSPM, 2020b). Moreover, the timeframe for this study was two years. Reforms like those reported for one country may have already occurred elsewhere earlier. Future research should focus on specific reform areas/clusters or combinations, such as governance-primary care, financing-hospital care, or insurance coverage-pharmaceuticals,

and over a broader time period to offer a richer, more contextualized understanding of the similarities and differences in reforms and their implementation across countries.

Given these limitations in scope, this study does not provide the contextualization to extract in-depth lessons learned; however, for health systems researchers and policymakers who are studying and planning reforms, it provides ample signposts for where to turn to understand reform experiences and processes—both in terms of content (cluster) and form (what type)—and to uncover new insights and ideas. Nevertheless, it has important implications for researchers and policymakers. First, policymakers can learn from similar reforms happening simultaneously in different countries, even when these lessons must be understood with the larger context of each country in mind. For example, Belgium, Norway, Latvia, Slovakia, and Sweden were in the process of restructuring their hospital networks as of 2018 or 2019. Likewise, Czechia and Lithuania were working on establishing emergency hospital networks in 2019, while Finland had re-organised its emergency and urgent care system in 2018 and Belgium did so in 2017 (Van den Heede et al., 2017, p339-345). Policymakers in every country would benefit from exchanging with their colleagues about similar reforms, and considering motivations, concepts, drivers, and approaches behind these reforms in other countries. This is especially valuable knowing that reforms are often works in progress in need of ad-hoc fixes, mid-course corrections and continuous monitoring and evaluations. While some information on hospital network reforms is available in the international literature (Rechel et al., 2016, p758-769; Dubas-Jakobczyk et al., 2020, p368-379; De Regge et al., 2019, p601-605; Field, Keller and Louazel, 2020, p1100-1107; Bryndová et al., 2021), it is very likely that many interesting approaches to defining networks, delineating responsibilities, incentivising collaboration, and implementing changes are lost if policy-makers are unaware of these concurrent reforms happening across countries.

Second, researchers from included countries should be encouraged to describe and assess ongoing health reforms in their countries, and to engage in cross-country comparative studies. Currently, most available up-to-date research on health system reforms originates from relatively few countries. Numerous papers, for example, have been published describing or evaluating aspects of primary care reforms in different provinces of Canada (Busse and van Ginneken, 2018, p453-456; Haj-Ali et al., 2020; Aggarwal and Williams, 2019; Glazier et al., 2019, p624-632; Kreindler et al., 2019, p532-537). Much less has been published on primary care reforms in Austria, Czechia, Finland, Malta, Netherlands, Norway, Poland, and the UK, where major primary care reforms to increase the size and scope of practices were ongoing in 2018 and 2019. Countries who are at the beginning of designing primary care reform or are considering reform could benefit immensely from this research. Available research on primary care reforms in individual countries, e.g., in Portugal (Dimitrovova, Perelman and Serrano-Alarcon, 2020) and the UK (Batchelor and Kingsland, 2020, p4100), or cross-country research on primary care workforce developments (Kuhlmann et al., 2018, p1055-1062) or

community-orientation of general practitioners (Vermeulen et al., 2018, p1070-1077) demonstrates the potential benefits of reporting and comparing similar developments in different countries. Third, our results seem to suggest that reforms targeting a more delineated health issue or narrowly scoped policy objective are more likely to be implemented quickly—or at all. For example, 'public health' reforms were reported as having the highest rate of implementation between 2018 and 2019, while 'governance' reforms saw the lowest. 'Public health' reforms tended to focus on specific public health issues (e.g. measles outbreaks, alcohol and tobacco consumption) or leveraged one single policy (e.g. mandatory vaccinations or taxation). Governance reforms in contrast were often multifaceted and looking for systemic change, potentially redistributing responsibility and/or power over several levels of government. In addition, reforms that were advanced by health agencies or insurance entities or underpinned by central government legislation were more likely to be implemented than reforms under the jurisdiction of regional governments.

Previous research has speculated about different conditions for successful reforms in the areas of health service provision and health promotion (McKee & Mackenbach 2013a). Some countries have been found to be more successful at implementing effective health policies than others, partially reflecting differences in the availability of resources, different political characteristics, and differences in political will (Mackenbach and McKee, 2015, p1298-1308; McKee and Mackenbach, 2013). However, little research is available investigating health reform processes within and across countries, disentangling the relevance of different factors for successful (or unsuccessful) governance reforms, hospital reforms, primary care reforms, or others. More research into the drivers informing reforms, the process of development, including stakeholder consensus, and political level at which it is issued as well as the content of the reform is essential to better understand how to create and implement successful reforms, and which strategies and mechanisms to use in different contexts.

Finally, although 'primary & ambulatory care', 'hospital care', and 'digital health & transparency' are the most important clusters across 2018 and 2019, based on the number of reforms reported, the top reform clusters of each year are different. 'Governance' and 'organisation of hospital care' were among the main four clusters in both years. 'Insurance coverage & resource generation' and 'healthcare purchasing & payment' were among the top four in 2018 but were replaced by 'organisation of primary & ambulatory care' and 'care coordination & specialised care' in 2019. While this may reflect small shifts in countries' health system priorities, it also speaks to the complex, long-term nature of health reform design and implementation. As such, a longer time period is needed to detect real changes in reform clusters. In addition, a future analysis of 2020 reforms will show whether there is a more pronounced shift in reform focus as a result of Covid-19.

Conclusions

This overview of major health reforms has analysed 167 reforms reported by national HSPM members from 31 countries as the top three reforms in their countries in 2018 and 2019. Despite the diversity of reforms in 2018 and 2019, there are clear trends. Reforms could be classified into 11 clusters, with a majority falling into just three across both years: 'primary & ambulatory care', 'governance', and 'hospital care'. An important trend in primary care reforms is that several countries are attempting to strengthen primary care by creating larger group practices or health centres, while expanding the scope of services provided. Several countries are also attempting to bring primary care to lower levels of the system and closer to where patients are. This is linked as well to an increased focus on care coordination for chronic and other care, especially in 2019. Hospital reforms often aimed to improve collaboration and coordination across hospitals and centralising (highly) specialised care. Governance reforms, human resource reforms, and payment reforms often support these developments. Care access, quality and continuity are also cross-cutting issues.

