

Partnership for Health System Sustainability and Resilience

THE NETHERLANDS

Sustainability and Resilience in the Dutch Health System

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Contents



Executive summary	1
Introduction	12
1. Domain 1 Governance	14
1.1 Dutch health system	15
1.2 Sustainability and resilience	17
1.3 Recommendations	19
2. Domain 2 Financing	20
2.1 Financial sustainability of the health system	21
2.2 Sustainability and resilience of health system financing	28
2.3 Recommendations for sustainable and resilient health system financing	31
3. Domain 3 Workforce	32
3.1 Workforce for health system sustainability	33
3.2 Workforce for health system resilience	37
3.3 Recommendations	38
4. Domain 4 Medicines and technology	39
4.1 Adoption of innovative medicines and health technologies	40
4.2 Sustainability of access to innovative medicines and health technologies	43
4.3 Medicines and technology for health system resilience	47
4.4 Recommendations	48
5. Domain 5 Service delivery	50
5.1 Service Delivery Sustainability	51
5.2 Service delivery resilience	54
5.3 Recommendations	56
6. Domain 6 Population health	57
6.1 Indicators of population health	58
6.2 Government policies to address social inequalities in health	60
6.3 Recommendations	62

7. Domain 7 Environmental sustainability	63
7.1 Environmental sustainability	64
7.2 Recommendations	66
8. CASE STUDY 1	67
Financing COVID-19-related health care costs in the Dutch competitive health system	
9. CASE STUDY 2	74
Competition and collaboration in the Dutch health system: Reconciling the irreconcilable?	
Acknowledgements	79
References	80

Executive summary



Introduction

The Dutch health system provides broad universal health care coverage and is based on the principles of regulated competition. According to the OECD (2022), it is one of the best health systems in the world with regard to access to health care, equity and clinical outcomes. However, as also concluded by the Netherlands Scientific Council for Government Policy (WRR, 2021), as with other health systems, it faces important sustainability and resilience challenges, some of which were exposed and exacerbated during the COVID-19 pandemic.

This report provides a comprehensive overview of the Dutch health system’s key features across the seven domains of the PHSSR framework: health system governance, health system financing, workforce, medicines and technology, health service delivery, population health and environmental sustainability. For each of these domains, the aim of the report is to (1) produce a critical assessment of the country’s most salient strengths, weaknesses and threats regarding the sustainability and resilience of its health system and (2) derive recommendations for health care policy.

In addition to the seven domains mentioned above, we present two case studies. The first focuses on the resilience of the Dutch health system to the financial shock caused by the COVID-19 pandemic. The second examines whether collaboration (aimed at reducing coordination problems and facilitating integrated health care) and competition are reconcilable in the Dutch health system.

Key findings

Table 1 summarises the key findings concerning the sustainability and resilience of the Dutch health system for each of the seven domains included in the PHSSR framework.

Table 1: Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 1 GOVERNANCE		
Strengths	<p>Sustainability</p> <ul style="list-style-type: none"> ↑ Access to care, solidarity and high-quality health care services are ensured through four basic health care acts. ↑ Various government agencies have delegated responsibility to ensure adherence to the key principles underlying the Dutch health system. 	<p>Resilience</p> <ul style="list-style-type: none"> ↑ During the COVID-19 pandemic, public and private interests were initially successfully aligned but this later changed.
Weaknesses	<p>Sustainability</p> <ul style="list-style-type: none"> ↓ Due to decentralised responsibilities and highly autonomous health care organisations, a lack of coordination and collaboration hampers innovation. ↓ The interplay of four different health care acts results in conflicting interests and misalignment of financial incentives. 	<p>Resilience</p> <ul style="list-style-type: none"> ↓ In the absence of a decisive central authority, the national crisis structure is not fully capable of tackling a health care crisis.

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 2 FINANCING		
Strengths	Sustainability <ul style="list-style-type: none"> ↑ Funding of the Dutch health system is ensured through mandatory social health insurance premiums and taxation. ↑ Redistribution (i.e., from healthy to sick, young to old and rich to poor) is built into the financing of health care. ↑ Everyone has access to universal comprehensive coverage and out-of-pocket payments are low. ↑ Over the past 10 years, spending growth has been effectively contained due to national stakeholder agreements regarding annual restrictions on expenditure. 	Resilience <ul style="list-style-type: none"> ↑ The financial challenges of the COVID-19 pandemic were effectively addressed by a combination of structural provisions (i.e., the catastrophic cost compensation clause in the Health Insurance Act) and ad-hoc measures.
Weaknesses	Sustainability <ul style="list-style-type: none"> ↓ Health care spending, both as a share of GDP and as euros per capita, is relatively high. ↓ Health care insurers have few incentives to invest in improving care for people who are chronically ill because those insured are insufficiently compensated by the current system of risk equalisation. ↓ Health care insurers are legally required to reimburse most of the costs of care offered by non-contracted providers; this hampers financial sustainability. ↓ Within long-term care, financial incentives are not well aligned across national government, health care insurers and municipalities. 	Resilience <ul style="list-style-type: none"> ↓ The various measures taken to absorb the financial shock caused by the COVID-19 pandemic were unnecessarily complex and market distorting (see Case study 1).

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 3 WORKFORCE		
Strengths	<p>Sustainability</p> <ul style="list-style-type: none"> ↑ Long term workforce planning is high on the political agenda and government programmes have a positive effect on labour shortages in the health care sector. ↑ A variety of policy measures have been announced to substantially invest in health care workforce sustainability. 	<p>Resilience</p> <ul style="list-style-type: none"> ↑ The COVID-19 pandemic encouraged the use of e-health and other new technologies which contribute to effectively alleviating the workload of clinicians (see also Domain 5). ↑ In 2020 and 2021, all health care workers received an extra bonus payment from the government. ↑ As part of the broader pandemic preparedness programme, a National Health Reserve (i.e., regional communities of former health professionals) will be formalised as a public task.
Weaknesses	<p>Sustainability</p> <ul style="list-style-type: none"> ↓ Across health care sectors (GPs, home care, hospitals, nursing homes), labour shortages are substantial and persistent. ↓ The payment of higher salaries, aimed at improving health care workforce sustainability, is at odds with the public goal of financial sustainability. ↓ The benefits of innovative labour-saving medical technologies are not fully utilised. ↓ A substantial growth in self-employed medical professionals is causing problems, such as higher spending on payments for health care workers. 	<p>Resilience</p> <ul style="list-style-type: none"> ↓ At the start of the COVID-19 pandemic, in particular, the Dutch government failed to protect health care workers from SARS-CoV2 infection, which contributed to a much higher workload.

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 4 MEDICINES AND TECHNOLOGY		
Strengths	<p>Sustainability</p> <ul style="list-style-type: none"> ↑ Effective price regulation and tendering for low-priced preferential generic drugs by health care insurers together with reluctant prescription behaviour by physicians make pharmaceutical spending in the Netherlands among the lowest within the OECD. ↑ Universal and relatively fast access to new in-patient drugs and innovative health technologies are guaranteed for the Dutch population through the open system basic benefit package of the social health care insurance scheme which ensures almost automatic eligibility for reimbursement. ↑ The sluice system for expensive innovative in-patient medicines – requiring a cost-effectiveness analysis before being approved for reimbursement from social health insurance – in combination with collective price negotiations at the national level, mitigates the rapid growth of expenditure on these medicines. 	<p>Resilience</p> <ul style="list-style-type: none"> ↑ Following the lessons learned during the COVID-19 pandemic, the government’s agenda on pandemic preparedness includes several policy measures aimed at improving access to and supply security for essential drugs and medical technology.
Weaknesses	<p>Sustainability</p> <ul style="list-style-type: none"> ↓ For both medicines and technology, the social health insurance scheme’s basic benefit package open system threatens financial sustainability. ↓ Low prices for generic medicines make the Netherlands relatively unattractive to pharmaceutical suppliers and, thus, vulnerable to supply shortages. ↓ A lack of information regarding the relationship between prices and the production costs of expensive new medicines renders it difficult to establish whether the prices paid are actually ‘socially acceptable’ and cost-effective. ↓ In contrast to other hospital services, effective budgetary restrictions on the utilisation of expensive new drugs are lacking. 	<p>Resilience</p> <ul style="list-style-type: none"> ↓ The COVID-19 pandemic clearly revealed the vulnerability of a relatively small country with a limited domestic production capacity to safeguard a timely and sufficient supply of critical medicines and health technologies.

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 4 MEDICINES AND TECHNOLOGY (continued)		
Weaknesses	<p>Sustainability</p> <p>↓ Increasing expenditure on expensive medical and health technology with a high budget impact poses a risk to financial sustainability, particularly as new medical and health technologies are often not cost-effectively implemented.</p>	
DOMAIN 5 SERVICE DELIVERY		
Strengths	<p>Sustainability</p> <p>↑ The Dutch reimbursement system incentivises providers to reduce readmission rates, which contributes to declining average lengths of hospital stay.</p> <p>↑ The quality of delivered health care services in the Netherlands is protected by quality standards embedded in several laws.</p> <p>↑ Primary care plays an important role in the Dutch health system.</p> <p>↑ The government-supported initiative Right Care at the Right Place (JZOJP) stimulates providers and insurers to seek ways to effectively improve health service delivery.</p>	<p>Resilience</p> <p>↑ The temporary National Coordination Centre for Patient Distribution succeeded in distributing COVID-19 patients equally across Dutch (and some German) hospitals.</p> <p>↑ The outbreak of COVID-19 clearly acted as a catalyst for the digitalisation (e.g., e-consultations and video calling) of Dutch health care (see also Domain 3).</p>
Weaknesses	<p>Sustainability</p> <p>↓ Current provider-insurer contracts often do not explicitly reward quality.</p> <p>↓ A lack of supporting integrated and outcome-based payment models and the absence of a national electronic patient records system hamper potential substitution of care (e.g., shifting care from hospitals to GPs).</p> <p>↓ A shortage of GPs in some regions threatens the sustainability of primary care provision.</p>	<p>Resilience</p> <p>↓ The relatively low number of ICU beds in the Netherlands severely impacted health care delivery during the (first months) of the COVID-19 pandemic.</p> <p>↓ During the first wave of the COVID-19 pandemic, in particular, almost all elective care was cancelled owing to capacity constraints and staff shortages.</p> <p>↓ The Netherlands lacked a centralised, nationally coordinated strategy to protect and coordinate health care delivery during the COVID-19 pandemic.</p>

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 6 POPULATION HEALTH		
Strengths	<p>Sustainability</p> <ul style="list-style-type: none"> ↑ Overall, most Dutch people report good health. ↑ In addition to its extensive vaccination programme for children, the central government initiates, organises and finances three cancer and five prenatal and neonatal population screening programmes. ↑ Municipalities and regional Public Health Services support policy makers and professionals by promoting the use of recognised interventions. 	<p>Resilience</p> <ul style="list-style-type: none"> ↑ In 2022, the government announced “a greater focus on prevention and on a healthy lifestyle from an early age”.
Weaknesses	<p>Sustainability</p> <ul style="list-style-type: none"> ↓ There are sizeable health disparities across socio-economic groups. Health risk factors, such as smoking, financial distress, (perceived) social exclusion and low health literacy, are much more prevalent among lower socio-economic groups. ↓ One in every five deaths in the Netherlands can be attributed to direct and second-hand smoking, which is higher than the EU average. ↓ Although the Netherlands has among the highest health care spending levels per capita compared to the EU average, spending on prevention as a percentage of total health expenditure has declined over the last 10 years. ↓ Activities aimed at health promotion and prevention are most often focused on primary prevention only. ↓ The National Prevention Agreement, signed in 2018 between the Dutch national government and more than 70 stakeholders, is temporary and its targets are not legally binding. 	<p>Resilience</p> <ul style="list-style-type: none"> ↓ Life expectancy temporarily dropped due to the COVID-19 pandemic. ↓ In 2020, COVID-19 was the third leading cause of death.

Table 1 (continued): Key findings concerning the sustainability and resilience of the Dutch health system

DOMAIN 7 ENVIRONMENTAL SUSTAINABILITY		
Strengths	<p>Sustainability</p> <ul style="list-style-type: none"> ↑ Dutch health care organisations, similar to businesses in other sectors, are obligated by law to meet a set of basic rules and regulations regarding the environment. ↑ In addition to other bottom-up initiatives, in November 2022, a third Green Deal, which includes goals for improving environmental sustainability in health care, was signed by the national government and stakeholders. 	Resilience
Weaknesses	<p>Sustainability</p> <ul style="list-style-type: none"> ↓ Annually, a substantial quantity of pharmaceutical residue and contrast agent cause contamination of surface water. ↓ A more centralised strategy with a clear vision for environmental sustainability is lacking. ↓ Although highly relevant for the Netherlands, air quality and its effects on health are not specifically addressed in the Green Deal goals. 	Resilience

Recommendations

We suggest recommendations for each of the seven domains and for both case studies. These are summarised in Table 2.

Table 2: Recommendations across the seven domains and two case studies

DOMAIN 1: GOVERNANCE	
1A	Introduce a centralised decisive overriding authority at the national government level to avoid situations in which conflicting stakeholder interests may obstruct the fundamental changes required to improve health system sustainability.
1B	Develop cross-sectoral payment methods within the health care sector to facilitate and incentivise coordination of care for patients who are chronically ill and in need of multiple different providers.

- 1C Implement the recommendations of the Dutch Safety Board aimed at ensuring effective governance and control during a crisis, including explicitly describing overall government responsibility and giving the Minister of Health greater authority.

DOMAIN 2: FINANCING

- 2A Social health insurance coverage should be more closely tied to clinical and cost-effectiveness analyses. To this end, service offerings in the social health insurance benefits package should be continuously evaluated based on clinical effectiveness and cost-effectiveness.
- 2B/C Encourage and facilitate integrated (or bundled) outcome-based payment methods across providers, sectors and financing regimes to stimulate effective collaboration among providers and insurers within the system of regulated competition (see Case study 2).
- 2D Improve or augment the system of risk equalisation to eliminate predictable losses for insurers on patients who are chronically ill. To this end, new promising methods, such as constrained regression, high-risk pooling and machine learning, should be explored.
- 2E Allow health insurers to reduce the level of reimbursement for non-contracted providers and specify which minimum level of reimbursement is socially acceptable.
- 2F Better align financial incentives for prevention with the efficient provision of long-term care across government, health insurers and municipalities.

DOMAIN 3: WORKFORCE

- 3A A variety of factors underlie health care staff shortages. Therefore, avoid focusing on a single policy measure (e.g., higher salaries) when attempting to solve these shortages.
- 3B Consider financial incentives (e.g., childcare subsidies and income tax reforms) other than higher salaries when seeking to attract and retain a health care workforce.
- 3C Reduce the need to expand the health care workforce through (1) a stronger focus on provision of labour-saving 'appropriate care', de-medicalisation and prevention and (2) facilitating innovative labour-saving medical technologies, digitalisation and the use of medical devices/tools as substitutes for current care.
- 3D Prioritise the process of formalising the National Health Reserve (NHR) as a public task to strengthen the resilience of the Dutch health system.

DOMAIN 4: MEDICINES AND TECHNOLOGY

- 4A Maintain the open system of admitting new in-patient medicines and medical technologies into the basic benefits package. This is crucial to facilitating the adoption and use of these innovations while counteracting their cost-ineffective use.
- 4B Make the Dutch 'sluice procedure' for new expensive in-patient drugs more effective (i.e., the requirement that a cost-effectiveness analysis is performed before drugs are included for reimbursement from social health insurance) and develop new

pricing models for innovative high-cost drugs. This approach has proven effective in the recently proposed pricing model for anti-cancer drugs in which maximum prices reflect the clinical value of the drugs (compared to other available treatments).

- 4C Retrospectively compensate manufacturers for delivering new expensive drugs during central price negotiations with the government.
- 4D Introduce a system of horizon scanning to identify expensive medical technologies in clinical development that may be excessively priced or not cost-effective in order to prevent these technologies from being admitted to the basic benefit package.
- 4E Adopt more systematic and transparent procedures when using Special Medical Procedures Act (WBMV) licenses to restrict the non-efficient use of new health technologies.
- 4F Restrict entitlement to reimbursement from social health insurance of potentially cost-effective innovative medicines and health technologies to indications and patient groups for which cost-effectiveness has been convincingly established. Health insurers should include these restrictions in their contracts with health care providers or, in cases of uncertainty regarding cost-effectiveness, make arrangements with regard to desired outcomes or treatment duration and clearly communicate this with enrolees.
- 4G Strengthen international cooperation within the EU and with other strategic international partner countries to (1) counteract the vulnerability of the health system due to its limited domestic production capacity and restricted direct access to essential raw materials, (2) gather more evidence regarding the cost-effectiveness of medical technologies and (3) maintain a level playing field for investments in R&D.

DOMAIN 5: SERVICE DELIVERY

- 5A Improve the coordination of care and adjust payment models to reward multidisciplinary care (see also Domains 1 and 2).
- 5B Make health care quality more transparent by improving the public availability of reliable and comprehensible quality information.
- 5C Invest in a centralised, nationally coordinated strategy to improve health service delivery in times of crisis.

DOMAIN 6: POPULATION HEALTH

- 6A Recognise that population health is largely determined by policies that guide actions beyond the health sector (Health in All Policies) and act upon this by not focusing exclusively on disease management and health sector programmes.
- 6B Establish a national framework with legally binding measurable health goals and implement appropriate financial incentives for investing in prevention.
- 6C Strengthen prevention by (1) seriously considering the use of hard measures such as a sugar tax, (2) eliminating the influence of the alcohol and food industries on health policy by not allowing their participation in the formulation of policy interventions aimed at health promotion and (3) considering the potential benefits of secondary and tertiary prevention.

DOMAIN 7: ENVIRONMENTAL SUSTAINABILITY

- 7A** Take responsibility for a national policy with binding goals to reduce the environmental impact of health care, together with rules and regulations for meeting these goals (e.g., reducing CO₂ emissions, improving circularity, reducing pharmaceutical residues), and establish a centralised decisive authority at the national government level to ensure that sufficient progress is made.
- 7B** Adopt the most recent WHO air quality standards into the Green Deal.

CASE STUDY 1: FINANCING COVID-19-RELATED HEALTH CARE COSTS

- CS1** Improve the current catastrophic cost regulation for health insurers.
- CS2** Consider redesigning the current method for risk equalisation between insurers to reduce vulnerability to unforeseen catastrophic health care costs.
- CS3** Evaluate and reconsider financial risk-sharing between government and private stakeholders in health care during a pandemic.

CASE STUDY 2: COMPETITION AND COLLABORATION

- CS4** Encourage effective collaboration between providers and insurers, while also effectively eliminating strategic anticompetitive agreements.
- CS5** Monitor and evaluate the (competitive) effects of collaborations that contribute to health care transformation goals.
- CS6** Continue to provide the guidance that explains how also in the health care sector collaboration and competition are, to a large extent, reconcilable with competition law.

Introduction



This report is based on desk research and serves two audiences. First, it provides an international audience with a broad overview of the Dutch health system. Second, it contributes to the national policy debate on how to improve the sustainability and resilience of health care in the Netherlands.

Table 3: Definitions of health system sustainability and governance

<p>Health system sustainability</p>	<p>A health system's ability to improve population health by continually delivering the key functions of providing services, generating resources, financing and stewardship, incorporating principles of financial fairness, equity in access, responsiveness and efficiency of care, and to do so in an environmentally sustainable manner.</p>
<p>Health system resilience</p>	<p>A health system's ability to prepare for, absorb, adapt to, learn, transform and recover from crises born of short-term shocks and accumulated stresses, in order to minimise their negative impact on population health and disruption caused to health services.</p>

Given time and budget constraints, choices had to be made in each domain concerning which specific questions from the general PHSSR framework to focus on. As a result, partly following the expertise available within the research team, some issues are only briefly discussed while others receive more detailed attention. We hope this report, including the non-exhaustive set of recommendations, will be a useful starting point for a fruitful dialogue with stakeholders including current and former policy makers, health system researchers, health economists, patients and physicians.

1. DOMAIN 1

Governance



1.1 Dutch health system¹

Within the Dutch health system, the national government's primary responsibility is to create the overall conditions required for good public health, including the control of infectious diseases and the organisation of national screening programmes. Under the Public Health Act, responsibility for public health, prevention and health promotion at the local level lies with local authorities (municipalities).