This study has important implications for policymakers and researchers, especially as the Covid-19 pandemic has disrupted health care, resulted in shifts in delivery models, redirection of resource allocation, and accelerated the pace of digitalisation in many countries. Policymakers may benefit from knowledge about similar reforms that have happened or are happening in different countries because experiences from other countries can provide inspiration for reform or help to avoid making the same mistakes. In addition, researchers may draw on the overview of reforms across countries to identify and select case studies for more in-depth reviews of policies and processes in certain reform areas, such as primary care, hospital care, or governance. More research is needed to explore determinants of successful reforms across countries and how these differ across reform areas. Apart from more in-depth analyses of individual reform areas, a better understanding of reform success will require longer follow-up periods to track the development of health reforms over time. Finally, it remains to be seen how reform dynamics will be affected in the long-run by the Covid-19 pandemic and whether this will lead to changes in overall reform directions or provide new impetus to cross-country collaboration and existing still "ongoing" reforms.

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Annexes

Annex 1. Eleven reform clusters, 2018 and 2019

Cluster	Description
Governance	This category largely relates to changes to the governance of healthcare, including wide-scale reorganisation or redirection in the health system in both the private and public sectors and changes in the oversight and regulatory institutions of the system. *"Governance in the health sector refers to a wide range of steering and rule-making related functions carried out by governments/decisions makers as they seek to achieve national health policy objectives…»* (WHO definition).
Digital health & transparency	This category refers to those reforms introducing new IT/e-Health innovations and solutions, but also to regulation in this area. *"eHealth is the use of information and communication technologies (ICT) for health. Examples include treating patients, conducting research, educating the health workforce, tracking diseases and monitoring public health."* (WHO definition)
Insurance coverage & resource generation	This category relates both to reforms that attempt to modify the breadth and/or depth of health insurance coverage and to those that change how resources to finance healthcare and insurance are generated.
Resource allocation & pooling	This category covers reforms relating to how financial resources for healthcare, once generated, are allocated as well as to where they are directed, and for what and whom.
Healthcare purchasing & payment	This category refers to efforts to reform the purchasing and payment of healthcare services. That is, who purchases services, for whom, the extent of services and how and by which mechanisms they are purchased (i.e. strategic purchasing).
Human resources	This category covers reforms related to the health workforce, mostly to quality, training, work modalities and working conditions. *«A well-performing health workforce is one that works in ways that are responsive, fair and efficient, to achieve the best health outcomes possible, given available resources and circumstance»* (WHO 2007)
Public health	This category relates to activities to improve public health and create conditions under which individuals can maintain and improve their own health and well-being, e.g., through health promotion, approaches to curtail poor health seeking behaviors. ** *Health and well-being is understood in the broadest sense and activities such as health campaigns targeted at populations* (WHO definition)
Organisation of primary & ambulatory care	This reform category refers to those that aim to change primary and ambulatory, or outpatient care in a country in some way. This is medical care provided not in a hospital, or as an overnight stay in a hospital, and includes diagnosis, observation, consultation, treatment, intervention, and rehabilitation services.
Organisation of hospital care	This category relates to changes made to medical services and treatment performed in a hospital setting, or to the management and organisation of hospitals.

Care coordination & other specialised care	This category refers primarily to changes or initiatives around care for chronic and other specialised care patients, such as long-term care, as well as attempts to prove coordination between care sectors. Often, this includes new models of care delivery but also the evaluation of such care to date.
Pharmaceuticals	This category relates to the policies regulating the manufacture, certification and delivery of drugs.

Annex II. List of reform types

Reform type	**Short form**
A central government legislated reform, package of laws, or change to the constitution	Gov. law
An explicit central government strategy	Gov. strategy
A reform introduced as part of a coalition agreement	Coalition agreement
Non-legislative central government policy, including decrees, directives, pilot programs, and guidelines, among others, that may or not be legally binding	Gov. other
Reform led by non-Ministry of Health health agency or insurance entity	Health agency
Reform led by or under the jurisdiction of regional government	Regional gov.
A reform that was part of political campaigning	Political campaign

Annex III. List of top reforms for 2018-2019, including short description, type, cluster, and implementation status (when reported)

Country	Year	Reform description	Type of reform	Cluster	Implementation Status
Austria	2018	Merging of 9 regional SHI funds	Gov. law	Governance	Ongoing
Austria	2018	New tobacco control law	Coalition agreement	Public Health	Abandoned
Austria	2018	Establishment of 75 PHC units by 2021	Gov. law	Organisation of primary & ambulatory care	Ongoing
Austria	2019	Allowing physicians to employ physicians	Health agency	Organisation of primary & ambulatory care	na
Austria	2019	Tabacco control law reintroduced	Gov. law	Public health	na
Austria	2019	E-vaccination record	Gov. law	Digital health & transparency	na

Belgium	2018	Health system efficiency improvements: a) creation of a HiAP research network; b) merging of institutions	Gov. other	Governance	Ongoing
Belgium	2018	Development of "One world – one health" strategy	Gov. strategy	Governance	Ongoing
Belgium	2018	Reforming hospital landscape (since 2015)	Coalition agreement	Organisation of hospital care	Ongoing
Belgium	2019	New fee schedule for physicians	Gov. law	Healthcare purchasing & payment	na
Belgium	2019	Agreement on creation of regional hospital networks	Coalition agreement	Organisation of hospital care	na
Belgium	2019	Lump sum payment for hospital stays with low variability (case payments for 56 groups of patients)	Coalition agreement	Healthcare purchasing & payment	na
Bulgaria	2018	Overhaul of compulsory health insurance	Gov. law	Insurance coverage & resource generation	Ongoing
Bulgaria	2018	Voluntary health insurance and cost-sharing	Gov. law	Healthcare purchasing & payment	Ongoing

Bulgaria	2019	Changes to HTA oversight and governance	Gov. law	Governance	na
Bulgaria	2019	Executive Agency “Medical Audit” merged with the Executive Agency for Transplantation in 2019 in the new Executive Agency “Medical Supervision”	Gov. law	Governance	na
Bulgaria	2019	Reform to governance of funds for Treatment of Children was closed	Gov. law	Allocation & pooling	na
Canada	2018	Lump sum payment for hospital stays with low variability (case payments for 56 groups of patients)	Regional gov.	Insurance coverage & resource generation	Ongoing
Canada	2018	(Re)centralization of health system in selected provinces	Regional gov.	Governance	Ongoing
Canada	2018	Advancing Pharmacare	Gov. other	Public health	Ongoing
Canada	2019	Design of Pharmacare and cost containment measures for pharmaceutical costs	Gov. law	Pharmaceuticals	na
Canada	2019	Reforms around tobacco (renewed strategy) and cannabis (legalization) in 2018	Gov. law	Public health	na