As Figure 1 shows, four basic health care acts are in place to protect the key principles underlying the Dutch health system (i.e., access to care for all, solidarity through mandatory insurance and high-quality health care services). First, the Health Insurance Act (*Zorgverzekeringswet*, (Zvw); hereafter HIA) makes it mandatory for all Dutch residents to buy basic health insurance coverage from one of the country's competing health insurers. The basic benefit package – covering a broad set of health services including GP care, hospital care and pharmaceuticals – is set by the government but, based on a legal duty of care, insurers must guarantee that health care is available to enrollees in actual practice. Second, the Long-Term Care Act (*Wet langdurige zorg* (Wlz); hereafter LTCA) is a mandatory public long-term care insurance scheme, covering high-level care for vulnerable older people or people with severe mental or physical disabilities. Like the HIA, the benefit package is set by the government. Regional health care administration offices, all closely affiliated to the health insurer with the largest market share in the region, are responsible for contracting long-term care for all residents in their region. Using a national standardised format, an individual's need for long-term care is assessed by the Care Assessment Agency (*Centrum Indicatiestelling Zorg*; CIZ). Third, under the Social Support Act (*Wet maatschappelijke ondersteuning*; Wmo), municipalities are responsible for providing support to people with physical, mental or psychological disabilities. This support includes general and personalised provisions. Fourth, the Youth Act (*Jeugdwet*) makes municipalities responsible for organising support, assistance and care for young people and their families living with parenting and developmental challenges, psychological problems and disorders. Local authorities, in regional collaboration, are also responsible for the implementation of child protection measures and youth rehabilitation services, and advising on and processing, reports of domestic violence and child abuse.

The national government is responsible for the overall functioning of the Dutch health system. Various government agencies have delegated authority from the government to ensure the enactment of the previously mentioned key principles underlying the Dutch health system.² These include:

- The National Health Care Institute (*Zorginstituut Nederland*; ZiN) which has a variety of tasks, including (1) advising VWS regarding the content of the basic health insurance package;³ (2) promoting the quality, affordability and accessibility of care by identifying opportunities for innovation and improvements in the care sector and providing relevant information accordingly; (3) developing information standards to allow for efficient and effective (quality) information exchange in the care sector aimed at improved decision-making by policy makers, health insurers and health care providers; (4) encouraging the utilisation of digital care and exploring potential

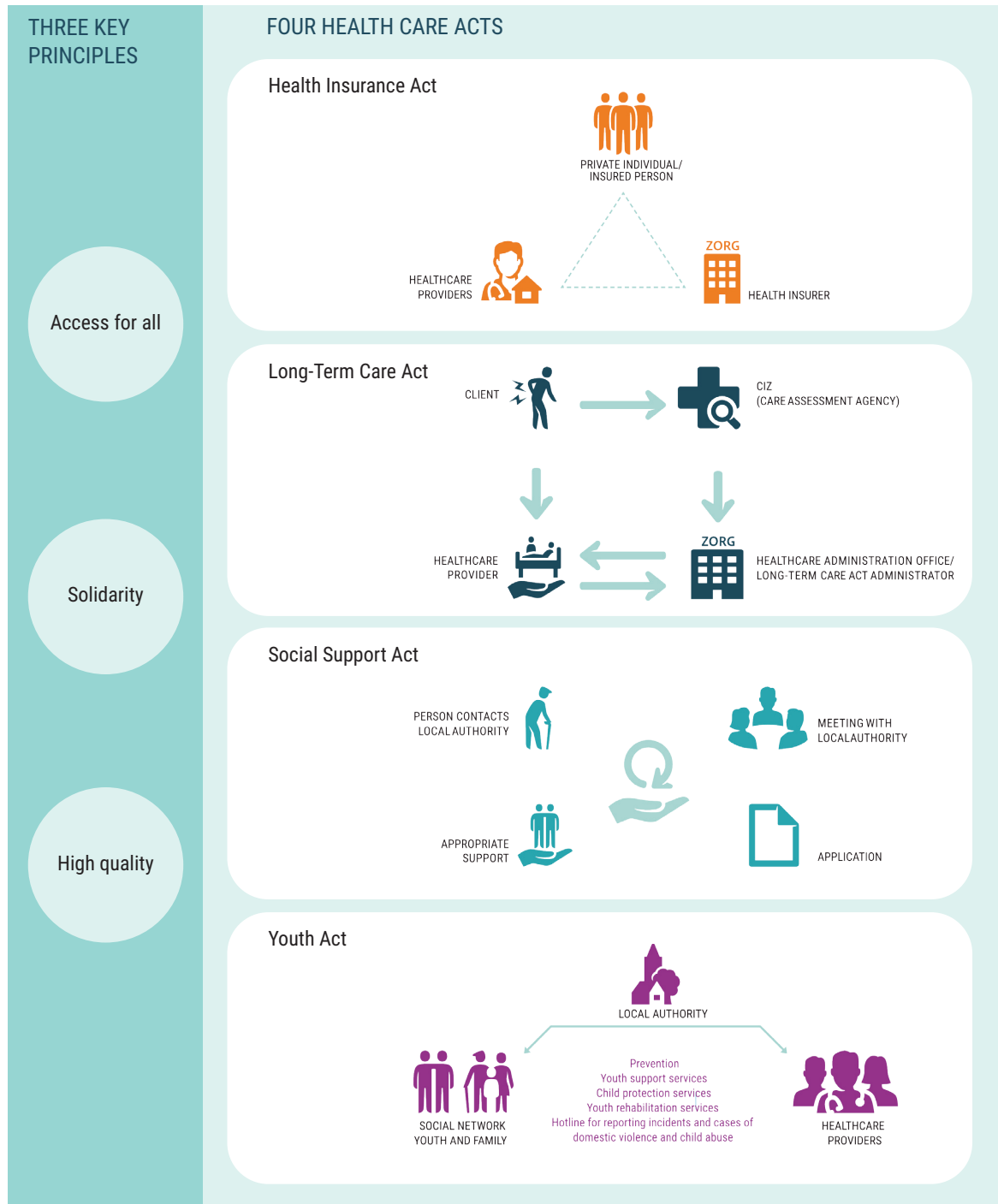
¹ For a brief overview see, for example, www.argumentenfabriek.nl/products/quickguidedutchhealthcare

² The delegated tasks will be discussed in greater detail in the remainder of this report.

³ As explained by ZiN itself (<https://english.zorginstituutnederland.nl/about-us/tasks-of-the-national-health-care-institute/advising-on-and-clarifying-the-contents-of-the-standard-health-care-benefit-package>): "In order to be included in the basic package, care must, above all, be effective: evidence must show that care does what it is meant to. This is a statutory requirement. In general, care is automatically included if its effectiveness has been proven. This does not apply to pharmacy-supplied medicines. These are only included in the basic package after the National Health Care Institute has issued positive advice and the Minister of Public Health, Welfare and Sport (VWS) has converted that advice into a positive decision."

new technological opportunities; (5) managing funding for the Health Insurance Act and the Long-term Care Act, and providing information about the costs of care; and (6) taking care of risk equalisation among health insurers. Recently, as an independent coordinator, ZIN took a central role in the transition towards appropriate care, i.e., the reimbursement of health care only when it proves to be (cost-)effective.

Figure 1: Brief overview of the Dutch health system



Adapted from: <https://english.zorginstituutnederland.nl/binaries/zinl-eng/documenten/publications/2016/01/31/healthcare-in-the-netherlands/healthcare+in+the+netherlands.pdf>

- The Dutch Health Care Authority (*Nederlandse Zorgautoriteit*; NZa) is responsible for protecting the accessibility, affordability and quality of health care in the Netherlands. It does so by setting rules, overseeing health care providers and health insurers and giving on request and proactive policy recommendations to the Ministry of Health, Welfare and Sport (VWS). An important task of the NZa is to determine the types of health care that may be billed by providers. For some treatments, e.g., complex hospital care and basic GP services, the NZa also determines the maximum price.
- The Netherlands Authority for Consumers and Markets (*Autoriteit Consument & Markt*; ACM) is responsible for general competition oversight, specific regulation of several sectors, and enforcement of consumer protection laws. In sum, its aim is to ensure that, in health care, markets function well and no one is harmed by unfair practices.
- The role of the Health and Youth Care Inspectorate (*Inspectie Gezondheidszorg en Jeugd*; IGJ) is to supervise the quality of health care and youth care services and to monitor the safety of medicines and medical devices.
- As an independent agency owned by the Ministry of Health, Welfare and Sports (VWS), the National Institute for Public Health and the Environment (RIVM) has three main tasks: (1) it advises the government on how to keep the living environment in the Netherlands safe, clean and healthy, (2) it collects, analyses and interprets data to prevent and control infectious diseases and (3) it investigates the requirements for good health care and healthy lifestyles for which, among other things, it assesses which national and local health programmes, including perinatal and population screening, are most effective.
- With responsibility for safeguarding financial stability in the Netherlands, *De Nederlandsche Bank* (DNB) has supervised Dutch health insurers since the European risk-based supervision framework, Solvency II, which went into effect on 1 January 2016. Most importantly, this supervision includes monitoring the solvency reserves of insurers.

1.2 Sustainability and resilience

The unique institutional setting of the Dutch health system is the result of many decades characterised by incremental changes which can be described as an “evolution of market-oriented health care reforms” (Helderman et al., 2005). As Bertens and Vonk (2020) conclude, this has resulted in a “complex layered system of financial arrangements consisting of direct public funding, national, social and private health insurance with complex interdependencies.” From a governance perspective, the Dutch health system is an example of institutional layering in which different institutional arrangements are placed alongside or above each other (Van de Bovenkamp et al., 2014; 2017). In the discussion paper *Care for the future (Zorg voor de toekomst)*, the Ministry of Health, Welfare and Sports (VWS) emphasised that within the Dutch health system (1) responsibilities are typically decentralised and (2) health organisations are highly autonomous. While this clearly has benefits, such as flexibility, shared responsibilities and understanding local/regional needs, there is also a widely recognised drawback: the current organisation can lead to fragmentation which hampers the functioning of the health system. More specifically, the lack of coordination and collaboration is an important barrier to the transformation required to meet increased and changing demands for health care. In this context, the government has identified some important bottlenecks, including conflicting interests and adverse financial incentives, that need to be tackled to improve the sustainability of the health system (VWS, 2021c). These bottlenecks are often closely related to the interplay of the country’s four different health care acts, each with its own specific rules, regulations and assigned authorities. The Council of Public Health and Society (*Raad voor Volksgezondheid & Samenleving*), an independent advisory body to the government and parliament, recently concluded that an important challenge within the current health system is better facilitating collaboration across sectors (RVS, 2022) by, for example, developing innovative payment models that reward cross-sectoral cooperation.

As in any country, the resilience of health system governance in the Netherlands was seriously tested during the COVID-19 pandemic. This was particularly true because, as explained above, decision-making in the Dutch health system is fragmented due to its layered and decentralised nature, while the COVID-19 pandemic often required a collective and nationally coordinated response.⁴ Based on the examination of three key topics (aligning hospital care, negotiating scarcity and the role of experts and scientific knowledge in policy decision-making), Wallenburg et al. (2022) conclude that the national government first succeeded in aligning public and private interests, but then gradually lost control when, in the absence of a decisive central authority, conflicting interests and ideologies became more apparent. In May 2020, at the request of the Dutch government, the Dutch Safety Board, a prominent independent administrative body, started to investigate how the COVID-19 crisis was handled in the Netherlands.⁵ The results of this investigation are being published as a series of three sub-reports.

The first report, published in February 2022, contains a description and analysis of the approach of the various parties to the crisis. It covers preparations for and the approach to the pandemic up to September 2020.⁶ From the perspective of health system governance, the most important observation can be summarised as follows (Dutch Safety Board, 2022): The central, and crucial, role of the Ministry of Health, Welfare and Sports (VWS) for infectious disease control was never really considered during regular exercises to prepare for a pandemic. As a result, a scenario describing how to combine the national approach with regional approaches did not exist. Together with other parties, the ministry was, therefore, forced to improvise when tackling the crisis. This resulted in “the establishment of a whole raft of coordination structures” which “regularly resulted in a lack of clarity and irritation within the health care field.”

Based on its findings, the Dutch Safety Board made four recommendations to ensure effective governance and control during a crisis. First, when a crisis shifts from a single department, such as the VWS, to a national crisis structure, overall government responsibility should be described “in explicit terms” accompanied by a “department overarching strategy” that results in shared accountability. Second, the national crisis structure must be adapted to more capably tackle the problem. This would include safeguarding “the unity of government policy”, improving “the implementation of strategy and decisions” and the organisation of “parallel and separate advice on acute and long-term problems.” Third, for the health care field, the crisis structure needs to be adjusted to give the Minister of Health the authority, including the option of “directly binding instructions”, required to tackle problems that exceed those of specific sectors, regions or organisations. Fourth, a clearer division of roles is needed to secure “the independent position of administrators as decision-makers and experts as advisors” which “contributes to understanding for and traceability of government actions and reinforces the democratic legitimacy of decisions.”

⁴ In a study comparing the initial response to the COVID-19 pandemic in eight European countries with social health insurance (SHI), including the Netherlands, Schmidt et al. (2022) concluded that decentralised structures create both opportunities (e.g., the key role that GPs can play in pandemic prevention and management) and risks, such as the need for coordination among stakeholders, given that social health insurers were typically absent during the initial pandemic decision-making process.

⁵ www.onderzoeksraad.nl/en/page/12263/dutch-safety-board

⁶ The second report, published in October 2022, focuses on the period from September 2020 until July 2021 and investigates the vaccination programme, the requirement to wear face masks, the closing of primary and secondary schools, and the curfew (<https://www.onderzoeksraad.nl/en/aanpak-coronacrisis-deel2>). The third report, expected to be published in 2023, will focus on the period from July 2021 and will investigate topics that were relevant throughout the pandemic, such as the testing policy and insights into the virus, the decision-making process regarding the introduction and relaxation of measures and the cabinet’s goals and strategies.

1.3 Recommendations

Considering the findings reported above, we make the following recommendations.

RECOMMENDATION 1A

Without ignoring the benefits of highly autonomous health care organisations within the current decentralised health system, decisive overriding authority should be introduced at the national government level to avoid situations in which conflicting stakeholder interests may obstruct fundamental changes needed to improve health system sustainability.

RECOMMENDATION 1B

Due to the interplay of the four different health care acts, improving the sustainability of the Dutch health system requires the development of innovative cross-sectoral payment methods to facilitate and incentivise coordination and collaboration in the health care of chronically ill patients in need of multiple different providers.

RECOMMENDATION 1C

To improve health system resilience, the recommendations of the Dutch Safety Board aimed at ensuring effective governance and control during a crisis should be implemented as soon as possible within the current health system.

2. DOMAIN 2
Financing



2.1 Financial sustainability of the health system

2.1.1 Health care spending and revenue generation

In the Netherlands, spending on health care both as a share of GDP and euros per capita is above the EU average (OECD/European Observatory on Health Systems and Policies, 2021). The most recent projection by the CPB Netherlands Bureau for Economic Policy Analysis reveals that health care spending is expected to increase from 10% of GDP in 2020 to more than 18% in 2060 (Aalbers and Roos, 2022). On average, the growth in real terms will be around 3% per year of which 0.7% will be the result of higher prices and wages, approximately 1.0% the result of demographics and almost 1.0% the result of income growth per capita.

The Dutch health care system has various funding sources (Table 4). The main source is the social health insurance scheme (Health Insurance Act), which covers a broad basic benefit package including hospital care, primary care, prescription drugs, nursing care at home and short-term mental health care services. Another major funding source is the social long-term care insurance scheme (Long-term Care Act), which covers institutional long-term care (i.e., nursing home care, institutional care for people with mental and physical disabilities and institutional psychiatric care of more than three years) as well as substitutive intensive home care. A third major source of health care financing is taxation. Tax-financed health care services are paid, in part, directly from central government tax revenues, including primary prevention such as vaccination and screening programmes, and in part, indirectly via redistribution to the municipalities, which have responsibility for the provision of social long-term care and support (Social Support Act). Finally, health care services that are partially or not funded by the social health insurance schemes or by the government are paid either by supplementary private insurance or directly out-of-pocket by users. Despite the high percentage of health care expenditure covered by mandatory social health insurance and taxation, spending on voluntary health insurance exceeds the EU average (OECD/European Observatory on Health Systems and Policies, 2021).

Table 4: Health care* financing in the Netherlands by source of funding in 2015 and 2021

Funding source	% Total health expenditure	
	2015	2021**
Social health insurance scheme (HIA/Zvw)	45.7	39.7
Social long-term care insurance scheme (LTCA/Wlz)	20.1	20.9
Government (taxation)	17.0	25.0
Supplementary insurance	4.7	3.2
Out-of-pocket payments	10.4	9.2
Other	2.1	2.0

* Excluding day-care for children.

** Preliminary figures.

Source: Statistics Netherlands, <https://opendata.cbs.nl/#/CBS/nl/dataset/84053NED/table> (data retrieved: 25/10/2022).

Three types of redistribution are built into health care financing in the Netherlands. First is redistribution from the healthy to the sick because mandatory social health insurance protects all individuals from the financial shocks associated with illness. Second is redistribution from young people to old people because the latter typically make greater use of health care services. Third is redistribution from the rich to the poor through the progressive tax system, the use of income-related premium payments and the greater use of health care services by individuals on low income than those on high income. If future health care continues to be financed in this way, these three redistribution effects will become more striking owing to the aging population and an expected increase in health care expenditure (Wouterse et al., 2016).

2.1.2 Coverage and resource allocation

Table 5 shows the distribution of health care spending across health system sectors and changes in distribution over the last 10 years. According to the broad definition by Statistics Netherlands (CBS), from 2010 to 2021, total health care expenditure increased from €86 billion to €125 billion in nominal terms. Hospital care, including medical specialist care, accounts for the largest share of total health expenditure and this share has remained stable over the past decade. Long-term care accounts for the second largest spending share. This has steadily increased over time, due to the aging population and substantial investments in nursing homes, particularly since 2018. The share

Table 5: Resource allocation across health care sectors as a percentage of total health expenditure* in 2010, 2015 and 2020

Sector	% Total health expenditure		
	2010	2015	2020**
Hospital care	27.5	28.7	28.1
Mental health care	7.5	7.0	7.1
GP care	3.5	4.0	4.2
Dental care	3.2	3.1	2.6
Paramedical care	2.3	2.3	2.0
Out-patient drugs (pharmacies, drugstores)	7.1	5.7	5.2
Long-term care	18.8	19.3	20.7
Care for people with mental or physical disabilities	10.5	10.7	11.4
Public health (prevention)	2.5	2.1	3.2
Social care	5.7	5.8	5.3
Other care providers (e.g., medical devices, labs)	6.9	6.9	6.0
Administrative bodies	4.5	4.4	4.1

* Excluding day-care for children.

** Preliminary figures.

Source: Statistics Netherlands, <https://opendata.cbs.nl/#/CBS/nl/dataset/84053NED/table> (data retrieved: 25/10/2022).

of spending on general practitioners (GPs) is also gradually increasing, which may reflect efforts to reinforce primary care as a substitute for hospital care. The share of health care resources spent on out-patient drugs is also in decline, which is likely caused by the increasing prescription of generics and health insurers' effective preferential drug policy which typically reimburses only the lowest priced generic drug – after a tendering process – within a therapeutic class. Finally, the substantial growth of the share spent on public health (prevention) in 2020, is likely due to increased expenditure on COVID-19 tracing and testing during the first year of the pandemic.

How are health care expenses covered?

As shown in Table 4, most health and long-term care services in the Netherlands are covered by two social insurance schemes, the Health Insurance Act (HIA) and the Long-Term Care Act (LTCA). Participation in both schemes is mandatory for the entire Dutch population.⁷

The HIA benefits package comprises hospital care, GP services, short-term mental health care, prescription drugs, community nursing, physical therapy for chronic patients and dental care for children. There is a mandatory deductible of €385, which means that people must pay health care costs up to €385 out-of-pocket per year. However, GP services, community nursing and maternity care are exempted from the deductible to guarantee unrestricted access to these primary care services. In addition to the mandatory deductible, individuals may opt for a voluntary deductible up to €500 in return for a premium discount. The percentage of individuals with a voluntary deductible has increased from 9.7% in 2013 to 13.0% in 2022, with most of these (75%) opting for the maximum amount of €500 (Vektis, 2022).

The Long-Term Care Act covers nursing home care and substitutive (intensive) home health care, care for people with physical and mental disabilities and prolonged institutional mental health care (i.e., psychiatric care of more than three years). For care covered by the LTCA, income- and wealth-related co-payments are required. Social long-term care (e.g., support for independent living at home for frail older people) is provided by municipalities based on the Social Support Act (Wmo). Municipalities may charge a small uniform co-payment for these services (at maximum, €19 per month in 2022). Individuals can purchase supplementary health insurance for benefits not covered by HIA or LTCA or can pay for these benefits directly out-of-pocket. The percentage of people doing so has declined from 93.0% in 2006 to 83.5% in 2022 (Vektis, 2022). The most important benefits covered by supplementary health insurance are dental care for adults and physical therapy for non-chronic patients.

Health Insurance Act

Approximately 50% of the health care expenses covered by the HIA are financed by income-related contributions paid by employers (on behalf of their employees), the self-employed and pensioners. All adults must pay a flat-rate premium to a private health insurer licensed to offer basic health insurance. Together, flat-rate premiums and out-of-pocket payments falling under the mandatory and voluntary deductibles account for approximately 45% of health care expenses covered by the HIA. Children up to 18 years of age are exempted from paying a flat-rate premium and deductibles. Instead, their health care expenses are covered by the government from general taxation, accounting for the residual 5% of health care expenses covered by the HIA.

Up to a certain income level, households are entitled to an income-related monthly paid health care allowance that can be used to pay the flat rate premium and out-of-pocket expenses. As this allowance is not earmarked, it may be used for other purposes, such as paying the rent or paying energy bills. The health care allowance was established to guarantee that mandatory health insurance is affordable. In 2020, about 4.5 million households (predominantly one-person

⁷ There are few exceptions for HIA, e.g., military personnel (see VWS, 2021a).

households), accounting for approximately 32% of the total Dutch population, received this health care allowance (VWS, 2021a). This allowance will be substantially increased in 2023, which, in part, will be general income support, motivated by the rapidly increasing cost of living due to inflation.⁸

Insurers incur the health care expenses of their enrolees, so charge flat rate premiums that offer a sufficient margin and rate of return. Since differentiating premiums according to health status or other personal characteristics is not allowed, insurers incur expected losses on high-risk individuals, while making expected profits on low-risk individuals. To compensate insurers for these expected losses and profits, a system of risk equalisation has been put in place.⁹ This system should remove incentives for risk selection and create fair competition among insurers.

During a period of six weeks at the end of each year, individuals are permitted to switch to a different health insurer or to another health plan offered by the same insurer. Each year, approximately 6.5–7.0% of all enrolees switch health insurer (Vektis, 2022). This should motivate competing insurers to buy care prudently by contracting good providers at a fair price. Insurers are obligated to accept all applicants for basic health insurance. Although HIA is mandatory for all Dutch residents, insurance is not automatic; rather, basic health insurance must be purchased from a licensed health insurer.¹⁰ Nevertheless, the number of uninsured individuals is almost negligible (0.1% of the population) and was effectively reduced from approximately 58,000 in 2011 to approximately 20,000 in 2020 due to the adoption of a law (*Wet Ovoz*)¹¹ to actively investigate and insure uninsured individuals (VWS, 2021a).

Some individuals are unwilling or unable to pay for mandatory health insurance. Failure to pay premiums for more than six months leads to the insurer notifying the Central Administration Office (CAK, an independent government body) and the individual in question is officially registered as a defaulter, leading the CAK to impose and collect an administrative premium based on the so-called 'defaulter's regulation'.¹² Since 2019, the administrative premium has been set at 120% of the average monthly premium. By the end of 2020, there were approximately 190,000 registered defaulters, the majority of whom (58%) were registered for more than two years (VWS, 2021a). In 2020, approximately 63% of registered defaulters were entitled to a health care allowance, which is deducted from their administrative premium.

⁸ In 2023, health care allowances will be raised by €412 per year per one-person household. For single persons with a minimum income, the total allowance will increase to €1850 per year which is almost equal to the expected average flat rate annual premium of €1881. The total amount of health care allowances paid by the government will increase by €2.1 billion to approximately €8.3 billion (VWS, 2022a).

⁹ Health insurers receive risk-adjusted capitation payments from a national health insurance fund that is funded by income-related contributions and government subsidies for the health care cost of children. Risk-adjusted capitation payments are based on a large number of administrative and morbidity indicators to predict individual health care costs (Van Kleef et al., 2018).

¹⁰ In 2022, there are 10 independent health insurance concerns, most of which were not-for-profit entities, competing for enrolees on a national level. The four largest health insurers have a joint market share of 85% (NZa, 2022d).

¹¹ *Wet Opsporing en verzekering onverzekerden zorgverzekering*, Stb. 2011, 111. The Social Insurance Bank (SVB) actively investigates potentially uninsured individuals by linking various administrative social insurance registrations. Uninsured individuals are notified that they must buy health insurance within a period of three months. If they fail to do so, they are required to pay a fine of approximately three times the monthly premium. After two fines, they are compulsorily enrolled in a designated health plan, with premiums collected by withholding funds from the individual's source of income.

¹² Excluding (medical) long-term care expenditure, which is relatively high in the Netherlands, expenditure as a share of GDP dropped from 7.6 to 7.3%, which is approximately the average OECD level (figures obtained from the online database OECD Health Statistics 2022).

Long-Term Care Act

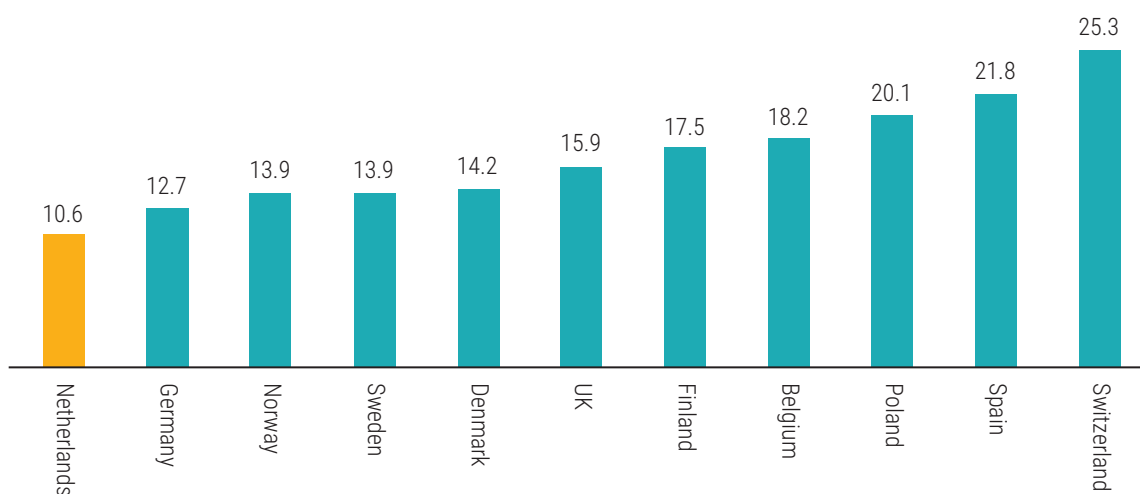
In contrast to the HIA, the LTCA is a public scheme in which all Dutch residents are automatically enrolled. Contributions are income and wealth related and are collected by the tax office as part of income taxation. As these contributions are insufficient to cover total expenditure covered by the LTCA, tax revenues are used for the remainder. Over the years, the share of direct government payments out of taxation has steadily increased and is projected to account for approximately 45% of total expenditure in 2023 (VWS 2022a). Therefore, this social insurance scheme is gradually transforming into a public provision scheme. Approximately 7% of total expenditure covered by the LTCA is directly paid by beneficiaries in the form of income-related co-payments. Regional health care administration offices (zorgkantoren) are responsible for contracting care covered by the LTCA.¹³ In contrast to the HIA, regional administration offices are not at financial risk, as risk is entirely borne by the central government. Nevertheless, the required contracts that regional offices conclude with providers must fit within regional budget constraints, which are set by national government and monitored by the Dutch Health Care Authority.

The current LTCA scheme (Wlz), which came into force in 2015, is much less comprehensive than the long-term care insurance scheme (Awbz) that preceded it, as the latter also covered home health care and social long-term care. Since 2015, home health care (i.e., community nursing) has been included in the HIA benefits package, while municipalities have been made responsible for the provision of social LTC (under the Social Support Act 2015) for which they receive a non-earmarked budget from the central government (Maarse et al., 2016; Alders & Schut, 2019).

Out-of-pocket payments in international perspective

An international comparison of out-of-pocket payments for health care, using the same OECD definition, reveals that these payments are lowest in the Netherlands relative to other high-income countries (see Figure 2). Out-of-pocket expenditure in the Netherlands is also much lower than the EU-average (OECD/European Observatory on Health Systems and Policies, 2021). Furthermore, since 2014, the share of out-of-pocket payments in total health care expenditure gradually decreased from almost 12% to just above 9% (CBS, 2022).

Figure 2: Out-of-pocket payments as % of total health care expenditure in 2019



Source: CBS (2022).

¹³ All associations undersigned this agreement, which replaced the previous sectoral agreements, such as the general agreement with the hospital sector.

The rate of catastrophic health care expenditure (defined as out-of-pocket expenditure exceeding 10% of household consumption) in the Netherlands is unknown. However, given comprehensive mandatory social insurance coverage, the large share of income-related contributions, substantial income-related health care allowances and relatively low out-of-pocket payments, this rate is likely to be very low. Still, a study by the Netherlands Institute for Health Services Research (Van Esch et al., 2015) found that 3% of respondents to a representative sample of the Dutch population (and young low-income adults aged 18 to 39 years in particular) reported refraining from visiting a GP owing to the potential negative financial consequences. From an international perspective, the percentage of Dutch people reporting unmet needs for medical treatment is very low (OECD/European Observatory on Health Systems and Policies, 2021).

Coverage of vulnerable groups (illegal aliens and asylum seekers)

As explained, all legal Dutch residents have access to universal comprehensive coverage, while out-of-pocket expenses are low compared to international standards and the number of uninsured people is almost negligible. Illegal aliens, however, cannot take out health insurance in the Netherlands, but will receive any medical care considered necessary by the attending physician. Those who cannot pay for their treatments may be eligible for assistance from the Health Care Institute. Asylum seekers awaiting a final decision on their asylum applications are insured collectively under the Asylum Seekers Health Care Scheme (RZA) and are entitled to almost all the care provided under the HIA and the LTCA.

2.1.3 Paying Providers

In the Netherlands, provider payments are often negotiated between providers and insurers or other third-party payers within budgetary constraints set by the government and/or maximum prices determined by the Dutch Health Care Authority. Table 6 summarises the main payment methods for the main providers of primary care (i.e., GPs), secondary care (i.e., hospitals, including medical specialists) and tertiary care (i.e., community nurses and nursing homes). We will discuss these payment methods in further detail below.

Table 6: Provider payment methods for providers of primary, secondary and tertiary care

Provider type	Payment methods
General Practitioners	<p>Mixed payment system, consisting of three components:</p> <p>Capitation plus fee-for-service (75–80%). On average, capitation accounts for approximately two-thirds and fee-for-service for one-third of this payment component.</p> <p>Bundled payment for multidisciplinary care for patients with chronic diseases (diabetes, COPD/asthma, vascular problems) (15%).</p> <p>Pay-for-performance, for instance for generic drug prescription, referral behaviour (5–10%).</p>
Hospitals (including medical specialists)	<p>Payment per diagnosis treatment combination (DTC), derived from global budgets or expenditure caps, negotiated per insurer.</p>
Community nurses (home health care organisations)	<p>Integrated hourly prices for a bundle of care activities, negotiated per insurer, usually combined with a negotiated budget ceiling per provider (for non-contracted providers, regulated maximum hourly prices for different care activities are determined by the Dutch Health Care Authority).</p>
Nursing homes	<p>Budgets and prices negotiated with regional health care administration offices (regionale zorgkantoren), based on regional budgetary constraints set by the government and maximum per diem rates differentiated per care package (that should be sufficient to cover all the care needed for a certain care profile) determined by the Dutch Health Care Authority.</p>

General practitioners

In 2015, the Dutch government introduced a new GP payment model, which consists of three components (Wammes et al., 2020). The first payment component, accounting for approximately 75–80% of GP income, reimburses core primary care services and consists of a capitation fee per registered patient, consultation fees for GP visits and phone consultations, and consultation fees for ambulatory mental health care at the GP practice. The Dutch Health Care Authority (NZa) determines maximum fees for this component. Although insurers can negotiate lower fees, in practice, maximum fees are typically paid. The second component, accounting for approximately 15% of GP income, reimburses programmatic multidisciplinary care for diabetes, asthma and COPD, as well as for cardiovascular risk management. This component is based on the 2010 experimental introduction of bundled payments for these chronic conditions. Health insurers are allowed to negotiate a single fee with newly established contracting entities, known as care groups, to cover the various types of primary care needed by patients with these chronic conditions. The initial evaluation of the programme indicated improvements in organisation and coordination of care, but at a substantial additional administrative cost (De Bakker et al., 2012). The third component, accounting for 5–10% of GP income, offers the opportunity to negotiate additional payments to encourage innovation and incentivise good performance, for instance, by rewarding the prescription of generic drugs.

Hospitals and medical specialists

Hospitals are paid per diagnosis treatment combination (DTC), meaning they are paid a price per bundle of activities required to treat patients with a certain diagnosis. For most of the approximately 4,400 DTCs, prices are freely negotiable between hospitals and insurers. Maximum prices are determined by the Dutch Health Care Authority for DTCs with the most complex and expensive treatments (accounting for approximately 30% of total hospital expenditure), which are typically performed in a limited number of hospitals. Since 2015, the remuneration of medical specialists has been integrated into DTC prices. This implies that health insurers negotiate integrated DTC prices with hospitals, and that hospital boards negotiate with free-standing medical specialists (usually united in a 'medical specialist firm' per hospital) regarding remuneration per DTC.¹⁴ A study of hospital-insurer contracts over the period 2013–2018 showed that, for almost all contracts, a global budget or expenditure cap was negotiated (Gajadien et al., 2023). The need for contracts with global budgets or expenditure caps emerged in 2012 when the government began to conclude general agreements with the national associations of hospitals, medical specialists and health insurers to limit annual total spending growth of the hospital sector. To enforce these agreements, the government created a "macro control instrument", making it legally possible to reclaim any overrun of agreed upon maximum national hospital expenditure growth by imposing a levy on each hospital in proportion to its revenues. Health insurers used annual national growth limits to negotiate global budgets and expenditure caps with hospitals. As a result, the primary role of prices per DTC became filling the budget or expenditure cap, rather than reflecting the underlying production costs of bundle of services per diagnosis. This is corroborated by a study showing substantive price variation between hospitals for the same products and within hospitals for the same product across insurers (Douven et al., 2020). The study found that the highest and lowest hospital contract prices differed by a factor of three or more for about half of the DTCs included in the sample. Moreover, contract prices did not follow a consistent ranking across hospitals, suggesting substantial cross-subsidisation between hospital products. Despite the government's aim to stimulate outcome-based payment and contracting (VWS, 2018), performance-based payment models remain seldom used in Dutch hospital care (Gajadien et al., 2023). However, in recent years, several experiments with

¹⁴ Referring to the existing rules and guidelines to enable collaborative agreements regarding the Right Care in the Right Place (see Case Study 2 on competition and collaboration), the Ministry of Health stated that both the Dutch competition authority (ACM) and the Health Care Authority will be requested to create as much room as possible within current legislation to facilitate the necessary coordination for these transformations.

bundled payments involving multiple providers for treating specific conditions have begun as promising first steps towards value-based payment in medical specialist care. An overview of these recent bundled payment experiments showed a broad range of initiatives, involving mental health care, care for rheumatoid arthritis, asthma and COPD, type 1 diabetes, breast cancer, HIV, stroke, cardiovascular diseases and integrated birth care (Cattel et al., 2021). In only a few of these experiments, however, payments were partially integrated across the bundle (i.e., shared savings or losses relative to an agreed upon benchmark).

Home health care organisations (community nursing)

Most home health care organisations providing community nursing negotiate integrated hourly prices for bundles of nursing and personal care activities with insurers. Approximately half of providers make specific contractual agreements with the largest insurer in their region regarding performance. Typically, these agreements concern the realisation of a certain (maximum) number of hours of care per patient and a certain level of average cost per patient in return for extra payment or a higher budget ceiling (Bakx et al., 2021). In a recent evaluation of provider-insurer contracts, the NZa (2019) concluded that there are few specific agreements about quality, innovation or prevention. One reason for this is that health insurers do not gather data on these topics and do not possess a set of relevant, reliable and comparable quality indicators about nursing and personal care. In a recently developed quality framework for nursing and personal care by the National Health Care Institute (ZIN, 2018b), however, providers and insurers committed to developing, measuring and implementing indicators for patient experiences and other quality indicators which should be used to provide patients and insurers with relevant quality information and providers with relevant feedback information.

Nursing homes

Nursing homes negotiate with their regional health care administration office on an annual basis about volume and prices. Negotiated prices (per diem) are generally lower than maximum prices per care package set by the NZa so that regional offices can adhere to the regional budget. Regional offices often apply the same rebate (a few percentage points) to the maximum prices to all providers (Bakx et al., 2021). In addition to negotiating prices, regional offices and providers negotiate budgets, which typically consist of a fixed ex-ante budget for most of the revenue and a smaller flexible budget based on the number of clients the nursing home can attract (Bakx et al. 2021). Contracts usually also contain agreements on quality of care. However, regional offices have limited information on the quality of the care provided (Bakx et al., 2021). The information that can be used in contracting consists of the report by the Health and Youth Care Inspectorate (IGJ) (the government agency responsible for enforcing basic levels of quality of care), client satisfaction data, data on employees' sick leave and the quality of administrative and management processes. In some instances, regional offices carry out file examinations. Providers also gather quality information, but a uniform quality measurement system is lacking, making it difficult to compare this information across providers. Specific agreements are made for the budget earmarked for quality improvements (Bakx et al., 2021).

2.2 Sustainability and resilience of health system financing

2.2.1 Sustainability

The Dutch health system offers universal access to a comprehensive package of health care and long-term care services at relatively low out-of-pocket costs. To sustain future access to an affordable broad set of necessary health services is a huge challenge, given expensive technological innovations, aging populations and the expansion of patients with multimorbidity. According to the Netherlands Scientific Council for Government Policy (WRR, 2021), this requires tough choices regarding which services should be covered by social health insurance and which services should

no longer be reimbursed owing to lack of cost-effectiveness or because they are 'not suitable' for treating certain conditions.

Notwithstanding these long-term challenges for financial sustainability, the level and growth of health care expenditure in the Netherlands has been quite moderate compared to other OECD countries, many of which saw the share of GDP spent on health care reduce from 10.6% in 2013 to 10.2% in 2019 (figures obtained from the online database OECD Health Statistics 2022).¹⁵ Hospital costs were effectively contained, due to the introduction, in 2012, of national agreements regarding annual restrictions on total hospital expenditure growth, which were translated into hospital-insurer contracts with global budgets and expenditure caps.

The strong focus on cost control, however, is increasingly criticised, resulting in intensifying policy efforts to enhance value-based health care by encouraging integrated care, concentration of complex care, outcome-based payment methods and multiyear contracting. To this end, the government has concluded an Integral Care Agreement (*Integraal Zorgakkoord*; IZA) with the associations of providers, insurers and patients (VWS, 2022b).¹⁶ Although the government does not want to fundamentally reform the current system, which is based on managed (or regulated) competition, the Integral Care Agreement clearly shows a shifting emphasis from competition to cooperation and concentration. For instance, to encourage "impactful transformations", defined as transformations having a major impact on health care utilisation, employment of personnel, the regional distribution of resources and/or the size of real estate, the government wants to allow "unidirectional" contracting. This implies that providers and health insurers will be allowed to coordinate contracting behaviour despite potentially violating the Dutch Competition Act.¹⁷ To qualify for an "impactful transformation", a "transformation plan" must be formulated, which must be reviewed by the two largest health insurers in the region, based on an assessment framework. Furthermore, to improve regional coordination of care, parties agree to develop 'regional visions' (*regiobeelden*) and regional plans for each of the 32 health care regions (as defined by the LTCA). In addition, to facilitate concentration, the Minister of Health decided to abolish the prevailing lower threshold for health care mergers for assessment of anticompetitive effects by the Dutch competition authority (ACM).¹⁸ Although better collaboration and more concentration may reduce coordination problems and facilitate better integrated care, it may also reduce incentives for efficiency, increase market power and restrict consumer choice.¹⁹ Therefore, it is unclear whether the proposed changes will ultimately result in a financially more sustainable health care system.

The financial sustainability of the Dutch health system is also hampered by two important incentive problems. First, health care insurers have few incentives to invest in improving care for people who are chronically ill because they are insufficiently compensated by the current system of risk equalisation. Although this system is quite sophisticated and has been considerably improved over

¹⁵ Excluding (medical) long-term care expenditure, which is relatively high in the Netherlands, expenditure as a share of GDP dropped from 7.6 to 7.3%, which is approximately the average OECD level (figures obtained from the online database OECD Health Statistics 2022).

¹⁶ All associations undersigned this agreement, which replaced the previous sectoral agreements, such as the general agreement with the hospital sector.

¹⁷ Referring to the existing rules and guidelines to enable collaborative agreements regarding the Right Care in the Right Place (see Case Study 2 on competition and collaboration), the Ministry of Health stated that both the Dutch competition authority (ACM) and the Health Care Authority will be requested to create as much room as possible within current legislation to facilitate the necessary coordination for these transformations.

¹⁸ This implies that, from January 2023, the threshold of the joint revenue of the merging health care organisations will be raised from €10 million to €30 million. According to the Dutch Competition Authority, the disadvantages to patients of raising the threshold for the assessment of health care mergers outweigh potential benefits (ACM, 2022e).