Canada	2019	Focus on integrated care, including potential shared budgets across providers in new "Ontario Health Teams"	Regional gov.	Care coordination & specialized care	na
Croatia	2019	Diversion of budget surplus into healthcare	Gov. law	Allocation & pooling	na
Croatia	2019	Further primary care privatization	Gov. strategy	Organisation of primary & ambulatory care	na
Croatia	2019	Minor structural changes to palliative care	Gov. law	Care coordination & specialized care	na
Cyprus	2018	New private sector reimbursement mechanisms	Gov. law	Healthcare purchasing & payment	Ongoing
Cyprus	2018	Implementation of NHI	Gov. law	Insurance coverage & resource generation	Ongoing
Cyprus	2018	Increasing administrative and financial autonomy of public hospitals	Gov. law	Organisation of hospital care	Ongoing
Cyprus	2019	First phase of new National Health Scheme: universal coverage with outpatient care	Gov. law	Insurance coverage & resource generation	na

Cyprus	2019	Introduction of GPs as 'gatekeepers'	Gov. law	Organisation of primary & ambulatory care	na
Cyprus	2019	Creation of State Health Services Organisation, an autonomous body of public hospitals and healthcare institutions	Gov. law	Organisation of hospital care	na
Czech Republic	2018	E-prescriptions	Gov. law	Digital health & transparency	Implemented
Czech Republic	2018	Changes to risk-adjustment (aligning to pharmaceutical cost groups)	Gov. law	Allocation & pooling	Implemented
Czech Republic	2018	Development of payment mechanism towards performance criteria to expand role of GPs	Gov. other	Healthcare purchasing & payment	Implemented
Czechia	2019	Monitoring of recovered oncological patients handed over from oncologists to GPs	Gov. law	Organisation of primary & ambulatory care	na
Czechia	2019	Reforms around palliative care, including financial support and pilot project on palliative care teams in hospitals	Gov. other	Care coordination & specialized care	na
Czechia	2019	Emergency hospital wards network	Gov. other	Organisation of hospital care	na

Denmark	2018	Structural reform - 21 regional coordinated care clusters	Gov. law	Governance	Abandoned
Denmark	2018	Replacing activity based funding pool for regions (hospitals) with 5 new critieria focusing on coordination and quality	Gov. strategy	Allocation & pooling	Ongoing
Denmark	2019	Awaiting proposals from new government; expect further expansion of regional/municipal health houses	Gov. other	Care coordination & specialized care	na
Denmark	2019	Upscaling workforce ("1000 new nurses")	Regional gov.	Human resources	na
Estonia	2018	Enhanced financial protection for people facing a high level of OOP payments	Health agency	Insurance coverage & resource generation	Implemented
Estonia	2018	Broadening the health insurance revenue base	Health agency	Insurance coverage & resource generation	Implemented
Estonia	2018	Estonian Health Insurance Fund (EHIF) introduced a global budget based hospital financing for the Hiiumaa hospital on the second largest island.	Health agency	Healthcare purchasing & payment	Implemented
Finland	2018	Regional healthcare reform	Gov. law	Governance	Abandoned

Finland	2018	Centralisation of specialised and emegency care	Gov. law	Organisation of hospital care	Ongoing
Finland	2018	New alcohol law	Gov. law	Public health	Implemented
Finland	2019	New attempt at (re)starting the health and social care reform	Gov. other	Governance	na
Finland	2019	'The Health and social care centre for the future' programme - strengthening and developing primary health and social services, prevention, integrated care, access to services, etc	Gov. law	Organisation of primary & ambulatory care	na
Finland	2019	Preparation of mental health policy strategy	Gov. strategy	Care coordination & specialized care	na
France	2018	Development of new payment models for chronic care in hospital settings	Gov. other	Healthcare purchasing & payment	Ongoing
France	2018	Training of nurses and medical assistants	Gov. law	Human resources	Ongoing
France	2018	Investments in telemedicine	Gov. other	Digital health & transparency	Ongoing

France	2019	Development of local "responsibility" for health	Gov. other	Governance	na
France	2019	Adapting health professionals to new needs	Gov. other	Human resources	na
France	2019	Several measures in support of digital shift in health: creation of medical files and a digital portal for all service users, no geographical restrictions to practice telemedecine, creation of a Health data hub pooling different health data for research	Gov. other	Digital health & transparency	na
Germany	2018	Law on nursing staff strengthening in hospitals and Decree on minimum staffing requirements for nurses in hospitals	Gov. law	Organisation of hospital care	Implemented
Germany	2018	Nursing costs to be excluded from DRG-based payment	Gov. law	Human resources	Ongoing
Germany	2018	Statutory Health Insurance-Contribution Relief Law	Gov. law	Insurance coverage & resource generation	Implemented
Germany	2019	Reform to improve access to primary and specialist ambulatory care	Gov. law	Organisation of primary & ambulatory care	na

Germany	2019	Digital Health Act	Gov. law	Digital health & transparency	na
Germany	2019	Fair competetion between sickness funds through changes to risk-structure-adjustment between sickness funds	Gov. law	Allocation & pooling	na
Hungary	2018	Private sector regulation	Gov. law	Governance	Ongoing
Hungary	2018	Health workforce retention measures	Gov. law	Human resources	Ongoing
Hungary	2018	Better oversight of underfinanced public hospitals and hospital debt	Gov. other	Organisation of hospital care	Ongoing
Hungary	2019	Announcement of five national public health programmes (CVD, oncology, child health, mental health, locomotor diseases)	Gov. strategy	Care coordination & specialized care	na
Ireland	2018	Sláintecare Implementation Strategy	Gov. law	Insurance coverage & resource generation	Ongoing
Ireland	2018	Legalisation of abortion	Gov. law	Public health	Implemented

Ireland	2018	Public Health Alcohol Act	Gov. law	Public health	Implemented
Ireland	2019	The Health Service Executive (Governance) Act 2019 (into effect on 28 June 2019)	Gov. law	Governance	na
Ireland	2019	Publication of the De Buitleir Report detailing how to remove private care from public hospitals over a ten year period	Gov. other	Organisation of hospital care	na
Ireland	2019	Two major controversies: Cervical Check & Children's Hospital	Gov. other	Public health	na
Israel	2018	Drug registry website	Gov. other	Digital health & transparency	Ongoing
Israel	2018	Expansion of dental care eligibility	Gov. law	Insurance coverage & resource generation	Implemented
Israel	2018	Increased responsibilities for specialist nurses in community	Gov. other	Human resources	Abandoned
Israel	2019	E-health initiatives: (1) All pharmacies must accept digital prescriptions from all health plans; (2) Improving accessibility to digital medical records, low copays	Gov. law	Digital health & transparency	na