¹⁹ See Case study 2 for a more extensive discussion.

time, insurers still make a predictable loss on most individuals with chronic diseases, reducing incentives to attract those individuals by investing in well-coordinated good quality care (Van de Ven, 2021). Second, health insurers are legally required to reimburse most of the cost of care offered by non-contracted providers. This is because of the legal requirement that individuals are not hindered from visiting a non-contracted provider because reimbursement by insurers is too low. In mental health care and community nursing, in particular, a substantial number of providers choose not to contract with insurers. A comparison between the two types of community nursing providers shows that the costs per client of non-contracted providers are on average 60–70% higher than those of contracted providers (Van Gerwen et al., 2022). In the Integral Care Agreement, all parties agreed to counteract non-contracted care by, for instance, lowering the reimbursement of non-contracted providers. However, the current legal requirement that patients not be hindered by financial barriers to visit non-contracted providers (*hinderpaalcriterium*; article 13 of the Health Insurance Act) will not be changed, so it remains unclear whether the reimbursement of non-contracted providers can be reduced.

The LTC system in the Netherlands is known for providing broad access to a wide range of long-term care services, which includes both good quality nursing home care and extensive home care and social assistance. As a result, however, together with Denmark, Norway and Sweden, the Dutch LTC system is the most expensive within the OECD (OECD 2020). Within the EU, the Netherlands is among the highest spenders on long-term care according to the definition of long-term care used in the OECD System of Health Accounts (OECD/European Observatory on Health Systems and Policies, 2021). In 2019, per capita spending was €1,112 compared to the EU average of €617. Therefore, in view of the ageing population, the financial sustainability of the system is a matter of concern. In 2015, the LTC system was profoundly reformed to increase its financial sustainability, but the effects of the reform remain unclear. This reform led to a complicated mix of three financing schemes – social long-term care insurance, social health insurance and tax-financed social support – each of which pays for other types of long-term care. In all three schemes, the national government has delegated the contracting of private care providers to a different party (i.e., regional administration offices, health insurers, municipalities). At present, the incentives are not well aligned across government, health insurers and municipalities, and are sometimes contrary to the objectives of the reform (Alders & Schut, 2019; Bakx et al., 2021). For instance, municipalities have strong financial incentives for cost shifting to the LTCA by encouraging frail older people to apply for nursing home admission or substitutive home care covered by the LTCA. Hence, municipalities lack appropriate financial incentives to invest in facilitating people to stay at home for as long as possible (e.g., by developing adapted forms of living and e-health), despite this being one of the goals of the reform (Alders & Schut, 2022).

2.2.2 Resilience

The resilience of Dutch health care financing was severely tested by the COVID-19 pandemic. The main challenges were to protect providers and insurers against catastrophic losses and to maintain a level playing field within a competitive health system. As described and analysed in a separate case study,²⁰ these financial challenges were effectively addressed by a combination of structural provisions (i.e., the HIA's catastrophic cost compensation clause) and ad-hoc measures (i.e., continuity payments to providers and solidarity agreements regarding cross-subsidies between insurers).

²⁰ See Case study 1.

2.3 Recommendations for sustainable and resilient health system financing

The following recommendations are based on the observations presented in section 2.2.²¹

RECOMMENDATION 2A

Social health insurance coverage should be more closely tied to clinical and cost-effectiveness analyses. To this end, more empirical evidence on (cost-)effectiveness of new treatments and technologies should be gathered, together with evidence regarding the use (diffusion) of existing treatments and technologies covered by social health and long-term care insurance (see also Domain 4).

RECOMMENDATION 2B

The government should actively encourage and facilitate integrated (or bundled) and more outcome-based payment methods across providers, sectors and financing regimes. To this end, a standardised set of reliable and case-mix adjusted performance process and outcome indicators should be developed and implemented in provider-insurer contracting. Shared saving arrangements should be developed based on measurable performance targets to reward cross-sectoral coordination.

RECOMMENDATION 2C

Effective collaboration between providers and insurers should be encouraged, but within the system of regulated competition. Hence, strategic anticompetitive behaviour and consolidations to increase market power should be counteracted because these would destroy incentives to be more efficient. Given that most provider markets have limited geographical scope, increasing the turnover threshold for health care merger assessment is a step in the wrong direction as this makes it impossible for the competition authority to effectively prevent strategic anticompetitive mergers between local health care providers.

RECOMMENDATION 2D

The system of risk equalisation should be improved or augmented to eliminate predictable losses for insurers on people who are chronically ill. To this end, new promising methods, such as constrained regression, high-risk pooling and machine learning, should be explored (Van Kleef et al., 2022).

RECOMMENDATION 2E

Health insurers should be allowed to reduce the level of reimbursement for non-contracted providers and the current legal uncertainty regarding the minimum level of reimbursement should be eliminated. To this end, the current legal requirement that individuals may not be financially hindered to use non-contracted care (*hinderpaalcriterium*; article 13 of the Health Insurance Act) should be modified by the government by specifying which minimum level of reimbursement is socially acceptable.

RECOMMENDATION 2F

Financial incentives for prevention and an efficient provision of long-term care should be better aligned across government, health insurers and municipalities in line with the objectives of the reform to make the LTC system more sustainable. Policies to encourage elderly people to remain in their own homes for as long as possible should incorporate financial support for interventions to prevent hospitalisation and complications (secondary prevention).

²¹ For recommendations aimed at improving the resilience of health system financing, we refer to Case study 1.

3. DOMAIN 3

Workforce



3.1 Workforce for health system sustainability

3.1.1 Key data on the health care workforce

As Table 7 shows, the number of practicing physicians per 1,000 population in the Netherlands slightly increased from 2015 to 2020. This number is comparable to the OECD average.²² The density of practicing nurses also increased over the past five years and exceeds the OECD average of approximately nine nurses per 1,000 population. Overall, despite the growth in health and social employment per 1,000 population, the percentage of all jobs in this type of work remained fairly stable over the past decade equalling almost 16% in 2020, which is considerably higher than the OECD average of approximately 10%. This difference is likely to be (partly) caused by Dutch parttime working culture. Of all people working in the health care sector, 70.8% work part-time. For caregivers assisting individuals who have difficulty performing basic day-to-day activities, the percentage of part-time workers is more than 90%.²³

Table 7: Health workforce, density per 1,000 population

	2010	2015	2020
Practicing physicians	n/a	3.49	3.83
Practicing nurses	n/a	10.53	11.08
Total health and social employment (% total civilian employment)	83.90 (15.88)	81.35 (15.64)	87.44 (15.98)

Source: OECD Health Statistics 2022.

As Table 8 reveals, international workforce migration has a minor influence on Dutch health care provision. The percentages of doctors and nurses who obtained their degrees in other countries have increased over the past decade, but both are far below the OECD averages of 18% and 6%, respectively. Since 2010, the annual inflow of foreign-trained nurses has more than doubled, whereas the annual inflow of foreign-trained doctors initially fell and then returned to the previous level.

Table 8: Health workforce migration

	2010	2015	2020
Percentage foreign-trained doctors	2.6%	2.2%	3.6% ^a
Annual inflow foreign-trained doctors	226	161	225 ^a
Percentage foreign-trained nurses	1.1%	0.5% ^b	1.4%
Annual inflow foreign-trained nurses	91	100 ^b	193 ^b

a Break in the data after 2019.

b Break in the data after 2012.

Source: OECD Health Statistics 2022.

²² In this section, OECD (2021) is used for international comparison.

²³ www.cbs.nl/nl-nl/nieuws/2022/37/kassamedewerkers-werken-het-vaakst-in-deeltijd

As in most other OECD countries, the remuneration of Dutch GPs and specialists has increased since 2010 (Table 9), with remuneration of general practitioners rising much faster than that of specialists. As a result, in relative terms, the income gap between both has decreased. GP incomes are currently more than double the average wage in the Netherlands. The income of specialists, both salaried and self-employed, is approximately three-and-a-half times the average wage. The remuneration of hospital nurses is slightly higher than the average wage. Since 2010, the rise in income for hospital nurses has been comparable to the rise in income for GPs.

Table 9: Remuneration of health professionals (PPP for private consumption, in US\$)

	2010	2015	2020
General practitioners (Index 2010 = 100)	100,304 (100)	110,927 (111)	131,910 (132)
Specialists (Index 2010 = 100)	166,986 (100)	169,536 (102)	190,656 (114)
Hospital nurses (Index 2010 = 100)	54,519 (100)	59,976 (110)	71,170 (131)

Source: OECD Health Statistics 2022.

3.1.2 Long term workforce planning

The Netherlands Scientific Council for Government Policy research project report, *Sustainable Health Care*, concluded that health care workforce sustainability is a more urgent problem than financial sustainability (WRR, 2021). The government programme Working in Health Care has had a positive effect on labour shortages, but across sectors these remain substantial and persistent. According to the WRR, by 2030, approximately 20% of the total Dutch labour force will be needed to meet health care demand, while this percentage is expected to further increase to more than 30% by 2060. This is both unrealistic and undesirable from both the overall economic perspective and from the perspective of other (public) sectors.

Based on the outcomes of a forecasting model,²⁴ taking into account many relevant factors, including trends in labour productivity and labour supply, the Ministry of Health Welfare and Sports (VWS) annually informs parliament of expected staff shortages in health care. The most recent projection shows that the shortage remains undiminished, with the biggest short- and long-term shortages in nursing care, home care and mental health care (Table 10). In terms of types of professionals, the expected shortages are highest for (post-secondary educated) nurses.

Unfortunately, solving staff shortages in health care is difficult for two reasons. First, although vacancy rates in health care are at a record high,²⁵ according to figures from the Employee Insurance Agency (UWV),²⁶ other sectors (e.g., construction, hospitality industry, ICT, education) are also experiencing labour shortages. Therefore, there are shortages overall in the Dutch labour market and, according to Statistics Netherlands (CBS), there were 123 vacancies per 100 unemployed in the fourth quarter of 2022.²⁷ Second, there are a variety of reasons for staff shortage in health care. In

²⁴ www.prognosemodelzw.nl

²⁵ www.skipr.nl/nieuws/vacatures-in-zorg-nog-nooit-zo-hoog, 27 September 2022.

²⁶ UWV is an autonomous administrative authority and is commissioned by the Ministry of Social Affairs and Employment (SZW) to implement employee insurances and provide labour market and data services.

²⁷ www.cbs.nl/en-gb/visualisations/labour-market-dashboard

Table 10: Expected staff shortage in 2022 and 2031 (number of health care workers)

Health care sector	2022	2031
Disability care	2,100	8,800
General hospitals and other providers of medical specialist care	9,900	24,400
General practitioners and health centres	1,600	3,300
Home care	6,100	15,400
Mental health care	4,200	9,300
Nursing homes	17,900	51,900
Social work	600	2,800
University medical centres	2,600	6,500
Youth care	700	1,900
Other	3,000	10,600
Total	48,600	135,000

Source: VWS (2022c).

addition to increased demand and cost containment, physical and mental workload negatively contribute to staffing shortages. In the second quarter of 2022, 50% of all employees in the care and welfare sector thought their workload was too high or much too high, compared to 44% only six months earlier.²⁸ Therefore, a complex combination of policy measures is needed to break the current downward spiral caused by a high rate of sick leave and an increasing incidence of burnout that increase the workload for remaining health care professionals, resulting in even higher rates of sick leave and burnout.

When advising on how to improve the health care labour market, the Social and Economic Council of the Netherlands²⁹ identified five key priorities (SER, 2021): (1) professional autonomy of and for employees, (2) improve training, development and career opportunities, (3) employee retention, (4) valuation and employee involvement and (5) technological and social innovation. Each priority leads to more detailed recommendations at three different levels – individual health care organisations, the overall health care sector and the health system and the government. Given the size of the challenges, the SER explicitly warns that extra spending will be needed. This especially involves improving the valuation of health care workers through higher salaries and investment in training and development. At least to some extent, the public goal of health care workforce sustainability is, therefore, at odds with the public goal of financial sustainability. To illustrate this, the average monetary premium for mandatory basic health insurance in the Netherlands is expected to increase from €1,514 per year in 2022 to €1,649 in 2023. Of this €135 increase, €125 (92.6%) is

²⁸ www.cbs.nl/nl-nl/nieuws/2022/46/helft-zorgwerknemers-vindt-werkdruk-te-hoog

²⁹ The SER is the most important advisory body for the Dutch government in which employers, employees and independent experts work together to reach agreement on key social and economic issues.

the result of increased health care prices and wages. Due to high inflation, there is likely to be a further increase in wages that will spur further health care spending. For instance, ActiZ, which represents approximately 400 health care organisations providing nursing and care to approximately two million older and chronically ill people, recently urged the government to further increase financial opportunities for paying higher salaries to its employees.³⁰

Following the SER advice outlined above, the Dutch government published the policy document *Future proof health care labour market* (VWS, 2022g). The central message of this document is clear: “Scarcity [of health care workers] requires new paths and there is no time to lose. If we do nothing now, we run the risk that the quality and accessibility of care will be eroded.” To reduce employment growth between 2022–2025, from 140,000 to 110,000 new health care jobs, a variety of policy measures were announced to substantially invest in (1) staff retention, (2) lifelong employee development, (3) scaling up of innovations and task-shifting (e.g., resulting in new professionals, such as physician assistants and nurse practitioners) and (4) giving employees more control over their work and improving their happiness. The details of most investments, however, have not yet been worked out and their feasibility is thus unclear. In reaction to this policy document, the largest trade union in the Netherlands announced that it will no longer participate in government-initiated talks about improving the health care labour market because it expects “these will yield next to nothing”.³¹ According to the union, three strategies are required to solve the urgent labour problem in health care. First, more money must be made available to improve working conditions. Second, a reduction in administrative tasks is necessary to reduce workload. Third, flexibility and market forces in the health care sector must be curbed. The latter particularly relates to problems caused by the strong growth of self-employed medical professionals, such as (much) higher payments that make health care more expensive and cherry picking the most pleasant shifts, thus leaving evening, nights and weekends to salaried employees who, as a result, bear the burden of an increase in workload.

A potentially promising way to reduce (expected) staff shortages in health care is the increased use of medical technologies. According to research by Gupta Strategists (2022a), conducted on behalf of FME, the Dutch employers’ organisation for the technology industry, existing medical technologies, such as telemonitoring and social robots, offer possibilities to unlock 110,000 health care employees by 2031 which would be almost sufficient to solve the expected shortage.³² To make this possible, five policy recommendations have been formulated by FME (2022): (1) clear legal frameworks for collaboration in health care are needed, (2) the use of technology should become a permanent component of health care education and training, (3) the use of innovative technologies should be facilitated by introducing new payment methods and quality frameworks, (4) a joint European Health Dataspace should make it possible to access medical data safely and responsibly and (5) by acting as a coordinator, the government can help to strengthen the efforts of public and private parties and improve collaboration.

In September 2022, the Ministry of Health concluded the integral health care agreement (Integraal Zorgakkoord; IZA) with almost all relevant stakeholders in Dutch health care, in which all the aspects for improving health care workforce sustainability mentioned above were recognised and addressed. The goal is ambitious (VWS, 2022b): “*The agreements under the IZA should lead to a slower growth in the number of employees, so that the future demand for health care can be met with the [current] use of approximately one in six employees in the Netherlands.*” For this purpose,

³⁰ www.actiz.nl/actiz-reactie-op-prinsjesdag-kabinet-trek-de-lonen-de-zorg-gelijk, 20 September 2022.

³¹ www.fnv.nl/nieuwsbericht/sectornieuws/zorg-welzijn/2022/06/fnv-neemt-niet-deel-aan-zoveelste-haagse-overleg-a, 1 June 2022.

³² In a similar report, the Dutch Association of Innovative Medicines (Vereniging Innovatieve Geneesmiddelen) in July 2022 concluded that labour-saving therapeutic interventions also have great potential: see www.vereniginginnovatievegeneesmiddelen.nl/actueel/tekort-zorgpersoneel-daalt-met-14-door-gepast-gebruik-medicijnen.

many policy measures and action points are being proposed, including the concept of appropriate care (passende zorg),³³ that should substantially lower the demand for health care. However, the practical implementation of these policies and actions is yet to be determined and thus remains unclear. The biggest challenge now is how to move from words to actions.

3.2 Workforce for health system resilience

Despite extra staff shortages (e.g., ICU nurses), the COVID-19 pandemic in the Netherlands had a positive side effect that could contribute to improving health care workforce sustainability; that is, it spurred the use of e-health, including increased use of video consultations, online written consultations and remote patient monitoring, such as blood pressure or blood glucose measurements (Van der Vaart et al., 2022). While acknowledging that e-health and other new technologies can indeed help to solve, temporarily and permanently, staff shortages in health care, the Dutch Minister of Health has called it “an illusion” to think that the labour problem will be solved before the arrival of a potential new wave of COVID-19.³⁴ As part of its long term strategy to manage the risks of the pandemic (or a similar potential future health care crisis), the Dutch government has also addressed the need for extra health care staff in times of crisis (VWS, 2022d). In addition to investment in the newly developed six-month training programme for Basic Emergency Care nurses, it is explicitly mentioned that health care organisations can call on the National Health Reserve (NHR) when in need of extra capacity. This private initiative, financed by the Ministry of Health, creates regional communities of former health professionals that can serve as a last resort in the event of a crisis.³⁵ For the future, the aim of the government is to formalise the NHR as a public task and integrate it into the broader pandemic preparedness programme. Following an exploration conducted by the Ministry of Health (VWS, 2021b), the most important legal, organisational and financial issues are currently being worked out in more detail.

The realisation of an NHR is even more important as a crisis can put health care workers under enormous additional strain. The COVID-19 pandemic clearly illustrated this, especially in the early days, when personal protection equipment was not always available, vaccines were still lacking and many health care workers became infected, substantially increasing the workload for the remaining workers. Of the infected health care workers, thousands probably continue to experience persistent post-infection symptoms.³⁶ Since 2022, health care organisations have been able to apply for a government subsidy for the reintegration of employees suffering from long COVID.³⁷ Recently, an agreement was reached to provide an additional invalidity benefit for workers who care for (older) people at home and nursing home workers who experience long COVID.³⁸ As a general form of financial compensation for their extraordinary efforts, all health care workers, including those indirectly affected by the challenges imposed by the pandemic, were entitled to an extra bonus payment of €1,000 and almost €385, in 2020 and 2021, respectively. In total, the Dutch government spent €3 billion on these bonuses.³⁹

³³ <https://english.zorginstituutnederland.nl/zinnige-zorg>

³⁴ www.skipt.nl/nieuws/kuipers-bij-nieuwe-coronagolf-is-er-te-weinig-zorgpersoneel, 17 May 2022.

³⁵ <https://wij.nationalezorgreserve.nl/default.aspx>

³⁶ <https://nos.nl/artikel/2411199-duizenden-zorgmedewerkers-met-long-covid-vakbond-begint-meldpunt>, 29 December 2022.

³⁷ www.rijksoverheid.nl/ministeries/ministerie-van-volksgezondheid-welzijn-en-sport/nieuws/2022/06/15/loket-subsidieregeling-voor-behoud-zorgmedewerkers-met-post-covidklachten-vanaf-vandaag-open, 15 June 2022.

³⁸ <https://nos.nl/artikel/2445295-financiele-regeling-bereikt-voor-deel-zorgpersoneel-met-long-covid>, 20 September 2022.

3.3 Recommendations

Considering the findings reported above, we make the following recommendations.

RECOMMENDATION 3A

Staff shortages in health care are due to a variety of reasons. As a result, no single policy measure will resolve staffing issues. Higher salaries can help, but lowering physical and mental workload and improving career opportunities are at least equally important. Therefore, problems caused by the strong growth of self-employed medical professionals should be counteracted and a higher inflow of foreign-trained health care professionals should be considered.

RECOMMENDATION 3B

Adding to the previous recommendation, a strong focus on (further) increasing wages to make working in health care financially more attractive is undesirable. Higher salaries would substantially increase health care spending and thus seriously endanger the financial sustainability of the health care sector. Therefore, other financial incentives should be considered when looking for ways to counteract Dutch parttime work culture and increase the health care labour supply (e.g., childcare subsidies and income tax reforms).

RECOMMENDATION 3C

When trying to improve the health care labour market, the substantial and persistent labour shortages in other (public) sectors should also be considered. Fully meeting the expected increase in demand for health care workers is, therefore, both unrealistic and undesirable. As a result, it is necessary to (1) reduce health care demand by focusing more on labour-saving 'appropriate care', de-medicalisation, primary and secondary prevention and health promotion and (2) facilitate investment in and diffusion of innovative labour-saving medical technologies, digitalisation and the use of medical devices/tools as substitutes for current care.

RECOMMENDATION 3D

In order to strengthen the resilience of the Dutch health system workforce, in addition to investing in new training programmes to facilitate a more flexible deployment of existing health care staff in times of crisis, the government should prioritise the process of formalising the National Health Reserve (NHR) as a public task so that former health care workers can quickly be deployed to increase capacity when needed.

³⁹ www.rijksoverheid.nl/actueel/nieuws/2021/10/25/meer-dan-miljoen-zorgbonussen-2021-toegewezen, 25 October 2022.

4. DOMAIN 4
**Medicines
and
technology**



4.1 Adoption of innovative medicines and health technologies

An effective use of cost-effective medicines and health technologies can have important societal benefits and may contribute to the sustainability and resilience of a health system. For instance, as explained in Domain 3, this may substantially alleviate mounting pressure on the future workforce needs of health care.

However, not all medicines are cost-effective or (cost-)effectively used. Chandra and Skinner (2012) make a useful distinction between (1) highly cost-effective “home run” medicines and technologies with little chance of overuse (e.g., anti-retroviral therapy for HIV), (2) medicines and technologies that are highly effective for some but not for all (e.g., stents) and (3) a grey area of medicines and technologies with uncertain clinical value (e.g., ICU days for chronically ill patients). Not surprisingly, they find that countries that adopt medicines and technologies in the first category and those that adopt effective medicines and technologies in the second category gain the greatest health improvements, while countries that adopt ineffective medicines and technologies in the second category and those in the third category experience the most rapid cost growth.

Crucial for the adoption of new medicines and medical technologies in the Netherlands is admission to the basic benefit package of the Social Health Insurance scheme, as this offers people access to (i.e., reimbursement for) these new technologies. We will here focus the discussion on high-cost in-patient medicines (prescribed in hospital settings) and innovative medical devices, as these have the biggest impact on the sustainability and resilience of the Dutch health system.⁴⁰

4.1.1 Adoption of new medicines

In the Netherlands, the Minister of Health, subject to approval by parliament, decides which drugs are included in the basic benefit package of the social health insurance scheme (Health Insurance Act). The National Health Care Institute (*Zorginstituut Nederland*, abbreviated ZIN), an independent governmental advisory body, advises the Ministry about the inclusion of drugs. A prerequisite for inclusion in the basic benefit package is that the drug is approved by the EMA (European Medicines Agency) for the European market and by CBG (*College ter Beoordeling van Geneesmiddelen*) for the Dutch market.

The legal procedure for inclusion in the basic benefit package differs between out-patient drugs and in-patient drugs. There is a closed system (or positive list) of insurance entitlements in place for out-patient drugs, meaning that only drugs explicitly included in the basic benefit package, after assessment by ZIN (2020), are covered. Meanwhile, an open system of insurance entitlements is in place for in-patient drugs, meaning that new drugs “complying to the state of science and practice” are automatically reimbursed by the social health insurance scheme (i.e., included in the basic benefits package).⁴¹ However, since 2015, an exception has been made for the inclusion of in-patient drugs that may pose a risk to the quality, accessibility and affordability of the basic benefit package. The focus of this section is on the adoption of these new expensive in-patient medicines, as they have the largest budget impact and, for which a so-called ‘sluice procedure’ has been introduced. Selection for the ‘sluice procedure’ is based on a medicines horizon scan (*Horizonscan Geneesmiddelen*), which is an ongoing monitor by ZIN (published online twice a year) of the possible budget impact of new drugs (or expanding indications of existing drugs) expected to be registered in the European market within two years. The Minister of Health can put a drug in the sluice if (1) the expected budget impact of one or all indications exceeds €40 million per year and/or (2) the expected cost for a new indication exceeds €50,000 per patient per year and the expected budget

⁴⁰ Digital health technologies are discussed in Domain 5.

⁴¹ If a specialist drug is prescribed within the hospital and this drug is not included on the positive list of out-patient drugs, its use can be continued post-discharge if it is prescribed by a hospital-based medical specialist.

impact exceeds €10 million per year. For as long as drugs are in the sluice, they will not be reimbursed by health insurers. Nevertheless, the drug may still be available to patients, because during this period most producers provide these drugs for free.

In-patient drugs meeting the criteria to be put in the sluice must first undergo a pharmacotherapeutic assessment and budget impact analysis by ZIN. If the pharmacotherapeutic assessment demonstrates that the new drug has added value in terms of clinical effectiveness, a cost-effectiveness analysis (CEA) is required. Cost-effectiveness analyses are based on the list prices of new drugs, which may diverge from the actual prices negotiated and paid by health insurers. For admission to the basic benefit package (i.e., reimbursement by health insurers), a cost-effectiveness threshold must be met. Three CEA thresholds are distinguished, depending on the estimated burden of illness,⁴² reflecting an increasing willingness to pay (WTP) for a higher burden of illness (see Table 11). ZIN performs the CEA from a societal perspective, meaning that all relevant societal cost and benefits are considered in the analysis.⁴³

Table 11: Reference values for cost-effectiveness

Burden of illness (between zero [no loss of QALYs] to 1 [total loss of QALYs = death])	0.10–0.40	0.41–0.70	0.71–1.00
Maximum reference value per QALY gained	€20,000	€50,000	€80,000

Based on an integral assessment of effectiveness, cost-effectiveness, necessity and feasibility, and after consulting the Advisory Committee Package (Adviescommissie Pakket, abbreviated ACP), ZIN advises the government whether to admit a certain (expensive) drug to the basic benefits package. If the estimated CE ratio exceeds the relevant threshold for the new drug, ZIN may recommend admitting the drug to the basic benefit package only under certain conditions or not admitting it at all.

Hence, in case of a positive outcome, ZIN also recommends (1) whether the government should negotiate a lower price with the pharmaceutical firm (e.g., to meet the relevant cost-effectiveness threshold) and (2) in consultation with the medical profession, how the drug should be prescribed, i.e., for which patients and treatments. If price negotiations are recommended, ZIN may also recommend a maximum negotiating price. These maximum prices may be derived from the CEAs or based on a comparison with the cost of other drugs within the same therapeutic class. From 2017 to 2020, ZIN recommended a specific maximum price (or minimum price discount) for 15 new expensive drugs (VWS, 2021d).

The first price negotiations between government and industry started in 2012. To this end, a specific unit (*Buro Financiële Arrangementen Geneesmiddelen*) was established within the Ministry of Health. Depending on the outcome of price negotiations, the Minister of Health decides whether to include the new drug in the basic benefit package. However, the results of these price negotiations are often confidential because producers are sometimes unwilling to publicly reveal the price discounts they have negotiated with the government. If price negotiations are not yet completed, the new medicines are not reimbursed by the health insurers and, in the meantime, producers may provide these medicines for free; however, this common practice is meeting increasing resistance from the pharmaceutical industry as it can be very costly (Vaessen, 2022).

⁴² ZIN calculates the burden of illness using the proportional shortfall method (ZIN, 2018a). This method is based on a calculation of the proportional loss of quality-adjusted life years of people with a certain illness relative to those without that illness.

⁴³ This implies that all costs and benefits must be considered, irrespective of those who reap the benefits or bear the costs. Therefore, benefits and costs outside the health care system must also be considered, such as the cost of informal care for the family or costs due to productivity losses.

Example of sluice procedure: nivolumab for patients with lung cancer

In 2015, nivolumab, a drug for patients with terminal lung cancer, was the first expensive innovative drug put in the sluice.

The expected budget impact of nivolumab was estimated to be €200 million and the estimated health gain was 0.77 life years (LY) or 0.61 quality-adjusted life years (QALY). ZIN's estimated cost-effectiveness (CE) ratio was €134,000 per QALY (the producer's estimate was considerably lower, at €62,000 per QALY). This CE ratio substantially exceeded the relevant threshold of €80,000 (see Table 11).

ZIN therefore recommended the Minister of Health to negotiate a price at least 43% lower. During the price negotiations, nivolumab remained in the "package sluice" for six months and its use was paid for by the producer. After successful negotiation for a lower price, nivolumab was admitted into the basic benefit package on 1 March 2016.

Access to and reimbursement of new medicines for Dutch patients is relatively high and fast in comparison to most other European countries, as shown in a comparative study by Newton et al. (2022). According to that study, the rate of availability to patients of new medicines approved by EMA over the period 2017–2020 was 70% (112 out of 160) for the Netherlands, which is substantially above the European average of 46%, but substantially below the German rate of 92%, which is at the top of the ranking (Netherlands is ranked sixth out of 39 European countries). The time to availability of new medicines, measured as the number of days between market authorisation and admission to the basic benefit package (i.e., reimbursement), is also relatively short, as the Netherlands is ranked fourth in Europe, with an average of 294 days, which is less than half the EU average of 511 days (Newton et al., 2022). Again, access to newly approved medicines is much faster in Germany, with an average time to availability of 133 days. Until recently, new medicines could enter the German market with free pricing for the first year until a value assessment was performed and a coverage decision made. Therefore, the difference in access to new medicines in the Netherlands and Germany is likely to be at least partly due to the Dutch sluice system. According to the Ministry of Health, the average length of sluice procedures for expensive new drugs (i.e., the time required from access to the European market until admission to the basic benefits package) is approximately 13 months (VWS, 2021d). Despite relatively fast adoption of new expensive medicines, the pharmaceutical industry is increasingly critical of lengthy price negotiations and the lack of reimbursement in the meantime.⁴⁴ The Dutch government has been criticised for taking too long to negotiate prices, thereby relying on free expensive new drugs offered by producers during the negotiation process. For the first time, a French pharmaceutical firm decided not to offer its new cancer drug for free during the price negotiation process (Vaessen, 2022). To prevent access to new expensive beneficial drugs, pharmaceutical firms and a patient association (Vaessen, 2022) have suggested retrospectively compensating producers for providing drugs during the negotiation process, based on the negotiated prices. This suggestion is in line with current practice in other European countries, including France, Germany and Italy.

4.1.2 Adoption of other new technologies

As with in-patient drugs, there is an open system of insurance entitlements in place for treatments with new technologies. This implies that inclusion in the basic package of the social health insurance (SHI) scheme and reimbursement by health insurers is dependent on general criteria and

⁴⁴ Some countries (e.g., France) provide temporary reimbursement during price negotiations, thereby offering patients direct access after EMA approval.

how these are interpreted by health care providers, health insurers and the National Health Care Institute (ZIN). There is no standard requirement to assess the effectiveness or cost-effectiveness of new technologies for their admission to the basic benefit package. If health care providers, health insurers or insured persons doubt whether a new technology should be covered by SHI, they may request ZIN to assess if it is justified. ZIN can also decide to initiate such an assessment without request. The assessment by ZIN is based on legal criteria primarily regarding the effectiveness of the new technology (i.e., whether it complies to the state of science and practice). ZIN may also assess the cost-effectiveness, necessity and feasibility of the new technology, but this is not legally required. If ZIN concludes that evidence of the effectiveness of a new technology is negative, the technology may still be conditionally admitted to the basic benefit package, under the condition that research will be undertaken to establish its effectiveness.⁴⁵ When an assessment by ZIN does not take place, new technologies that are not (cost-)effective can be adopted and reimbursed if providers and insurers agree about this.

Unrestricted access to some new technologies may be unwarranted for reasons of quality and efficiency. In these cases, the government has a legal instrument, based on the Special Medical Procedures Act (WBMV), to restrict their use by requiring a license to provide care using these technologies. Typically, this instrument is used in the case of complex and very expensive technologies, such as organ transplant, neonatal intensive care and proton therapy, or in the case of technologies with important ethical implications, such as clinical genetic research and in vitro fertilisation (IVF). By restricting the number of providers approved to provide these special medical producers, the government can concentrate provision and expertise, which may reduce both adverse outcomes and costs (prices of these procedures are regulated). If restricting access to a specific technology is no longer deemed necessary, such as when a technology becomes more mature, requires fewer specific skills or becomes less expensive, then the legal licensing requirement can be terminated.

4.2 Sustainability of access to innovative medicines and health technologies

4.2. Sustainability of access to innovative medicines

Pharmaceutical spending in the Netherlands is among the lowest within the OECD, as a share of total health spending (6.9% in 2020), as a share of GDP (0.77% in 2020) and as spending per capita (US\$426 in 2020).⁴⁶ This is partly due to price negotiation (tendering contracts for generic drugs) and partly due to reluctant prescription behaviour by GPs and other health care providers. In 2020, generics accounted for 79% of total pharmacy prescriptions but only 23% of total prescription drug costs (based on pharmacy purchase prices) (SFK, 2021). The low prices of generic medicines make the Netherlands relatively unattractive for pharmaceutical suppliers, which has resulted in increasing temporary supply shortages during the past decade. From 1 January 2023, marketing authorisation holders and pharmaceutical wholesalers are legally required to maintain a 2.5 month 'iron stock' of medicines.⁴⁷

Within the Dutch context, the main concern regarding financial sustainability of access to medicines is the growth of new expensive medicines, which will be the focus of the remainder of this subsection.

⁴⁵ This system of conditional admission (*Voorwaardelijke toelating*) has been in place since 2012. In 2019, this regulation was expanded to expensive drugs for serious or rare diseases for which no adequate treatments are available.

⁴⁶ <https://data.oecd.org/healthres/pharmaceutical-spending.htm>

⁴⁷ www.knmp.nl/actueel/nieuws/aanleg-ijzeren-voorraad-geneesmiddelen-verplicht-1-januari-2023

Sustainability of access to new expensive medicines

The open system for including expensive in-patient medicines in the basic benefit package of the SHI scheme guarantees universal and relatively fast access to innovative health technologies for the Dutch populace. However, the open system may also facilitate access to cost-ineffective medicine or the (cost-)ineffective use of potentially cost-effective medicine and may, therefore, threaten financial sustainability. In addition, the open system may enable producers of innovative technologies for which there are no alternatives to charge monopoly prices because of their excessive market power. To keep the open system sustainable, the sluice system with (sometimes lengthy) central price negotiations has been introduced for expensive new in-patient medicines and medicines with a high budget impact. An evaluation by the Netherlands Court of Audit (ARK) pointed out that the sluice system has likely contributed to the financial sustainability of the system (Algemene Rekenkamer, 2020).

The Dutch sluice system for new expensive drugs is intended to keep the prices of innovative expensive drugs at a socially acceptable (sustainable) level because it forces producers to negotiate prices with the government to meet cost-effectiveness thresholds. To inform parliament, each year the government provides a general overview of the overall results of the financial arrangements negotiated with the pharmaceutical industry. In its most recent report, the government claimed that, in 2020, price negotiations of 21 new expensive in-patient drugs reduced costs by 47% (see Table 12) relative to the original list prices (VWS, 2021d).

Although the realised savings look impressive, they are calculated relative to prices initially set by the pharmaceutical industry. Pharmaceutical firms may anticipate price negotiations by setting high initial prices; in which case, they might be able to offer high discounts and still make substantial profits. More insight into the production costs of innovative medicines is required to be able to assess whether the prices are indeed not higher than necessary to make a reasonable profit.

Moreover, as shown in Table 12, more than half of these hypothetical savings are realised through confidential price negotiations. Given that the negotiated prices and production costs of these drugs are not known, it is difficult to establish whether these confidential prices reflect the production costs (including R&D) of the innovative drugs. In an investigation based on confidential data from 32

Table 12: Reduction of expenditure on new expensive in-patient drugs as a result of price arrangements in 2019 and 2020

	2019	2020
Number of active price arrangements	15	21
Hypothetical expenditure calculated at list prices (€ million)	627.5	807.8
Publicly reported price discounts (€ million)	144.2	168.3
Confidential expenditure reduction (€ million)	140.2	214.9
Realised expenditure with price arrangements (€ million)	343.1	424.6
Hypothetical expenditure reduction (€ million)	284.4	383.2
Hypothetical savings due to price arrangements (%)	45.3%	47.4%

Source: VWS (2021d).

price agreements between the government and the pharmaceutical industry from 2012 to 2018, the Netherlands Court of Audit (ARK) found that in five out of 13 agreements in which ZIN recommended a cost-effective maximum price, the negotiated price exceeded the advisory price (Algemene Rekenkamer, 2020). The ARK concluded that price negotiations were only partially successful in realising cost-effective drug prices and recommended strengthening the bargaining position of the Dutch government. For instance, the ARK recommended explicitly establishing a rule that negotiated prices may not exceed the ZIN's CEA-based advisory price and investing in societal support for negative decisions on admission to the basic benefit package in the case of producers unwilling to comply with these advisory prices. In its most recent report on the impact of price negotiations, the government claims that, in 2020, total expenditure on 15 drugs for which ZIN advisory prices were available was 16% lower (€411 million vs €491 million) than if the advisory prices had been paid for these drugs, despite some of the negotiated drug prices exceeding the advisory price (VWS, 2021d).⁴⁸

An important drawback of setting maximum advisory prices based on CE thresholds is that these prices may also serve as a focal point, incentivising producers to negotiate prices closely to this maximum socially acceptable price even if a much lower price is possible. Therefore, maximum prices may also turn out to be minimum prices. Since actual production costs (including the fixed costs of R&D) are typically not known, it is impossible to assess whether these prices remain much higher than necessary (i.e., higher than competitive prices could have been). Therefore, a novel pricing model has been proposed for setting reasonable and affordable prices of new expensive anti-cancer drugs, in which maximum prices are calculated to reflect the clinical value of the drug (as compared to other available treatments), ensuring that the drug is accessible to patients and sustainable for both national health care and reimbursement systems and for pharmaceutical companies (Uyl-de Groot & Löwenberg, 2018).

In its coalition agreement, the new Dutch cabinet, which came into office in January 2022, stated that it will substantially reduce the threshold for price negotiations for new expensive drugs. Specifically, the expenditure threshold would be lowered from €40 million to €10 million per year (VWS, 2022e). This regulation should be effective from the second quarter of 2023 and will certainly expand the range of new drugs for which prices can be centrally negotiated. Obviously, this may mitigate future increases in expenditure on new expensive drugs. A potential disadvantage, however, is that this could also slow down access to new drugs on the market (i.e., reimbursement).

Another potentially effective way to mitigate the future costs of new expensive drugs is to cooperate with other countries in negotiating drug prices. In 2015, the health ministers of Belgium, Netherlands and Luxembourg started an initiative to explore possible collaboration on pharmaceutical policy. In 2016, Austria joined the newly named Beneluxa initiative, which aims for sustainable access to, and appropriate use of, medicines in the participating countries. Two years later, Ireland also joined the Beneluxa group. In 2021, for the first time, the Netherlands, Belgium and Ireland jointly negotiated the price of a new expensive gene therapy (Zolgensma) for treating spinal muscular atrophy (SMA).⁴⁹

When new drugs are admitted to the basic benefit package, a relevant question for assessing their financial sustainability is whether hospitals or health insurers have incentives and tools to restrict their use. Dutch hospitals and health insurers typically negotiate a fixed budget (lump sum) or expenditure cap for care provided by hospitals. Until 2018, new expensive drugs were included in the hospital budget, putting hospitals at substantial and increasing financial risk, with many hospitals faced with overrunning their available innovative drugs budgets. Since then, health insurers agreed

⁴⁸ It should be noted that, in contrast to the ARK, the Ministry of Health also calculated savings on indications other than the original indication for which the new drug was developed. Therefore, the savings as calculated by the Ministry are larger than those calculated by ARK.

⁴⁹ www.vbb.com/media/Insights_Articles/Zolgensma_Pricing_08102021.pdf

to carve out expensive drugs from the hospital budget/expenditure cap. As a result, the financial risk arising from expenditure on these drugs has shifted towards health insurers and, thus, to society as a whole.

The financial sustainability of new expensive in-patient drugs is monitored by the Dutch Health Care Authority (NZA). In its most recent report, the NZa (2022b) concludes that the strong growth of expenditure on new expensive in-patient drugs (a fourfold increase from 2017 to 2020) may not be sustainable as, given the restricted total budget that is available for hospital care, this is crowding out other medical specialist care.⁵⁰ According to the NZa, strong spending growth is caused by the combination of an increasing number of new expensive drugs, increasing utilisation (i.e., more indications and more patients)⁵¹ and increasing prices. Increasing utilisation is incentivised by the agreement that these expensive new drugs are carved out from the hospital budget. In contrast to other hospital services, effective budgetary restrictions on the utilisation of expensive new drugs are lacking.

4.2.2 Sustainability of access to other health technologies

Total expenditure on other health care technologies was estimated at €4.7 billion in 2017 or about 5% of total health care expenditure, and this expenditure is expected to grow substantially (Oosterkamp et al., 2021).

In a study on the introduction of expensive medical technologies in the Dutch health system, the CPB Netherlands Bureau for Economic Policy Analysis concluded that new ineffective technologies have a higher chance of being quickly adopted than being denied access to reimbursement (Mot et al., 2017). According to CPB, this is due to the open system for inclusion in the basic benefits package, a lack of evidence concerning the cost-effectiveness of many new health technologies and the moral hazard that incentivises both providers and patients to use new technologies, irrespective of cost. On the other hand, there is also substantive evidence that potentially cost-effective medical technologies have trouble entering professional standard practice and gaining access to reimbursement from social health insurance or other public funding (Torbica & Capellaro, 2010). To improve transparency regarding the quality and safety of medical devices, the European Union Medical Device Regulation (EU MDR) was released in 2017. However, whether this will be effective in encouraging the adoption of cost-effective technologies and preventing the adoption of (cost-)ineffective technologies from the European market remains to be seen.

Although the Special Medical Procedures Act (WBMV) empowers the government to place restrictions on the use and dissemination of new health technologies, this instrument is only meant as a last resort. Moreover, as highlighted in an evaluation of the WBMV, the licensing system is vulnerable to being influenced by stakeholders, due to a lack of clear definitions and procedures (Bouwman et al., 2012). Whether the WBMV has a positive impact on efficiency is unclear. According to stakeholders, the concentration of expensive technology has likely resulted in more efficient use and higher quality due to economies of scale, but licensing procedures can be costly and time consuming (Bouwman et al., 2012). The Health Council of the Netherlands (2021) recently advised that the WBMV licensing system “would benefit from greater clarity and less ambiguity” and suggested several (interim) evaluation criteria that can be used for deciding upon inflow and outflow of the technologies to which this licensing system applies.