Israel	2019	Data on access to care: (1) Mapping availability of community care measured as physicians' hours by specialty, region, and health plan: (2) mapping waiting times for common specialties in the community: (3) HPs to recommend maximum waiting times for community care	Gov. other	Organisation of primary & ambulatory care	na
Israel	2019	Bonus to attract physicians to "remote areas" discontinued	Gov. other	Healthcare purchasing & payment	na
Italy	2018	Measures to confront human resource shortage in the NHS	Gov. law	Human resources	Ongoing
Italy	2018	Mandatory child vaccination for congential rubella and measles	Gov. law	Public health	Implemented
Italy	2018	Piloting chronic care models	Regional gov.	Care coordination & specialized care	Ongoing
Italy	2019	Essential Levels of Assistance (LEAs) evaluation	Gov. other	Digital health & transparency	na
Italy	2019	New national waiting list plan	Gov. other	Organisation of primary & ambulatory care	na

Italy	2019	Five-year plan to counter medical school bottleneck	Gov. strategy	Human resources	na
Latvia	2018	e-Prescriptions	Gov. law	Digital health & transparency	Implemented
Latvia	2018	Healthcare financing reform (linking eligibility to payment of premiums)	Gov. law	Insurance coverage & resource generation	Abandoned
Latvia	2018	Introduction of "Green Corridor": streamlined pathway for suspected cancer patients	Gov. strategy	Care coordination & specialized care	Ongoing
Latvia	2019	Different level hospitals encouraged to unite in networks	Gov. law	Organisation of hospital care	na
Latvia	2019	Extention of cancer care pathways with patient navigation in secondary and tertiary care	Gov. law	Care coordination & specialized care	na
Latvia	2019	Unification of nursing educational programmes	Gov. law	Human resources	na
Lithuania	2018	Reorganisation of the network of healthcare institutions	Gov. law	Governance	Abandoned

Lithuania	2018	Performance evaluation of public health care	Gov. law	Digital health & transparency	Implemented
Lithuania	2018	New alcohol control policies	Gov. law	Public health	Implemented
Lithuania	2019	"First prescription" system: The most cost-effective reimbursable medicine is issued to patients when it is prescribed for the first time or after a period of more than 12 months. The system is designed to promote the use of generic medicines, increase competition between pharmaceutical companies in order to achieve lower prices of pharmaceuticals.	Gov. law	Pharmaceuticals	na
Lithuania	2019	"No fault" compensation scheme for patients	Gov. law	Governance	na
Lithuania	2019	Dividing emergency care into several levels	Gov. law	Organisation of hospital care	na
Malta	2018	Expansion of service coverage: adoption of a strategy on transgender healthcare and revision of the IVF legislation	Gov. law	Insurance coverage & resource generation	Implemented

Malta	2018	Introducing nursing specialisation	Gov. other	Human resources	Ongoing
Malta	2018	Fast-tracking orphan drugs	Gov. other	Pharmaceuticals	Ongoing
Malta	2019	Adoption of new mental health strategy with reform to shift services towards the community	Gov. strategy	Care coordination & specialized care	na
Malta	2019	Development of an e-primary health record and national health data exchange to integrate all health records	Gov. law	Digital health & transparency	na
Malta	2019	Development of network of new / refurbished clinics in each community	Gov. law	Organisation of primary & ambulatory care	na
Norway	2018	New National health and hospital plan 2016-2019	Gov. strategy	Governance	Ongoing
Norway	2018	GP education reform and reinforced primary care	Gov. other	Organisation of primary & ambulatory care	Ongoing
Norway	2018	Centralisation of acute care services, other decentralised	Gov. law	Organisation of hospital care	Ongoing

Norway	2019	New Health and Hospital Plan to be launched 28/10-19	Gov. strategy	Organisation of hospital care	na
Norway	2019	Realignment of primary care and specialist care, with municipalities to become partners	Regional gov.	Organisation of primary & ambulatory care	na
Norway	2019	Action plan for the primary care physician for tomorrow, replacing "fastlege" with GP and teambased care	Gov. strategy	Care coordination & specialized care	na
Poland	2018	Introduction of primary care teams	Gov. law	Organisation of primary & ambulatory care	Ongoing
Poland	2018	Electronic platform for medical records	Gov. other	Digital health	Ongoing
Poland	2018	Increased public expenditure on healthcare	Gov. other	Insurance coverage & resource generation	Implemented
Poland	2019	E-prescription system	Gov. law	Digital health & transparency	na
Poland	2019	Human resources: (1) increasing the number of medical secretaries in outpatient care (2018) and (2) Physiotherapists were permitted to make independent medical appointments (2019)	Gov. Other	Human resources	na

Poland	2019	Polish model of welfare state	Political campaign	Governance	na
Portugal	2018	Transfer of competencies to municipalities	Gov. law	Governance	Implemented
Portugal	2018	Creation of the Mission Structure for the Sustainability of the Health Budget Programme	Gov. other	Governance	Implemented
Portugal	2018	Roll-out of Pre-Exposure Prohylaxis (PrEP) for HIV in the NHS	Gov. other	Care cooridination & specialized care	Implemented
Portugal	2019	2019 Health Basic Law	Gov. law	Governance	na
Portugal	2019	New competencies to municipalities, including planning, managing and investing in new primary healthcare units; managing and maintaining primary healthcare infrastructures; managing allied professionals from Groups of Primary Healthcare Centres; participating in health programmes that promote community health, healthy lifestyles and healthy ageing	Gov. law	Governance	na

Portugal	2019	Legislation on informal carer status establishing the rights and duties of informal carers and providing social protection	Gov. law	Care coordination & specialized care	na
Romania	2018	Expansion of palliative care coverage	Gov. law	Insurance coverage & resource generation	Ongoing
Romania	2018	Major increase of health professionals' salaries	Gov. other	Healthcare purchasing & payment	Implemented
Romania	2018	Ensuring delivery of primary health care on ongoing basis	Gov. other	Organisation of primary & ambulatory care	Ongoing
Romania	2019	Measures to increase access to healthcare services in primary care and reduce inequity through, e.g., reducing bureaucracy	Gov. other	Organisation of primary & ambulatory care	na
Romania	2019	Changes in the legislation regarding the national health prevention programmes	Gov. law	Public health	na
Romania	2019	Reorganization of organ transplantation services	Gov. law	Governance	na
Slovakia	2018	Reorganisation of hospital network	Health agency	Organisation of hospital care	Abandoned