Therefore, it is doubtful whether the current method of adopting new health technologies is financially sustainable. In its coalition agreement, the new Dutch cabinet announced a plan of action

⁵⁰ According to NZa (2022a), the COVID-19 pandemic did not have a noticeable impact on expenditure on expensive specialist drugs.

⁵¹ Whereas prices often remain, based on a much smaller patient base to which the original patent status was applicable (e.g., in the case of orphan diseases).

to control expenditure on expensive medical or health technologies with a high budget impact (VWS, 2022e). The primary focus will be on increasing buying power and improving coordination of purchasing expensive medical technology to counteract current incentives for both providers and patients to use these technologies, irrespective of cost. In addition, the option of central price negotiations, as in the case of expensive medicines, will be explored. In 2020, the Dutch parliament adopted a motion requesting the Minister of Health to examine whether the sluce system for expensive medicines could also be a useful instrument to improve the adoption of other expensive medical technologies. In a subsequent investigation by two consultancy firms, it was concluded that the sluce system may not be the most suitable instrument to improve the adoption of new expensive technology (Oosterkamp et al., 2021). According to that study, the problems underlying sustainable adoption are likely to vary widely owing to the great diversity of medical technologies. For some technologies, high prices may be the result of excessive market power while, for others, the main problem may be limited evidence of cost-effectiveness or ineffective procurement coordination. If excessive power is absent, it is questionable whether a sluce system is an appropriate instrument. The selection for such a 'sluce procedure' should, at least, be based on a health technologies horizon scan, in which expensive health technologies are identified for which high prices due to excessive market power may be the problem.

4.3 Medicines and technology for health system resilience

During the COVID-19 pandemic, the resilience of the Dutch health system was limited. The first months of the COVID-19 crisis, in particular, saw multiple shortages of ICU-beds and ventilators, specialised workforce, personal protective equipment (PPE) and test capacity (both materials and infrastructure). The pandemic clearly revealed the vulnerability of a relatively small country with limited domestic production capacity to safeguard a timely and sufficient supply of critical medicines and health technology.

In addition, it took a long time to organise sufficient test capacity, which was caused by the restricted and highly regulated use of laboratory capacity for public health and a lack of coordination due to locally fragmented decision-making and infrastructure (Wallenburg et al., 2022).

As with testing, vaccination against COVID-19 faced several bottlenecks. Despite taking the initiative early in the pandemic (June 2020), together with Germany, France and Italy, to invest in the development and procurement of vaccines, the Dutch government's delivery and distribution of vaccines were slow and cumbersome. An important bottleneck was the lack of a central vaccination registry and the poor quality and communication of various registries (e.g., municipal public health offices, hospitals and GPs), which made it difficult to effectively target relevant risk groups within the population. In a recent evaluation of the Dutch system of vaccination, the Council of Public Health and Society (RVS, 2021) concluded that most problems occurred because COVID-19 vaccination campaigns were handled as normal vaccination campaigns, involving all parties with responsibility for regular vaccination programmes, despite not all of these being capable or sufficiently equipped to handle a crisis.

In April 2022, the Ministry of Health sent a pandemic preparedness policy agenda to parliament, in which the main policy measures to prepare for future pandemics were set out (VWS, 2022f). With regard to improving access to and supply security of essential drugs and medical technology, the following policy measures were announced:

- Investing in "open strategic autonomy" to reduce vulnerability due to dependency on the international supply of medical products, by diversifying supply chains and production of essential medicines and technology closer to home (i.e., within the Netherlands or the EU). In line with this, the Dutch government supports the EMA initiative to develop a critical list of drugs and medical devices that need to be readily available in crises, and the establishment of the European Health Emergency Preparedness and Response Authority (HERA). In addition, strategic

partnerships will be explored with countries outside the EU (e.g., India, China, US) that are important producers of medicines, medical technology and essential raw materials.

- Investing in scalability and strategic reserves of essential drugs, basic materials (active pharmaceutical ingredients (APIs) and personal protective equipment (PPE)).
- Improving monitoring and coordination of demand and supply of essential drugs and medical technology, for instance, by the continuation of the National Coordination Centre Medicines (LCG), which was set up during the pandemic, and the establishment of a national contact point for shortages of medical technology (in addition to a similar already existing national contact point for shortages of medicines).
- Investing in accelerating research, development and implementation of new therapies and vaccines, for instance, by utilising existing organisations such as the FAST initiative (Future Affordable and Sustainable Therapies).

4.4 Recommendations

From the above analysis, it is apparent that both the sustainability and resilience of access to medicines and technologies in the Dutch health system can and should be improved.

RECOMMENDATION 4A

Access to innovative and cost-effective medicines and health technologies is crucial for a sustainable and resilient health system. The open system of admitting new in-patient medicines and medical technologies to the basic benefits package of social health insurance effectively facilitates the adoption and use of these innovations and should, therefore, be maintained. However, since not all innovative medicines and health technologies are cost-effective or (cost-)effectively used, unrestricted access threatens financial sustainability. Therefore, an open system should be accompanied with restrictions to counteract cost-ineffective (use of) innovative drugs and technologies, as specified in the following recommendations.

RECOMMENDATION 4B

The Dutch sluice system could be made more effective by adopting a rule that new expensive in-patient medicines can only be admitted to reimbursement from social health insurance if negotiated prices do not exceed the maximum price recommended by ZIN, based on the maximum socially acceptable CEA-threshold level (exemptions from this rule could be granted only in exceptional cases, e.g., for rare diseases within paediatric populations). Even then, however, prices may be higher than necessary because the maximum price may serve as a focal point. Therefore, other pricing models should be considered and developed, such as along the lines of the recently proposed pricing model for anti-cancer drugs in which maximum prices reflect the clinical value of the drugs compared to other available treatments (Uyl-de Groot & Löwenberg, 2018).

RECOMMENDATION 4C

To guarantee that patients have access to beneficial new expensive drugs during central price negotiations and to increase incentives for reducing the length of the negotiation process, the government should retrospectively compensate producers for delivery of these drugs during the negotiation process, based on the negotiated prices. This recommendation is in line with current practice in other European countries (i.e., France, Germany and Italy).

RECOMMENDATION 4D

A system of horizon scanning could be introduced to identify expensive medical technologies that may not be cost-effective or for which prices may be too high because of excessive market power (see also Mot et al., 2017). This would make it possible to exclude cost-ineffective technologies from the basic benefit package or to centrally negotiate prices in cases of excessive market power. As

suggested by CPB, new technologies for which the (cost-)effectiveness is yet unclear might be temporarily reimbursed based on a system of “reference pricing with evidence development” (Mot et al., 2017). This implies that the price of the existing technology will serve as a reference price for reimbursing the alternative new technology until sufficient evidence is available regarding additional value that may warrant a higher price or reimbursement level.

RECOMMENDATION 4E

The Act on Special Medical Procedures (WBMV) which empowers the government to restrict the use and spread of new complex and expensive health technologies by requiring licenses could be made more effective by adopting more systematic and transparent procedures, including a clear assessment framework, for the application of these licensing requirements (Bouwman et al., 2012; Mot et al., 2017; Health Council of the Netherlands, 2021).

RECOMMENDATION 4F

To prevent the cost-ineffective use of potentially cost-effective innovative medicines and health technologies, entitlement to reimbursement from social health insurance should be restricted to indications and patient groups for which cost-effectiveness has been convincingly established. Health insurers should include these restrictions in their contracts with health care providers or, in case of uncertainty about cost-effectiveness, should make arrangements regarding, for instance, desired outcomes or treatment duration. This should be clearly communicated to enrollees.

RECOMMENDATION 4G

For a relatively small country such as the Netherlands, with a limited domestic production capacity and restricted direct access to essential raw materials, effective cooperation within the EU and other strategic international partner countries is vital to improve both sustainability and resilience. To improve access to safe and effective medical technologies and to prevent the adoption of ineffective ones, it is imperative that more evidence on cost-effectiveness within the EU, stimulated by the EU Medical Device Regulation, is gathered (see also Mot et al., 2017). Furthermore, international agreements on licensing and access requirements for medical technology are necessary to maintain fair competition across countries for investments in R&D by international suppliers.

5. DOMAIN 5
**Service
delivery**



5.1 Service Delivery Sustainability

In this section, the sustainability of Dutch health service delivery will be discussed through the lens of efficiency, quality of care and access to care. In addition, the importance of primary care, preventive care and new care models in improving service delivery sustainability will be explored.

5.1.1. Efficiency and quality of service delivery

In the Netherlands, average length of stay in hospitals declined from 6.8 in 2005 to 5.2 in 2012. From 2012 to 2019, however, the average length of stay remained stable at 5.2 days.⁵² Every year, all institutions providing specialist medical care are obligated to report on a set of quality outcomes determined by the Health and Youth Care Inspectorate (*Inspectie Gezondheidszorg en Jeugd*; IGJ). Only information on a limited number of these outcomes is made public. Moreover, these publicly available measures are often not adjusted for case-mix (patient and disease characteristics). Reliable, essential information is thus often unavailable, restricting the possibility for conclusions about efficiency. Average length of stay for specific diseases or diagnoses, such as acute myocardial infarction, are not published in the Netherlands. The Dutch reimbursement system incentivises providers to reduce readmission rates. When a patient is readmitted for the same primary diagnosis within 42 days of initial diagnosis, the health care provider cannot open a new hospital product code (diagnosis treatment combination; DTC), which implies that the cost of the readmission will not be reimbursed (NZa, 2021a).

Quality of health care services in the Netherlands is upheld through quality standards embedded in several laws. New health care institutions that deliver specialised medical care and all new institutions that deliver care covered by the Health Insurance Act or the Long-term Care Act and employ more than 10 staff members, are obligated by law to apply for authorisation to provide care (*Wet Toetreding Zorgaanbieders*).⁵³ In addition to this authorisation, institutions must install a complaints committee, a patients' council and a system through which incidents can be recorded by staff (*Wet Kwaliteit, Klachten En Geschillen Zorg*; *Wet Medezeggenschap Cliënten Zorginstellingen*). The care provided must meet the quality standards adopted by the individual professions and certain care services can only be carried out by professionals with a protected title under the Individual Health care Act (*Wet Op de Beroepen in de Individuele Gezondheidszorg*, *Wet Toetreding Zorgaanbieders*). The IGJ monitors safety, quality and accessibility of health care through, inter alia, site visits, data collection and the investigation of incidents and accidents. When health care quality does not meet pre-defined quality or safety standards, the inspectorate may intervene with the imposition of fines, the intensification of supervision or the closure of the providing institution.

Although the 2006 Health Insurance Act assigned health insurers the task of providing accessible, affordable good quality health care to their patients, current provider-insurer contracts often do not explicitly reward quality (Cattel et al., 2020). Innovative payment models, such as bundled payments, shared savings models and pay-for-performance agreements, promote cooperation between sectors and explicitly reward both quality and health care outcomes. Despite these benefits, negotiations on alternative agreements are time consuming. Additionally, challenges currently complicating the use of alternative payment models include incompatible reimbursement systems, legal obstacles and uncertainty regarding the correct sums of money agreed upon in financial agreements (Cattel et al., 2021; NZa, 2021b).

⁵² <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/84069NED/table?ts=1633083925267>

⁵³ This law, introduced on 1 January 2022, replaces a previous law and aims to reinforce the prevention of fraud by health care providers. To date, however, none of the institutions applying for authorisation have been subjected to the reinforced checks facilitated by this law, as reported by an expert in Dutch health law (www.rthnieuws.nl/onderzoek/artikel/5292480/zorgdirecteur-straftblad-verdacht-dubieus-controle-beperkt-wet, 31 March 2022).

Example of the implementation of a bundled payment for maternity care

In 2008, rates of perinatal mortality in the Netherlands were very poor compared to other European countries (Mohangoo et al., 2008). Poor collaboration between primary care midwives and hospital-based obstetricians, who historically communicate little, was partly blamed for the high mortality rate. Many pregnant women receive care by both provider types and, therefore, the importance of communication and collaboration was stressed. In almost all regions, obstetric collaboration cooperations (Verloskundige Samenwerkingsverband; VSV) were implemented, in which obstetricians and local midwives collaborated in a structural way.

In 2017, six regional integral maternity care organisations (IMCOs) were established, followed by two more in 2019 (Struijs et al., 2020). The IMCOs integrate midwives, obstetricians, paediatricians, postnatal maternity care assistance organisations and ultrasound centres. Health care providers use one electronic patient dossier and are reimbursed collectively, using bundled payments. Despite the positive experiences of several IMCOs, there is strong objection to integrated maternity care at a national level. Primary care midwives are concerned that they will lose their independence and autonomy, while pregnant women are concerned that they will lose the freedom to choose where to deliver.⁵⁴

5.1.2 Access to care

In 2020, the average distance to a GP was 1 km,⁵⁵ with an average of 9.5 practices within a 3 km radius. The average distance to the closest out-patient hospital clinic was 4.8 km, while the average distance to a hospital (excluding hospitals with only out-patient clinics and without the ability to admit patients or provide acute care) was 7.1 km. Despite a wave of hospital consolidations, with 25 mergers over the period 2010–2020, 60% of the Dutch population live within 5 km of a hospital. The average distance differs according to Dutch province, but never exceeds 10.3 km. As part of the overall health care labour shortage (see Domain 3), a decreasing influx of GPs combined with increasing care demand has led to GP shortages. These shortages are estimated to be particularly pronounced in regions in the north, east and south-west of the Netherlands, threatening, at the regional level, the sustainability of primary care provision (Batenburg et al., 2018). Maximum acceptable waiting times are defined for each health care sector. Providers are obligated to report on waiting times and under the supervision of the Dutch Health Care Authority.

5.1.3 The role of primary care

Primary care, including GPs, midwives and physiotherapists, plays an important role in the Dutch health care system. All residents are strongly recommended to register with a GP, who acts as a gatekeeper. Before accessing specialist care, patients generally need a referral from their GP. The patient will not be reimbursed for specialist care accessed without a referral. Care provided by GPs, midwives and district nurses, as well as chronic disease care (e.g., for COPD or type 1 diabetes) is excluded from the mandatory deductible, emphasising the importance of unrestricted access to primary care. Nevertheless, other types of primary care, such as mental health care or physiotherapy, are not excluded from the deductible.

⁵⁴ www.knov.nl/actueel/nieuws/nieuwsbericht?newsitemid=103776256&title=Verloskundigen%252bkomen%252bin%252bactie%252btegen%252bintegrale%252bbekostiging

⁵⁵ <https://opendata.cbs.nl/#/CBS/nl/dataset/80305ned/table?dl=2CAE5>

5.1.4 Preventive care⁵⁶

The Netherlands has among the highest expenditure on preventive care of European Union member countries.⁵⁷ In 2018, the Netherlands spent €146 per inhabitant on preventive care, compared to a European Union average of €82 per inhabitant.⁵⁸ Nevertheless, in 2018, only 3.3% of total Dutch health care expenditure was spent on prevention. At the end of 2018, a National Prevention Agreement was concluded between the Dutch government and 70 other parties (from, inter alia, health care, education and corporate business sectors). This agreement contained goals for both 2020 and 2040, aimed at improving public health through preventive care (by, for example, reducing the share of the population that is overweight or achieving a smoke-free generation). A progress report concluded that only one third of the 2020 goals were achieved (Van Giessen et al., 2021). In its most recent coalition agreement, the government expressed its intention to improve the focus on prevention by, for example, including mental resilience and increasing the sugar tax. Although this is a positive development, the broader scope of the prevention agreement also reinforces the need for a clear overview of tasks and responsibilities. All stakeholders involved in the agreement should be made explicitly aware of the goals of the agreement, what is expected of stakeholders and the government measures and/or decisions that will support them. Suboptimal collaboration and difficulty measuring the effect and outcome of preventive care currently restrict prevention from reaching its full potential. Considering that preventive care is only one on a long list of factors collectively affecting public health, collaboration between stakeholders and government bodies responsible for, for example, living conditions and education, should be pursued.

5.1.5 Substitution of care and novel care models

In 2018, several health care stakeholders introduced the Right Care at the Right Place (*Juiste Zorg op de Juiste Plek*, abbreviated JZOJP) initiative,⁵⁹ aimed at improving the sustainability and patient-centredness of health care. The initiative has three goals: (1) preventing (more expensive) care, (2) relocating care and centring it around the patient and (3) replacing care with 'smart care' and e-health. If certain care services are found to be better or more efficiently provided by primary care providers, they can be relocated from the medical specialist to the primary care provider. To financially enable these changes, health insurers made €425 million available for the period 2019–2022. Health care providers could apply for a share of this sum, known as transformation money, to use for JZOJP initiatives. The Dutch Health Care Authority reported that in 2020 and 2021, 43% and 45%, respectively, of hospital-insurer contracts contained agreements on the JZOJP initiative. In 2020, €28 million out of €85 million in transformation money remained unused. Reasons for this include a complex application process (from the providers' perspective) and a limited number of promising initiatives (from the insurers' perspective) (NZa, 2021b). Nevertheless, Bernhoven and the Beatrixziekenhuis, two Dutch hospitals, proved to be successful in shifting care and decreasing volume of care while maintaining quality (Centraal Planbureau, 2020). Efficiency improved due to (1) multiyear contracts, providing these hospitals with financial security and no incentive to overproduce, (2) increased collaboration with general practitioners and (3) organisational changes. Potential substitution of care is currently often hampered by a lack of supporting payment models.

⁵⁶ For a more extensive discussion of this topic, see Domain 6 (Population Health).

⁵⁷ Primary, secondary and tertiary prevention can be distinguished. Primary prevention focuses on preventing the occurrence or development of a disease or health problem. Secondary prevention aims to detect health issues at an early stage to facilitate timely treatment or cure. Tertiary prevention targets the prevention of complications due to existing diseases or health problems (www.loketgezondleven.nl/integraal-werken/wettelijk-en-beleidskader-publieke-gezondheid/wat-is-preventie).

⁵⁸ https://ec.europa.eu/eurostat/databrowser/view/HLTH_SHA11_HC_custom_423640/bookmark/table?lang=en&bookmarkId=f1817640-9f59-4759-8f4d-09aa5721370e

⁵⁹ www.dejuistezorgopdejuisteplek.nl

Additionally, although explored and experimented with in the past, the Netherlands does not have a national electronic patient records system. Restrictions in electronic patient data exchange thus also pose a barrier to care substitution. Having concluded that the health care IT market is not functioning well, the Dutch competition authority issued guidelines explaining both competition rules and opportunities for health care providers to counteract the strong position of the few IT suppliers active in this market (ACM, 2022c).

From 2013–2018, the National Institute for the Environment and Public Health (*Rijksinstituut voor Volksgezondheid en Milieu*, RIVM) monitored and evaluated nine regional initiatives set up to develop and implement novel, collaborative health care models (RIVM, 2018b). These initiatives aimed to improve health and quality of care, while simultaneously controlling costs. Hospitals, health insurers, municipalities, long-term care providers, pharmacists and many other stakeholders collaborated to make health care sustainable. The RIVM found that, after five years, regional collaboration had improved and some initiatives showed some positive population health and quality experience effects, but the impact on health care costs was generally unclear. To accomplish better outcomes and better prioritise these novel care models, the RIVM (2018b) concluded that these regional initiatives need the support of national stakeholders such as the Ministry of Health or the umbrella organisation for Dutch health insurers (*Zorgverzekeraars Nederland*; ZN).

In September 2022, the Ministry of Health, together with almost every relevant health care stakeholder's association, drafted and signed an integral health care agreement (*Integraal Zorgakkoord*, IZA) which aims to increase the sustainability of health care by ensuring access, quality and affordability. Another €2.8 billion will become available for meaningful transitions towards appropriate care, hereby providing possibilities for the design and implementation of new care models and initiatives that may benefit service delivery sustainability (VWS, 2022b). However, challenges concerning the transformation money application process remain.

5.2 Service delivery resilience

In this section, the resilience of Dutch health service delivery will be explored. The service delivery's response to the COVID-19 pandemic will be discussed, as well as opportunities for future service delivery resilience.

5.2.1 Service delivery and coordination of care during the COVID-19 crisis

As was the case in most countries around the world, the COVID-19 pandemic severely impacted health care delivery in the Netherlands. In the spring of 2020, when COVID-19 first surged through Europe, the number of intensive care unit (ICU) beds occupied by patients with COVID-19 quickly rose. Due to its pursuit of maximum efficiency, and a critical attitude towards prolonging life as a goal in itself (regardless of the quality of life), the Netherlands historically has a relatively limited maximum number of ICU beds (1,150 or 6.5 per 100,000 inhabitants, given the current population of 17.6 million inhabitants) (LNAZ, 2021). ICU capacity thus had to scale up fast and reached a maximum COVID-19 occupancy of 1,424 beds in April of 2020. Several patients were transferred to ICUs in Germany (Bundesregierung, 2020). Although close to maximum capacity, the Netherlands never reached 'phase-3' or 'code black', the scenario in which there are not enough ICU beds for the patients who need them. In 2020, the National Acute Care Network (*Landelijk Netwerk Acute Zorg*, LNAZ) expressed its intent to permanently scale up maximum ICU capacity from 1,150 to 1,350 beds (LNAZ, 2021). A capacity analysis in the spring of 2022, however, determined that with current staff numbers, the ICU capacity was 925 beds, with a possibility to temporarily scale up to 1,064 beds (V&VN-IC, 2022). All relevant stakeholders must continue working on a plan to enable ICUs to deliver care for a larger number of patients for a longer time, considering staff shortages, technological innovation and opportunities for collaboration.

The epicentre of the first outbreak was located in the southern part of the Netherlands. Hospitals in this part of the country quickly reached maximum capacity and had to transfer patients. While individual hospitals had protocols in place for hypothetical infectious disease outbreaks, a national plan did not exist. The government had to improvise and the Ministry of Health initiated the National Coordination Centre for Patient Distribution (*Landelijke Coördinatiecentrum Patiënten Spreiding*, LCPS). This centre distributed patients with COVID-19 equally over the entire country (as well as to some German hospitals).

To be able to provide beds and care for this large number of patients with COVID-19, almost all elective care was cancelled. Other care sectors were also affected. It is estimated that the first wave of the pandemic resulted in a 25% decrease in GP visits and a 20–25% decrease in cancer diagnoses (RIVM, 2020). In the period between March 2020 and August 2021, 1.49 million fewer hospital referrals were made by GPs and between 395,000 and 465,000 fewer surgical procedures were carried out. Mental health referrals initially dropped to less than 50% of the expected volume. These referrals have since returned to normal levels for adults. For children under 18, the number of referrals increased to a higher number than expected (NZa, 2021c). The waiting times in mental health care are high and still increasing, and were already high before the COVID-19 pandemic. The number of surgeries has returned to normal. Hospitals are, however, largely unable to catch up with the delayed provision of care. There are an estimated number of 100,000 to 120,000 patients currently on the waiting list for surgical procedures (NZa, 2022a).

While a significant amount of the national attention was focused on hospitals, a ‘silent disaster’ took place in nursing homes. Shortages in personal protective equipment, limited test capacity and, in some cases, a lack of regional coordination (not all nursing homes are members of the regional acute care networks (*Regionaal Overleg Acute Zorg*; ROAZ) led to sizable problems in the sector caring for the most vulnerable patients. The national decision to prohibit all visitors to nursing homes, taken to counteract the growing number of COVID-19 cases, took a large emotional toll on nursing home residents, their families and nursing home staff and was perceived by many as inhumane and traumatic. To improve the resilience of nursing home care in case of a new pandemic or a continuation of the current one, several steps must be taken. Regional collaboration needs to be improved and decisions impacting staff and residents need to be made on an individual basis that does justice to the diverse nature of the care provided in nursing homes.

5.2.2 Opportunities to improve service delivery resilience

Even though the use of e-health in the Dutch health care sector showed an increase prior to the pandemic, COVID-19 clearly acted as a catalyst for digitisation. E-consultations and video calling proved to be invaluable assets in overcoming the physical barriers posed by the pandemic. Currently, e-health is no longer the standard, as many appointments once again take place in GP practices or hospital out-patient clinics. Nevertheless, the need for and use of e-health services has not disappeared. Several reports have evaluated future opportunities of e-health. GPs in the Netherlands recognise the added benefit of e-health – e-consultations and video calling in particular – but prefer to reserve its use for minor, non-urgent cases (Meurs et al., 2020). Medical specialists concur and add that e-health is most suitable for follow-up consultations. Patients using e-health services are predominantly positive about their experiences (RIVM, 2022b). Yet, for e-health to play an integral role in future health care, several components need attention. Both Meurs et al. (2020) and RIVM (2022b) signal that professionals need to be educated on the use and value of e-health services and on digital infrastructure. They also conclude that the usability of e-health, and insight into affordability and reimbursement, must be improved. E-health has the potential to give patients greater autonomy, allowing them to take charge of the care they receive and decrease their travel times. The promotion of digital health care as another type of care is therefore important (RIVM, 2022a). Autonomy should, however, also mean that patients can choose to forgo digital health care. This is particularly crucial in preventing inequitable access to care for those most in need, who are often also those with the poorest digital health literacy (Rademakers, 2014).

In the coalition agreement 2021–2025, the Dutch government expressed its intention to increase pandemic preparedness. The plans that will constitute the policy programme are currently being drawn up and the government has allocated €200 million for the execution of these plans (VWS, 2022a). These plans, centred around management, international collaboration, knowledge and innovation and IT, will hopefully contribute to a better service delivery resilience (VWS, 2022f).

5.3 Recommendations

Considering the findings reported above, we formulated the following recommendations.

RECOMMENDATION 5A

To improve the efficiency of service delivery and, consequently, the sustainability of service delivery, coordination of care should be improved. This can be achieved through more and reinforced multidisciplinary cooperation, including national stakeholders. Payment models should be adjusted accordingly, for example, by implementing alternative payment models that are proven to support substitution of care, cooperation and novel care models. Moreover, data exchange should be improved to facilitate efficient and well-coordinated multidisciplinary cooperation and communication. In case too little progress is being made due to conflicting interests and/or legal barriers, decisive authority at the national level is required.

RECOMMENDATION 5B

To improve transparency regarding the efficiency and quality of Dutch health service delivery, performance metrics and quality information should be made public where possible. To ensure validity and meaningful comparisons, quality measures should be case-mix adjusted. Again, this may require binding decisions at the national level.

RECOMMENDATION 5C

To improve health care resilience and to be able to respond to a future pandemic in a manner that is both achievable and efficient, the national government should invest in a centralised, nationally coordinated strategy that involves all care sectors and includes a realistic ICU scale-up plan that considers staff shortages. To prevent long waiting times and guarantee access to care, regular care and elective procedures should continue as much as possible. Regional coordination and collaboration will be crucially important for this.

6. DOMAIN 6
**Population
health**



6.1 Indicators of population health

Table 13 presents Dutch scores on a selection of population health status measures. From these scores it can be concluded that life expectancy at birth slightly increased over the last ten years. In 2020, average life expectancy at birth was almost one year higher than the EU average but lower than many of the top performing countries such as Norway and Iceland (OECD/European Observatory on Health Systems and Policies, 2021). Compared to 2019, life expectancy in 2020 temporarily dropped due to the COVID-19 pandemic. No substantial changes were observed for most other scores between 2010 and 2020; however, there were some important exceptions. The percentage of daily smokers in the population decreased from 20.9% to 10.1% and consumption of alcohol also decreased. The rate of obesity, however, increased from 11.4% to 13.4%. Given the health risks involved, this trend is a cause for concern, although the overweight and obesity rates among the Dutch population remain lower than those in most EU countries (OECD/European Observatory on Health Systems and Policies, 2021).

Table 13: Summary of health status measures

	2010	2015	2020
Life expectancy at birth (years)	81.0	81.6	81.4
Infant mortality (deaths per 1,000 live births)	3.8	3.3	3.8
Low birth weight (% of total live births)	6.2	6.0	5.6
Obesity (% population, BMI > 30 kg/m ² , self-reported)	11.4	12.8	13.4
Daily smokers (% population aged 15+)	20.9	10.4	10.1
Consumption of pure alcohol (litres per capita 15+)*	9.1	8.3	7.2
Daily fruit consumption (% population aged 15+)**	n/a	42.8	42.3
Daily vegetable consumption (% population aged 15+)**	n/a	29.4	31.1
Good/very good health (% population aged 15+)	78.0	76.2	78.0
– Within low income group (% population aged 15+)	67.1	65.7	64.1
– Within low education group (% population aged 15+)	63.9	63.0	67.5

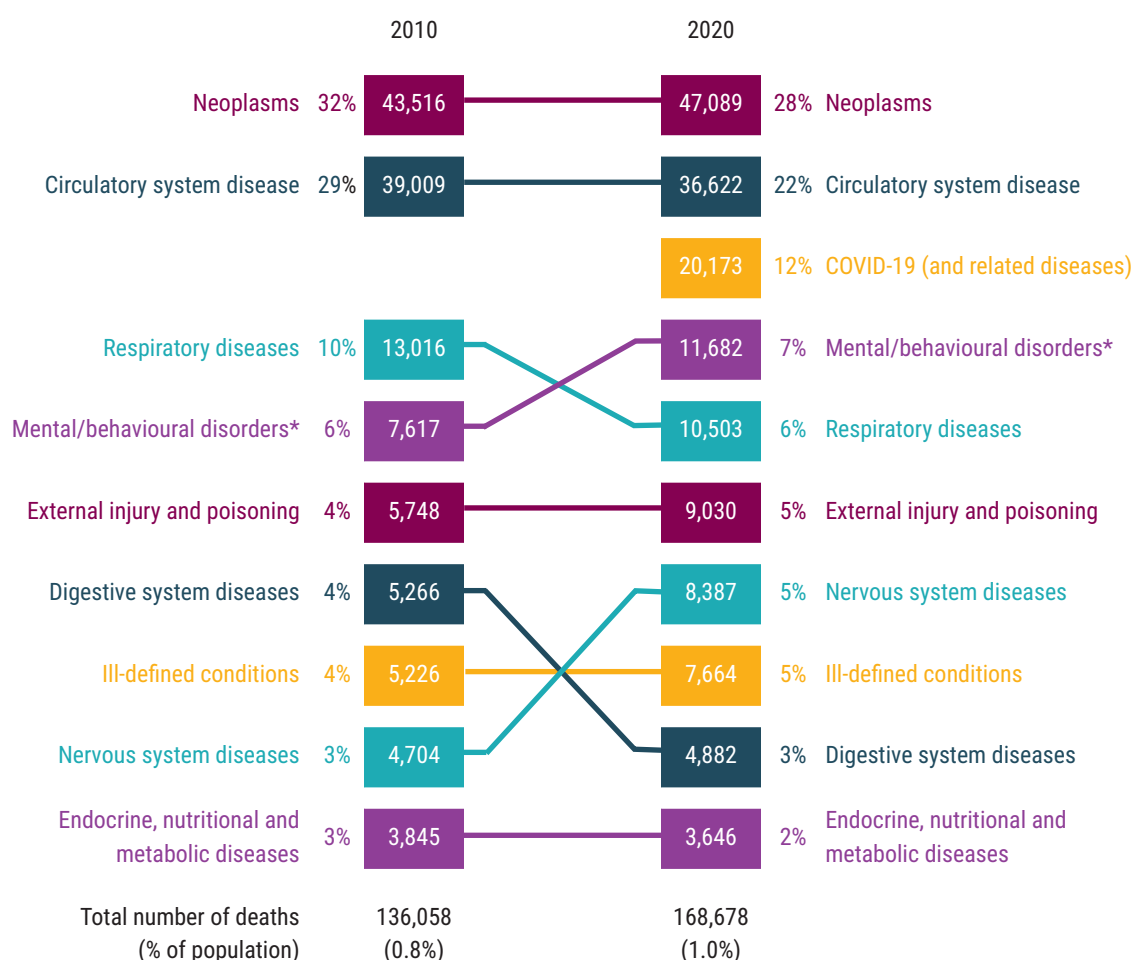
* Annual consumption of pure alcohol calculated as the sum of beverage-specific alcohol consumption of pure alcohol from different sources (beer, wine, spirits, other) considering the alcohol content (% alcohol by volume) for each source.

** Proportion of the population aged 15+ eating fruit (excluding juice) or vegetables (excluding potatoes and juice) at least once per day obtained from a national survey.

Source: OECD Health Statistics 2022, <https://www.oecd.org/els/health-systems/health-data.htm> (accessed November 3, 2022).

Table 14 presents the top 10 causes of death in 2020. When comparing these percentages with those for 2010, it can be concluded that, other than the impact of COVID-19, not much has changed over the past 10 years. In 2020, neoplasms (tumours) and diseases of the circulatory system (such as aneurysms and heart failure) jointly accounted for half of all deaths in the Netherlands. More than one third of all deaths in the Netherlands can be attributed to behavioural risk factors, including smoking, dietary risks, alcohol consumption and low physical activity. This is slightly lower than the EU average (OECD/European Observatory on Health Systems and Policies, 2021). The major risk factor is tobacco consumption: one of every five deaths can be attributed to direct and second-hand smoking, which is higher than the EU average (17%).

Table 14: Top 10 causes of death in 2020 compared to 2010 (all ages combined)



* This category covers many different disorders, including dementia.

Source: <https://opendata.cbs.nl/statline/#/CBS/en/dataset/7052eng/table?ts=1667482889262> (accessed November 3, 2022).

Overall, it can be concluded that although most Dutch people report good health, sizeable disparities exist across socio-economic groups (OECD/European Observatory on Health Systems and Policies, 2021).⁶⁰ In the most recent factsheet (July 2022) published by Pharos, the national centre of

⁶⁰ In a recent article, Mierau (2021) argues that addressing inequalities in health also requires focusing on disparities existing within socio-economic groups.

expertise on health disparities, these social inequalities in health are summarised as follows.⁶¹ First, people with both low income and low education live, on average, 15 years less in good health than people with high income and high education. Low income alone reduces life expectancy for men and women by 5.8 and 4.3 years, respectively. The isolated effect of low education on life expectancy for men and women equals 8.2 and 6.7 years, respectively. Second, diabetes, acute myocardial infarction, COPD, chronic stress and depression, obesity and perinatal death are much more common among people with lower socio-economic status. Third, health risk factors such as smoking, financial distress, (perceived) social exclusion and low health literacy are much more prevalent in lower socio-economic groups.

In addition to the changes in population health observed over the last 10 years, a four-year Public Health Foresight Study (VTV)⁶² of the National Institute for Public Health and the Environment (RIVM) predicts both positive and negative future developments,⁶³ including fewer people smoking and more people exercising, but also more people having excess weight. Another key message is that these trends differ among socio-economic groups. Smoking is declining more rapidly among people with high socio-economic status, while obesity is increasing more rapidly among people with low socio-economic status. The study also highlighted that people with lower socio-economic status often have unhealthier lifestyles and face stressful social issues more often. From this perspective, it is striking that, despite having among the highest spending levels per capita compared to the EU average, spending on prevention as a percentage of total health expenditure in the Netherlands has dropped from 4.3% in 2010 to 3.3% in 2019 (OECD/European Observatory on Health Systems and Policies, 2021).

6.2 Government policies to address social inequalities in health

In the Netherlands, the Ministry of Health, Welfare and Sport (VWS) bears overall responsibility for health promotion and prevention.⁶⁴ The latter includes a wide range of potential activities, but the focus is most often on primary prevention, i.e., preventing the occurrence or development of a disease or health problem.⁶⁵ As part of its overall health responsibility, in addition to, for example, an extensive vaccination programme to protect children against twelve infectious diseases,⁶⁶ the Dutch central government initiates, organises and finances three cancer and five prenatal and neonatal population screening programmes.⁶⁷ In addition, under the Public Health Act (*Wet Publieke Gezondheid*),⁶⁸ responsibility for public health, prevention and health promotion at the local level lies with local authorities (municipalities). These responsibilities are carried out by 25 different Public Health Services (*Gemeentelijke of Gemeenschappelijke Gezondheidsdiensten*; GGDs). RIVM's Centre

⁶¹ www.pharos.nl/factsheets/sociaaleconomische-gezondheidsverschillen-segv

⁶² This study, commissioned by the Ministry of Health, Welfare and Sport, provides insight into the most important societal challenges for public health and health care in the Netherlands.

⁶³ www.vtv2018.nl/en/key-messages#oopenstapeling

⁶⁴ As part of this overall responsibility, in February 2022, the Ministry of Social Affairs and Employment (SZW) asked the Social and Economic Council (SER) for advice on the how to reduce health inequalities in the Netherlands; see www.ser.nl/nl/actueel/Nieuws/adviesaanvraag-sociaaleconomische-gezondheidsverschillen.

⁶⁵ However, both secondary and tertiary prevention are important as well. This refers to detecting health issues in an early stage to facilitate timely treatments or cures and targeting the prevention of complications due to existing diseases or health problems, respectively.

⁶⁶ <https://rijksvaccinatieprogramma.nl/english>

⁶⁷ www.rivm.nl/en/population-screening-programmes

⁶⁸ Currently, changes in the Public Health Act aimed at improving pandemic preparedness are under development.

for Healthy Living (*Loket Gezond Leven*) offers support to policy makers and professionals from the municipalities and GGDs by promoting the use of recognised interventions.⁶⁹ As an example, this centre's specific programmes include Healthy School (*Gezonde School*) which offers activities, knowledge and materials that can be used for health promotion at school.⁷⁰ Another interesting programme is the government-supported bottom-up network of more than 3,000 partners, All about Health (*Alles is Gezondheid*),⁷¹ the central aim of which is to inspire and activate citizens to lead healthier lives within their own environment. In the remainder of this section, the focus will be on the national government's overarching policies to address social inequalities in health.

National Prevention Agreement

In its coalition agreement, the current cabinet announced "a greater focus on prevention and on a healthy lifestyle from an early age".⁷² To produce "a healthy generation by 2040", it argues, "a broad approach that encourages healthy choices and discourages unhealthy ones" is required but "without restricting people's freedom of choice." A prominent role in this context is attributed to the National Prevention Agreement (*Nationaal Preventieakkoord*; NPA).⁷³ The NPA, as a temporary non-legally binding agreement, was signed in 2018 between the Dutch national government and more than 70 stakeholders. It includes many targets concerning smoking, obesity and problematic alcohol consumption, as well as agreements on how to reach these. The latest yearly evaluation conducted by the RIVM (2022c) concluded that progress has been made. However, of the 41 targets formulated up to and including 2021, only 22 were met. Despite its good intentions, the NPA has also been criticised because industry (with the exception for the tobacco industry which is forbidden by the WHO Framework Convention on Tobacco Control (FCTC)) is too heavily involved, leading to a lack of hard measures (Kroon, 2022). As an example, in 2018, the food industry succeeded in keeping a sugar tax out of the NPA⁷⁴ while, more recently, in October 2022, the Dutch Association for Alcohol Act Inspectors (NVDI) and the Dutch Institute for Alcohol Policy (STAP) announced that they will no longer participate in the NPA because "the difference in standpoints and interests between, say, the alcohol producers and health organisations, is too great to be bridged."⁷⁵

Health literacy

In the Netherlands, almost 25% of the population have difficulty finding, understanding and using information and services to make well-informed health-related decisions and actions for themselves (Willems et al., 2022). Compared to other European countries, this is relatively low. Still, since (1) there is a positive relation between an individual's health and their health literacy skills and (2) these skills are lower among vulnerable groups, policies are needed to reduce inequalities across socio-economic groups.⁷⁶ Recent research, conducted on behalf of VWS, estimated that lower health literacy in the Netherlands is responsible for a loss of 10,000 health life years and €300 million extra spending on health care (ECORYS, 2022). As part of a broader programme aimed at ensuring access to good health for all, the Dutch government announced that new policies will be developed to help

⁶⁹ www.loketgezondleven.nl/en/node/1781

⁷⁰ www.gezondeschool.nl

⁷¹ www.allesisgezondheid.nl

⁷² www.government.nl/binaries/government/documenten/publications/2022/01/10/2021-2025-coalition-agreement/2021-2025+Coalition+agreement.pdf

⁷³ www.government.nl/binaries/government/documenten/reports/2019/06/30/the-national-prevention-agreement/The+national+prevention+agreement.pdf

⁷⁴ www.ftm.nl/artikelen/suikertaks-verdwijnt-uit-preventieakkoord

⁷⁵ www.stap.nl/nl/nieuws/persberichten.html/3490/9088/nvdi-en-stap-huidige-samenstelling-alcoholtafel-van-het-nationaal-preventieakkoord-leidt-niet-tot-gewenste-resultaat-#p3490

⁷⁶ www.pharos.nl/factsheets/laaggeletterdheid-en-beperkte-gezondheidsvaardigheden

people with low health literacy (VWS, 2022h). According to Willems et al. (2022), a twin-track approach is needed. The first track should include policies for improving the health literacy skills of specific target groups (e.g., by offering reading courses and targeted programmes to promote healthy lifestyles), while the second track should focus on improving the support health providers can offer people with low health literacy (e.g., by increasing the insight and relevant skills of people working in health care).

6.3 Recommendations

Considering the findings reported above, we make the following recommendations.