Slovakia	2018	"Innovative medicines" reform	Gov. law	Pharmaceuticals	Implemented
Slovakia	2018	Reform on pooling of HICs funds	Gov. other	Allocation & pooling	Implemented
Slovakia	2019	Fully implemented DRG as payment mechanism	Gov. law	Healthcare purchasing & payment	na
Slovakia	2019	Adjustments to hospital management protocols and treatment oversight structures, a stratified hospital network and streamlining of treatment processes as well as changes related to curbing expenses, optimising revenue services, and improving reimbursement mechanisms.	Gov. law	Organisation of hospital care	na
Slovakia	2019	Market entry of biosimilar drugs improved	Gov. law	Pharmaceuticals	na
Slovenia	2019	Re-definition of competencies of nurses with vocational training vs. those with tertiary education	Gov. other	Human resources	na
Slovenia	2019	Plain packaging of tobacco products to be enacted	Gov. law	Public health	na

Slovenia	2019	Reduction of number of patients waiting beyond the maximum established waiting times and further shortening of waiting lists	Gov. other	Organisation of hospital care	na
Spain	2018	Re-establishing universal NHS coverage	Gov. law	Insurance coverage & resource generation	Implemented
Spain	2018	Regional governments increasing the health care budget	Regional gov.	Healthcare purchasing & payment	Ongoing
Spain	2018	Integrated care for elderly and chronic care patients	Regional gov.	Care cooridination & specialized care	Ongoing
Spain	2019	Nurse authorisation to prescribe	Gov. law	Human resources	na
Spain	2019	Fight against pseudotherapies, including homeopathic product	Gov. other	Pharmaceuticals	na
Spain	2019	"The Strategic Framework for Primary and Community Care"	Gov. strategy	Organisation of primary & ambulatory care	na
Sweden	2018	Implementing trust-based governance	Gov. other	Governance	Ongoing

Sweden	2018	Primary care reform proposition	Coalition agreement	Organisation of primary & ambulatory care	Ongoing
Sweden	2018	Centralisation of highly specialised care	Gov. law	Organisation of hospital care	Ongoing
Sweden	2019	Reform on strengthening primary care and digital care regulation	Gov. law	Organisation of primary & ambulatory care	na
Sweden	2019	A reformed cost equalisation system between regions	Gov. other	Allocation & pooling	na
Sweden	2019	Improved patient discharge from hospital treatment	Gov. other	Organisation of hospital care	na
Switzerland	2018	Financing of health services from a single source or uniform financing of outpatient and inpatient services	Gov. law	Allocation & pooling	Ongoing
Switzerland	2018	Restriction of physician authorisation	Gov. law	Organisation of primary & ambulatory care	Ongoing
Switzerland	2018	E-patient record (EPD)	Gov. law	Digital health & transparency	Implemented

Switzerland	2019	Swiss Federal Council adopts cost containment measures	Gov. law	Healthcare purchasing & payment	na
Switzerland	2019	Changes to organ donation system	Gov. other	Governance	na
Switzerland	2019	Improve access to psychotherapy: psychological psychotherapists should no longer have to work under the supervision of a doctor	Gov. other	Care coordination & specialized care	na
The Netherlands	2018	Shifting care to lower levels	Gov. other	Organisation of primary & ambulatory care	Ongoing
The Netherlands	2018	Long-term care reform evaluation	Gov. law	Care cooridination & specialized care	Ongoing
The Netherlands	2018	Changed GP reimbursement, giving more options for integrated care	Health agency	Healthcare purchasing & payment	Implemented
The Netherlands	2019	Sectoral agreements for acute care sector and expanded to other care sectors, including home nursing, prevention, paramedical care	Gov. other	Governance	na
The Netherlands	2019	Quality of care initiatives in long-term care and youth care. For instance: improvement of quality in nursing homes, reducing waiting lists in youth care, improving collaboration in care (both medical	Gov. other	Care coordination & specialized care	na

		and social) to keep elderly living at home as long as possible			
The Netherlands	2019	Cost containment in pharmaceutical care	Gov. law	Pharmaceuticals	na
United Kingdom	2019	Legislative proposals to merge governance of purchasers and providers locally and nationally, and remove internal market in England	Gov. law	Governance	na
United Kingdom	2019	Shift to scaled up primary care in networks, with formal programmes now in place in all UK countries and incorporating substantial proportion of GPs	Regional gov.	Organisation of primary & ambulatory care	na
United Kingdom	2019	Implementation of English Long Term Plan, including drive for increased digital access to primary and outpatient care	Gov. strategy	Digital health & transparency	na
United States	2018	Repeal of the Affordable Care Act	Gov. law	Insurance coverage & resource generation	Ongoing
United States	2018	Medicaid coverage expansion	Regional gov.	Insurance coverage & resource generation	Ongoing

United States	2019	Continued attacks on ACA and repeal of the individual mandate	Gov. law	Insurance coverage & resource generation	na
United States	2019	"Medicare for all"	Political campaign	Insurance coverage & resource generation	na

Figures and tables

Figure 1. Countries reporting in 2018 and 2019

2018	Reported	Included in analysis	2019	Reported	Included in analysis
Austria	√	√	Austria	√	√
Belgium	√	√	Belgium	√	√
Bulgaria	√	√	Bulgaria	√	√
Canada	√	√	Canada	√	√
Croatia	√	X*	Croatia	√	√
Cyprus	√	√	Cyprus	√	√
Czech Republic	√	√	Czech Republic	√	√
Denmark	√	√	Denmark	√	√
Estonia	√	√	Estonia	√	X***
Finland	√	√	Finland	√	√
France	√	√	France	√	√
Germany	√	√	Germany	√	√
Hungary	√	√	Hungary	√	√
Ireland	√	√	Ireland	√	√
Israel	√	√	Israel	√	√
Italy	√	√	Italy	√	√
Latvia	√	√	Latvia	√	√
Lithuania	√	√	Lithuania	√	√
Malta	√	√	Malta	√	√
Norway	√	√	Norway	√	√
Poland	√	√	Poland	√	√
Portugal	√	√	Portugal	√	√
Romania	√	√	Romania	√	√
Slovakia	√	√	Slovakia	√	√
Slovenia	√	X**	Slovenia	√	√
Spain	√	√	Spain	√	√
Sweden	√	√	Sweden	√	√
Switzerland	√	√	Switzerland	√	√
The Netherlands	√	√	The Netherlands	√	√
UK	X	X	UK	√	√
USA	√	√	USA	√	√
31	**30**	**28**	**31**	**31**	**30**

**reforms have been blocked for last 5 years*

***no reforms due to elections*

****no new reforms*

Figure 2. Share of top health system and policy reforms by type, 2018

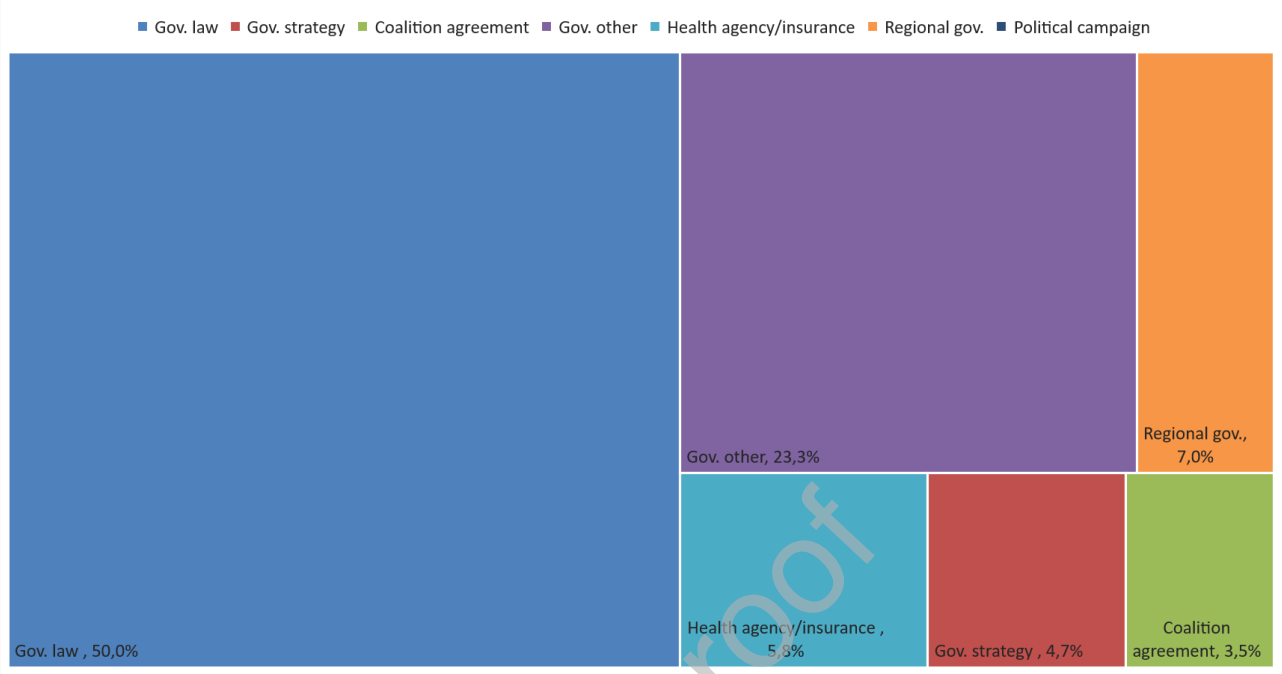
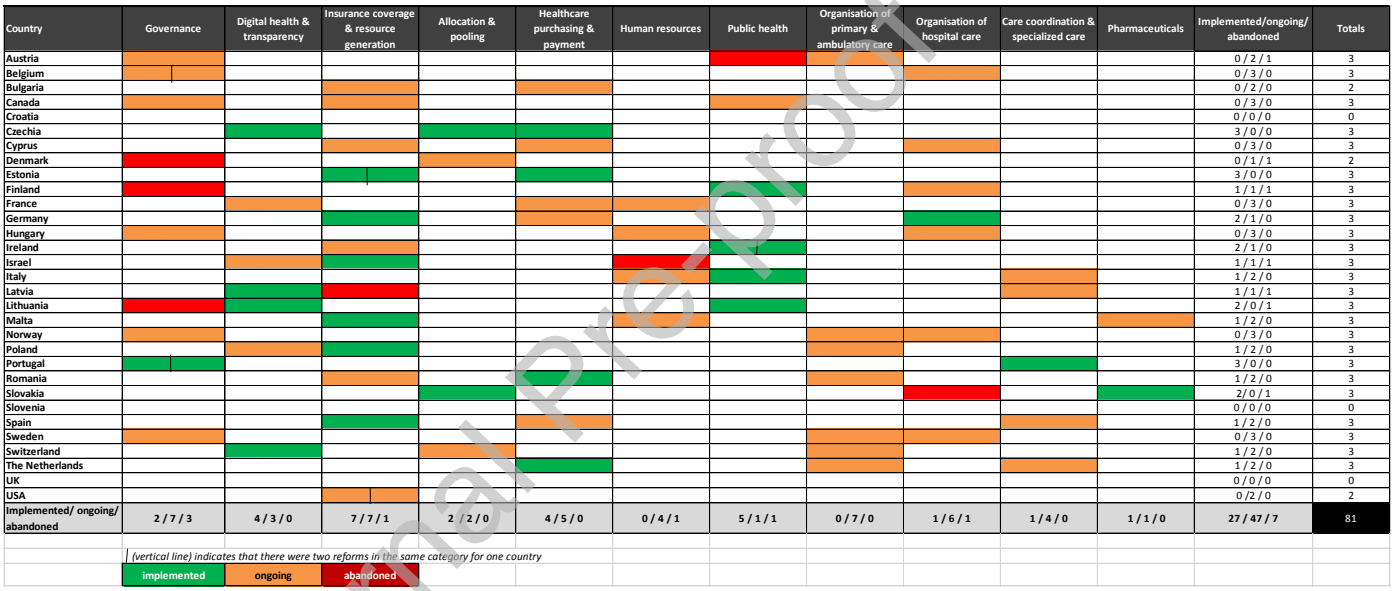


Figure 3. Top health system and policy reforms across high-income health systems, 2018

Country	Governance	Digital health & transparency	Insurance coverage & resource generation	Allocation & pooling	Healthcare purchasing & payment	Human resources	Public health	Organisation of primary & ambulatory care	Organisation of hospital care	Care coordination & specialized care	Pharmaceuticals	Totals
Austria	■						■					3
Belgium	■|							■			3
Bulgaria			■		■							2
Canada	■		■				■					3
Croatia												0
Cyprus			■		■				■			3
Czechia		■		■	■							3
Denmark	■			■								2
Estonia			■|		■							3
Finland	■						■		■			3
France		■			■	■						3
Germany			■		■				■			3
Hungary	■					■			■			3
Ireland			■				■|					3
Israel		■	■			■						3
Italy						■	■			■		3
Latvia		■	■							■		3
Lithuania	■	■					■					3
Malta			■			■					■	3
Norway	■							■	■			3
Poland		■	■					■				3
Portugal	■|								■		3
Romania			■		■			■				3
Slovakia				■					■		■	3
Slovenia												0
Spain			■		■					■		3
Sweden	■							■	■			3
Switzerland		■		■				■				3
The Netherlands					■			■		■		3
UK												0
USA			■|									2
Total # countries	10	7	13	4	9	5	6	7	8	5	2	
Total # reforms reported	12	7	15	4	9	5	7	7	8	5	2	81

| (vertical line) indicates that there were two reforms in the same category for one country

Figure 4. Implementation status of top 2018 health system and policy reforms across high-income health systems, 2019



Country	Governance	Digital health & transparency	Insurance coverage & resource generation	Allocation & pooling	Healthcare purchasing & payment	Human resources	Public health	Organisation of primary & ambulatory care	Organisation of hospital care	Care coordination & specialized care	Pharmaceuticals	Implemented/ongoing/ abandoned	Totals
Austria												0 / 2 / 1	3
Belgium												0 / 3 / 0	3
Bulgaria												0 / 2 / 0	2
Canada												0 / 3 / 0	3
Croatia												0 / 0 / 0	0
Czechia												3 / 0 / 0	3
Cyprus												0 / 3 / 0	3
Denmark												0 / 1 / 1	2
Estonia												3 / 0 / 0	3
Finland												1 / 1 / 1	3
France												0 / 3 / 0	3
Germany												2 / 1 / 0	3
Hungary												0 / 3 / 0	3
Ireland												2 / 1 / 0	3
Israel												1 / 1 / 1	3
Italy												1 / 2 / 0	3
Latvia												1 / 1 / 1	3
Lithuania												2 / 0 / 1	3
Malta												1 / 2 / 0	3
Norway												0 / 3 / 0	3
Poland												1 / 2 / 0	3
Portugal												3 / 0 / 0	3
Romania												1 / 2 / 0	3
Slovakia												2 / 0 / 1	3
Slovenia												0 / 0 / 0	0
Spain												1 / 2 / 0	3
Sweden												0 / 3 / 0	3
Switzerland												1 / 2 / 0	3
The Netherlands												1 / 2 / 0	3
UK												0 / 0 / 0	0
USA												0 / 2 / 0	2
Implemented/ ongoing/ abandoned	2 / 7 / 3	4 / 3 / 0	7 / 7 / 1	2 / 2 / 0	4 / 5 / 0	0 / 4 / 1	5 / 1 / 1	0 / 7 / 0	1 / 6 / 1	1 / 4 / 0	1 / 1 / 0	27 / 47 / 7	81

| (vertical line) indicates that there were two reforms in the same category for one country

implemented | ongoing | abandoned

Figure 5. Share of top health system and policy reforms by type, 2019

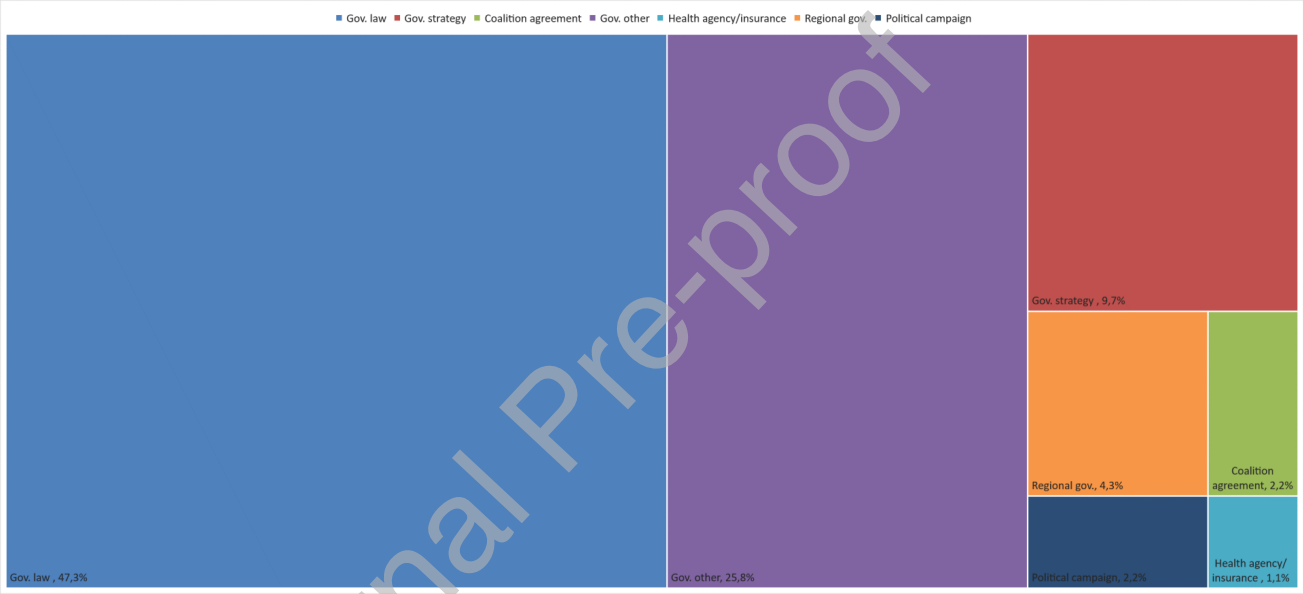


Figure 6. Top health system and policy reforms across high-income health systems, 2019

Country	Governance	Digital health & transparency	Insurance coverage & resource generation	Allocation & pooling	Healthcare purchasing & payment	Human resources	Public health	Organisation of primary & ambulatory care	Organisation of hospital care	Care coordination & specialized care	Pharmaceuticals	Totals
Austria		■					■	■				3
Belgium					■|				■			3
Bulgaria	■|	■		■								3
Canada							■			■	■	3
Croatia				■				■		■		3
Cyprus			■					■	■			3
Czechia								■	■	■		3
Denmark						■				■		2
Estonia												0
Finland	■							■		■		3
France	■	■				■						3
Germany		■		■				■				3
Hungary										■		1
Ireland	■						■		■			3
Israel		■			■			■				3
Italy		■				■		■				3
Latvia						■			■	■		3
Lithuania	■								■		■	3
Malta		■						■		■		3
Norway								■	■	■		3
Poland	■	■				■						3
Portugal	■|								■		3
Romania	■						■	■				3
Slovakia					■				■		■	3
Slovenia						■	■		■			3
Spain						■		■			■	3
Sweden				■				■	■			3
Switzerland	■				■					■		3
The Netherlands	■									■	■	3
UK	■	■						■				3
USA			■|									2
Total # countries	11	8	2	4	4	7	5	14	10	12	5	
Total # reforms	13	8	3	4	5	7	5	14	10	12	5	**86**

| (vertical line) indicates that there were two reforms in the same category for one country

Table 1. Reform clusters and sub-categories, 2018

Reform cluster	Sub-categories & reporting countries
Governance	a. Centralisation/decentralisation: Austria, Canada, Denmark, Finland, Lithuania, Portugal b. Strategy & architecture: Belgium (x2***), Norway, Sweden c. Financial goverance: Portugal d. Private sector: Hungary
Digital health & transparency	a. New digital tools to support care delivery & coordination: Czechia, Israel, Latvia, Poland, Switzerland b. Investment in digital health: France c. Digital tools to improve performance monitoring & evaluation: Lithuania
Insurance coverage & resource generation	a. Major (planned) changes to population coverage: Bulgaria, Cyprus, Ireland, Spain, Latvia*, USA (x2) b. Expanding service coverage: Canada, Israel, Latvia*, Malta**, Romania c. Improving cost coverage: Estonia d. New approaches for resource generation: Estonia, Germany, Latvia*, Poland
Allocation & pooling	a. Changes to the allocation & pooling of resources: Czechia, Denmark, Slovakia, Switzerland
Healthcare purchasing & payment	a. New payment options for integrated/chronic care: Czechia, the Netherlands, France* b. Reducing the role of DRG-based payment: France*, Germany, Estonia c. Other: Bulgaria, Cyprus, Romania, Spain
Human resources	a. Changes to the training & education of providers: France, Malta* b. Strengthening & increasing of staffing levels: Hungary, Italy c. Expanding roles & responsibilities of certain professionals: Israel, Malta*
Public health	a. Regulation of "unhealthy" goods: Austria (tobacco), Finland (alcohol), Ireland (alcohol), Lithuania (alcohol) b. Combatting health threats: Canada, Italy** c. Reproductive rights: Ireland
Organisation of primary & ambulatory care	a. Increasing size & scope of provision structures: Austria, Poland, the Netherlands*, Norway b. Improving access & care coordination: Romania, Sweden, the Netherlands* c. Limiting the number of new practices: Switzerland
Organisation of hospital care	a. Hospital governance: Cyprus, Hungary b. Restructuring hospital networks: Belgium, Finland, Norway, Slovakia, Sweden c. Improving quality & access: Germany
Care coordination & specialised care	a. Integrated care & care coordination: Italy (chronic care), Latvia (cancer care), Spain* (chronic care) b. Integrating social & healthcare for elderly: Spain*, the Netherlands c. New provision of treatment: Portugal (PrEP)
Pharmaceuticals	a. Improving access to innovative & specialised medicines: Malta, Slovakia

** Indicates a component activity of one larger reform in a country as opposed to a unique reform effort.*
*** Indicates two different component activities in a larger reform.*
**** Indicates that a single country saw multiple unique reforms in a cluster subcategory.*

Table 2. Reform clusters and sub-categories, 2019

Reform cluster	Sub-categories & reporting countries
Governance	a. Centralisation/decentralisation: Finland, France, Ireland, Portugal b. Organisation & architecture: Bulgaria (x2***), Poland, the Netherlands, UK c. Governance of organ donation: Romania, Switzerland d. Other: Lithuania (patient rights), Portugal (public-private sector relationship)
Digital health & transparency	a. New digital tools: Austria, France*, Israel*, Malta*, Poland, Italy b. New regulations of digital healthcare: France*, Germany, Israel*, UK
Insurance coverage & resource generation	a. Expanding & reducing service coverage: Cyprus, USA (x2)
Allocation & pooling	a. Changes to allocation & pooling of resources: Bulgaria, Croatia, Germany, Sweden
Healthcare purchasing & payment	a. Changes to payment options for providers: Belgium (x2), Israel, Switzerland b. Introducing DRG-based payments: Slovakia
Human resources	a. Changes to the training & education of providers: France*, Italy, Latvia* b. Strengthening & increasing staffing levels: France*, Denmark, Italy, Latvia* c. Expanding roles & responsibilities of certain professionals: France*, Poland, Slovenia, Spain
Public health	a. Regulation (taxation) of "unhealthy" goods: Austria, Canada*, Slovenia b. Direct health interventions: Canada*, Ireland c. Prevention measures: Romania
Organisation of primary & ambulatory care	a. Increasing size & scope of provision structures: Austria, Czechia, Finland, Malta, Norway, UK b. Improving access: Germany, Italy, Israel, Romania, Sweden c. Other: Croatia (privatisation), Cyprus (gatekeeping), Spain (strategic framework)
Organisation of hospital care	a. Hospital governance: Cyprus, Slovakia, Ireland b. Restructuring hospital networks: Belgium, Czechia, Latvia, Lithuania, Norway c. Improving quality & access: Slovenia, Sweden
Care coordination & specialised care	a. Integrated care & care coordination: Canada, Denmark, Latvia (cancer), Norway b. Mental health (strategies and improved access): Finland, Malta, Switzerland c. Palliative care: Croatia, Czechia d. Long-term care: the Netherlands, Portugal e. Vertical programming: Hungary
Pharmaceuticals	a. Improving cost effectiveness & containment: Canada*, Lithuania, the Netherlands, Slovakia* b. New approaches to regulation & classification: Slovakia*, Spain c. Increasing access & coverage: Canada*

** Indicates a component activity of one larger reform in a country as opposed to a unique reform effort.*
*** Indicates two different component activities in a larger reform.*
**** Indicates that a single country saw multiple unique reforms in a cluster subcategory.*