RECOMMENDATION 6A

From the perspective of overall health promotion and prevention, as stated by the WHO, it should be recognised that population health is largely determined by policies that guide actions beyond the health sector (Health in All Policies), rather than merely the product of health sector programmes. Therefore, a fundamental shift is needed towards a health system that embraces health over disease management.⁷⁷

RECOMMENDATION 6B

To increase the feasibility of the national objective of producing “a healthy generation by 2040”, a national framework with SMART and legally binding health goals (such as the targets included in the “Good health and wellbeing” goal of the UN Sustainable Development Goals⁷⁸) should be established. This would formalise the government’s responsibility for overall health promotion and the reduction of social inequalities in health.⁷⁹ Such a framework needs to be accompanied by appropriate financial incentives for investing in prevention, acknowledging that most benefits of such investments will be realised outside the health care sector itself.⁸⁰

RECOMMENDATION 6C

To strengthen the impact of the National Prevention Agreement, hard measures, such as a sugar tax, should be seriously considered. For this purpose, neither the alcohol nor food industries should play a role when formulating policy interventions aimed at health promotion. In addition, as well as focusing on primary prevention, it is important to give more consideration to the potential benefits of secondary and tertiary prevention. This would require clearly defined responsibilities for both health insurers and providers, and appropriate financial incentives.

⁷⁷ In 2022, a Council for Public Health and Society (*Raad voor Volksgezondheid & Samenleving*; RVS) advisory to the Dutch government identified four priorities: (1) from individual care delivery to caring for society, (2) from lifestyle to living environment, (3) from production-driven to value-driven care and support and (4) from institutional interests to public interests and cooperation (www.raadrvs.nl/documenten/publications/2021/03/08/wissels-omzetten). See also the recent white paper published by Medical Delta (an interdisciplinary collaboration between Erasmus University, Erasmus MC, TU Delft, LUMC, Leiden University and four universities of applied sciences in the province of Zuid-Holland) in which 14 scientists offer their views on a healthier society for all (www.medicaldelta.nl/en/news/tackling-debt-with-healthcare-funds-14-scientists-offer-their-views-on-a-healthier-society-for-all).

⁷⁸ <https://sdgs.un.org/goals/goal3>

⁷⁹ See also www.zorgvisie.nl/politiek-wil-wettelijke-gezondheidsdoelen-net-als-voor-stikstof

⁸⁰ www.medischcontact.nl/nieuws/laatste-nieuws/artikel/preventie-levert-veel-meer-op-dan-gedacht.htm

7. DOMAIN 7

Environmental sustainability



7.1 Environmental sustainability

It is important to address the environmental impact of health care when aiming for a sustainable future. Climate change heavily affects health and health care. UV light increases chances of skin cancer while heatwaves endanger the vulnerable and enable the emergence and spread of potentially dangerous infectious diseases (Romanello et al., 2021). For the Netherlands, the most recent four-year Public Health Foresight Study (VTV) predicted that an unhealthy environment was responsible for 4% of the disease burden (RIVM, 2018a). In turn, health care significantly affects climate change. The health care sector contributes to greenhouse gas emissions, water pollution, material use and waste. Health care is responsible for 8% of the total Dutch carbon footprint, 4.2% of the waste generation footprint and 13.1% of the material extraction footprint (Steenmeijer et al., 2022). On average, hospitals produce 1,320 kg of waste per bed per year. Nursing homes produce roughly half of this amount, while disability service providers annually produce 329 kg of waste per bed.⁸¹

As is the case for many companies, health care organisations are obligated by law to meet a set of basic rules and regulations regarding the environment.⁸² In addition, health care organisations are (or will be) faced with initiatives and/or standards, such as the Sustainable Development Goals (SDGs), Corporate Sustainability Reporting Directive (CSRD), and Environmental, Social, and Governance (ESG). While these regulations provide a base and create awareness, they often do not actively promote environmentally conscious behaviour. In line with the European Green Deal, and to achieve environment-friendly economic growth and climate neutrality, the Dutch government launched a Green Deal approach in 2011. This approach, encompassing more than 230 'sub-deals', aims to support innovative initiatives that contribute to environmental sustainability. A first deal for health care was signed in 2015, followed by a second deal in 2018, and a third, called Working Together on Sustainable Care, in November 2022. This most recent deal, which was signed by, inter alia, government parties, health care providers, professional organisations and municipalities, is centred around five goals: (1) reducing CO₂ emissions, (2) improving circularity and reducing the use of raw materials, (3) reducing pharmaceutical residues in groundwater and surface water, (4) emphasising health and healthy lifestyles and (5) increasing knowledge and awareness about climate change and the relationship between health care and the climate.⁸³

Between 2018 and the drafting of the most recent Green Deal, more than 200 signatory parties to the Dutch Green Deal on Sustainable Health Care have worked towards each of the goals and many initiatives have been launched.⁸⁴ To meet the 49% reduction in greenhouse gas emissions, as agreed upon in the Climate Agreement (the Dutch translation of the 2015 Paris Climate Accord), formats for roadmaps towards emissions reduction have been designed for the cure and care sector.^{85, 86} Health care organisations have been encouraged to use these formats to plan how to reduce CO₂ emissions at the level of their own organisations. By July 2022, 25% of long-term care organisations and 95% of all hospital organisations had submitted such a roadmap.⁸⁷ A concrete example of initiatives through which hospitals continue to try to save energy and reduce CO₂ emissions is the

⁸¹ <https://milieuplatformzorg.nl/bibliotheek/grondstoffen-en-afval>

⁸² <https://wetten.overheid.nl/BWBR0022762/2021-07-01>

⁸³ www.greendeals.nl/green-deals/green-deal-samen-werken-aan-duurzame-zorg

⁸⁴ www.government.nl/topics/sustainable-healthcare/more-sustainability-in-the-care-sector

⁸⁵ www.expertisecentrumverduurzamingzorg.nl

⁸⁶ In the recently closed Green Deal 3.0 Working Together on Sustainable Care, the target for CO₂ emissions reduction was increased from 49% to 55% by 2030 (www.greendeals.nl/green-deals/green-deal-samen-werken-aan-duurzame-zorg). The Dutch target hereby aligns with the European Green Deal's CO₂ emissions reduction target of 55% by 2030 (European Commission, 2020). To reach this target, initiatives for CO₂ emissions reduction will become more important and necessary.

Green OR (De Groene OK) initiative. This is a national network that aims to increase sustainability of operating rooms by saving energy and reducing CO₂ emissions through, for example, efficient use of operating room air ventilation and humidification.⁸⁸

Several initiatives intended to reduce waste and improve circularity in health care organisations offer promising results. Research shows that a significant proportion of the face masks used during the COVID-19 pandemic could be reprocessed using sterilisation while maintaining sufficient filtration efficiency (Van Straten et al., 2021b). It was also demonstrated that stainless steel from discarded surgical instruments can often be recycled, leading to notable cost savings (Van Straten et al., 2021a). Moreover, polypropylene material used to wrap sterile surgical instruments can be safely recycled into new medical devices (Van Straten et al., 2021c). The recycling method proposed by that paper, developed in collaboration with a Dutch waste processing company, has since been adopted by several Dutch hospitals in an effort to decrease their carbon emissions.⁸⁹ Waste can also be prevented altogether, as has been shown by many providers of cataract surgery, in cooperation with a Dutch health insurer (Coöperatie VGZ, 2022), that have stopped using surgical gowns for patients undergoing cataract surgery, thus reducing the amount of waste created.

Each year in the Netherlands, 140 metric tons of pharmaceutical residue and 30 metric tons of contrast agent end up in the surface water.⁹⁰ These waste products may harm fish and can eventually end up in drinking water. To address this important problem in a collective and cross-sectoral manner, a chain approach was adopted in 2017. Since then, many national and regional stakeholders have worked towards effective and efficient measures that tackle the complete chain of pharmaceutical waste in water (Moermond & de Rooy, 2022). The Coalition for Sustainable Pharmacy, a collaborative network representing a large part of the Dutch pharmaceutical chain, is also working towards reducing pharmaceutical waste.⁹¹ Through initiatives focusing on, inter alia, increased awareness of pharmaceutical waste, appropriate (pharmacy) inventories and appropriate prescribing of medication, waste and, consequently, water residue can be diminished.

An evaluation of the second Green Deal, carried out in 2021, showed that most parties considered the deal to be of added value (Bureau Bartels, 2021). Participating parties reported that, within their organisations, the topic of sustainability was met with increasing enthusiasm and attention and its importance was widely acknowledged. Encouraged by the Green Deal, parties shared knowledge and experiences, and new collaborations were initiated. Several organisations declared that their CO₂ emission had, in fact, decreased. To optimise the potential of the Green Deal for increased sustainability, it was concluded that some components needed attention. First, the goals should be more strictly and concretely defined to better guide participating organisations. Second, the sharing of knowledge should be better promoted. Finally, the Ministry of Health, Welfare and Sport (VWS) should emphasise the importance of sustainability as an integral part of health care.

To increase the potential of the initiatives and policy measures mentioned above, the Netherlands would benefit from a more centralised strategy with a clear vision (Gupta Strategists, 2022b). The Green Deal approach resulted in promising (regional) initiatives, but its fragmented character leads to goals that are not shared by all parties. The Ministry of Health may play a key role in emphasising the urgency of sustainability and uniting parties, thereby leading to a dedication that is shared by all. Together with the integral health care agreement (*Integraal Zorgakkoord*; IZA) that the Ministry of

⁸⁷ www.expertisecentrumverduurzamingzorg.nl/nieuws/eerste-sectorrapportage-met-enige-voorbehouden-aangeboden

⁸⁸ <https://degroeneok.nl/themas/energie>

⁸⁹ www.tudelft.nl/2021/3me/oktober/chirurgische-instrumenten-maken-van-medisch-afval

⁹⁰ www.rijksoverheid.nl/documenten/beleidsnotas/2019/02/12/ketenaanpak-medicijnresten-uit-water

⁹¹ www.knmp.nl/sites/default/files/2022-04/Inspiratiegids_Verspil_geen_Pil_v10.pdf

Health recently negotiated with almost all relevant stakeholders in Dutch health care, the current Green Deal 3.0 provides an opportunity for further efforts towards the environmental sustainability of health care. The IZA, however, has been criticised for its lack of binding agreements on how to reduce the environmental footprint of health care (see, for example, Baltesen, 2022; Baan et al., 2022). Moreover, the Green Deal 3.0 remains a ‘letter of intent’, containing no binding agreements and no clarity on whether (or by whom) progress will be monitored. In a recent advisory, the Health Council of the Netherlands (2022) recommended making environmental sustainability an additional standard of good care alongside safety, efficiency, effectiveness and client focus. Rather than leaving the sustainability of devices (such as gloves, wound management supplies, surgical instruments, medical equipment, diagnostic tests and implants) to the market and relying on voluntary measures, it has advised the Dutch government to adopt “a more compulsory approach” using laws and regulations that apply to both the health care sector and to manufacturers.

An important issue that is not specifically addressed as one of the goals in the Dutch Green Deal is the issue of air quality and its effects on health. As a result of European policy, air quality in the Netherlands has vastly improved since the 1970s. However, air pollution is still estimated to cause 12,000 premature deaths per year, with an average decrease in life expectancy of nine months (Gezondheidsraad, 2018; RIVM, 2019). Of the 4% disease burden caused by an unhealthy environment, at least 75% is caused by air pollution (Maas et al., 2015). Particulate matter and nitrogen dioxide are responsible for the largest part of these negative effects. Both may lead to or aggravate pulmonary problems, lung cancer and cardiovascular disease (RIVM, 2019). The Netherlands currently meets European air quality standards.⁹² To prevent even more health problems, the Netherlands has a goal to meet the stricter standards set by the World Health Organisation (WHO). With current policy, most regions in the Netherlands are expected to meet 2005 WHO standards by 2030. Current measures will, however, likely not be sufficient to meet the most recent WHO standards, adopted in late 2021 (Rijkswaterstaat, 2022).

7.2 Recommendations

Considering the findings reported above, we make the following recommendations.

RECOMMENDATION 7A

To reduce the environmental impact of health care and make the sector more sustainable, the Dutch government should take responsibility for a national policy with binding goals and rules and regulations for meeting those goals. Setting the goals and planning how to reach them should be a collaborative and mandatory effort between the government and the relevant stakeholders. This centralised strategy, including decisive authority to be used when insufficient progress is being made, should also include efforts to learn from best practices (i.e., which measures are most effective) and awareness-raising activities such as public outreach campaigns.

RECOMMENDATION 7B

To reduce environmental impact on the health of individuals, the most recent WHO standards, adopted in late 2021, should be incorporated into the Green Deal as part of the ambition to create a health-improving living environment. When it comes to air quality, an international approach, while challenging, would then be required for progress to be made.

⁹² www.rivm.nl/lucht/luchtkwaliteit-Nederland

8. CASE STUDY 1
Financing
COVID-19-
related health
care costs



Financing COVID-19-related health care costs in the Dutch competitive health system

8.1 Context

The Dutch health care system is based on the principles of managed (or regulated) competition, meaning that competing risk bearing insurers and providers negotiate contracts on the price, quantity and quality of care. The COVID-19 pandemic caused a huge external shock to the health care system which potentially distorted the conditions required for fair competition. Therefore, an important question is to what extent was the competitive Dutch health system resilient to the financial shock caused by the pandemic.

8.2 Goal

This case study examines how the negative financial consequences of the COVID-19 pandemic in 2020 and 2021 were managed in the competitive Dutch health system. Given that insurers and providers were unequally financially affected by the pandemic, we aim to understand which safety nets were in place and which measures were taken to ensure fair competition and to prevent risk-bearing insurers and providers from going bankrupt. How did the system cope with the negative and unequal financial consequences of the pandemic? What were the pros and cons of the safety nets in place and the measures undertaken to counteract those negative consequences? Could the system be improved to make it more resilient against future financial shocks, and if so, how?

8.3 Relevant domains

Domain 1 – Governance

Domain 2 – Financing

8.4 The case

The health care system in the Netherlands is based on the principles of managed (or regulated) competition. Mandatory social health insurance, established by the Health Insurance Act (HIA) in 2006, is offered by competing risk-bearing private health insurers that negotiate contracts with competing risk-bearing private providers on the price, quantity and quality of care. To create fair competition and counteract incentives for risk selection, a system of risk equalisation is in place to compensate insurers for differences in the expected costs of enrolees.

The COVID-19 pandemic caused a huge external financial shock to the health care system. There were three components to the financial shock: (1) substantial additional costs of treating patients with COVID-19, (2) a substantial reduction of revenue for hospitals and other health care providers due to the cancellation of most elective care, and (3) massive additional costs due to necessary investments in public health (e.g., protective equipment, testing, vaccination). Moreover, both insurers and providers were unequally affected by the financial shock. This is because the incidence and prevalence of COVID-19 was not evenly spread over the country, while health insurers have strongly divergent regional market shares and providers are typically located in specific regions. The pandemic, therefore, threatened to distort fair competition among insurers and providers. As a result, insurers and providers faced serious trouble; the former due to the additional costs of COVID-19 related expenses and latter due to forgone revenue from elective care that had to be cancelled or postponed because capacity was needed to treat COVID-19 patients or because patients were reluctant to visit health care providers.

Below we discuss several of the measures taken to accommodate the financial shock and restore fair competition for both insurers and providers.

Catastrophic cost compensation for insurers

The Health Insurance Act includes a provision which entitles health insurers to be (partly) compensated for catastrophic costs due to “natural disaster, pandemic or nuclear explosion” (Varkevisser & Schut, 2020). According to this catastrophic cost clause (Article 33 HIA), insurers can request compensation if their total costs in the year of the catastrophic event and the subsequent calendar year exceed a certain threshold level (i.e., 4% of the average risk equalisation payment per year received by the insurer).⁹³ The clause became effective on 11 March 2020, when the World Health Organization (WHO) officially declared COVID-19 to be a pandemic. How the compensation should be administered and calculated had to be specified in a separate regulation by the Ministry of Health, published in December 2020 (Staatscourant, 2020). According to this regulation, two types of COVID-19 costs were entitled to compensation: (1) direct patient-related costs of COVID-19 treatment, which were included in the payment for regular health services and (2) additional COVID-19-related expenses, which were costs that could not be attributed to individual patients (for instance, the cost of extra (expensive) protective equipment, of extra personnel and of retaining necessary spare capacity). Health insurers had to register both types of COVID-19-related health care costs separately. As shown in Table 15, total COVID-19-related expenses in 2020 and 2021 under the catastrophic cost regulation were approximately €3 billion (including approximately €1.4 billion in direct costs and €1.6 billion in additional costs). Since these expenses exceeded the threshold of 10% of average total risk equalisation payments (approximately €25 billion per year)

Table 15: COVID-19 expenditure falling under the catastrophic cost regulation in 2020 and 2021 (€ million)

Type of care	Direct COVID-19 expenses for patients	Additional COVID-19 related expenses	Total COVID-19 expenses
Primary care	103.7	66.7	170.3
Hospital care	1,213.7	1,423.0	2,636.8
Mental health care	0.0	39.9	39.9
Out-patient drugs and medical appliances	0.0	17.4	17.4
District nursing	0.0	74.2	74.2
Patient transport	70.8	17.4	88.2
Total	1,388.1	1,638.7	3,026.7

Source: VWS (2022).

⁹³ Risk equalisation payments for all insurers account for approximately 50% of total health care costs covered by the HIA. According to the ‘catastrophic cost clause’, if the threshold level of 4% is exceeded, insurers receive a compensation of 5/3 (or 167%) of the additional cost above the threshold up to a second threshold level of 10%. If this second threshold level is exceeded, insurers get fully compensated for all additional costs above the average risk equalisation payment up to a third threshold level of 20%. However, if this third threshold level is exceeded, insurers are fully at risk for all costs above this threshold. Therefore, the ‘catastrophic cost clause’ does not protect insurers against extremely high catastrophic costs.

almost all insurers were fully compensated for COVID-19-related expenses.⁹⁴ Table 16 also shows that the vast majority (87%) of all COVID-19-related costs were borne by hospitals.

Continuity contributions for providers

Another financial effect of the pandemic was a substantial reduction of health care spending due to the cancellation or postponement of non-COVID-19 elective hospital care and care by GPs, physical therapists, mental health care providers and district nurses. This reduction implied a substantial drop in revenue or income for providers, threatening bankruptcy or the inability to continue practicing. As this could seriously jeopardise the continuity of care, health insurers and providers agreed on compensations for forgone revenues due to COVID-19, known as continuity contributions. The Dutch Health Care Authority (NZa) had to explicitly allow and monitor these contributions because, under the HIA, it is illegal to pay for care that is not actually delivered (NZa, 2022c). As shown in Table 16, continuity contributions were particularly high in the first year of the pandemic when most elective hospital care was cancelled and people were reluctant to visit other health care providers. In 2020, continuity contributions were substantially higher than COVID-19-related costs (€1.341 billion). Overall, the additional health care costs of the COVID-19 pandemic and the continuity contributions to compensate forgone care were comparable in size. Of course, part of the care that was postponed may be provided later, which will result in additional costs in subsequent years.

Table 16: Continuity contributions to providers in 2020 and 2021 (€ million)

Type of care	2020	2021	Total
Primary care	214.5	0.0	214.5
Hospital care	1,865.9	125.3	1,991.2
Mental health care	76.7	9.4	86.1
Out-patient drugs and medical appliances	56.2	0.0	56.2
District nursing	100.7	34.6	135.3
Patient transport	12.8	1.6	14.4
Total	2,326.8	170.9	2,497.7

Source: VWS (2022i).

Solidarity payments between health insurers

Although the catastrophic cost regulation made it possible to compensate health insurers for most COVID-19-related expenses, this did not fully restore fair competition (Schut & Varkevisser, 2021), as the cost reduction due to regular care that needed to be cancelled had a different financial impact on the various health insurers, even though this effect was partially compensated for by continuity

⁹⁴ In total, 97% of all COVID-19-related expenses (€2,941.6 million out of €3,026.7 million) were compensated (VWS 2022j). In 2021, COVID-19-related costs (€1,686 million) accounted for 3.2% of total health care expenditure covered by the HIA (€52,049 million) or approximately 0.2% of GDP (€861 billion in 2021).

contributions. In 2020, all health insurers, except for the smallest one, agreed to restore fair competition by equally sharing the differences between actual costs and expected costs in the absence of COVID-19 (as calculated by the risk equalisation model), when these differences exceeded a certain bandwidth. Despite being anticompetitive, this 'solidarity agreement' was approved by the Dutch competition authority (ACM) as, without the agreement, the exceptional unforeseeable circumstances could have resulted in a severe distortion of the functioning of the health system (ACM, 2020c). In 2021, the solidarity agreement was extended for another year with a higher bandwidth (equivalent to a difference in annual individual premiums of €50), implying a higher financial risk for individual insurers. The new agreement was again approved by ACM, appraising that the increased financial risk was in line with reduced financial uncertainties in the second year of the pandemic (ACM, 2021a). According to ACM, the higher financial risk would provide insurers with sufficient incentives to be efficient and to critically monitor COVID-19-related costs.

Financial risk-sharing between government and health insurers

The final shock caused by the pandemic also made it difficult to calculate individuals' expected costs on which risk equalisation payments to health insurers were based (Van Kleef & Reuser, 2021). A miscalculation of total risk equalisation payments could result in an underpayment or overpayment by all health insurers. To protect insurers from this collective financial risk, in 2021, the government introduced a form of risk sharing, known as macro ex-post calculation (*macrona calculatie*). This one-year risk-sharing arrangement specified that in case actual total health care costs in 2021 exceeded the total amount of risk equalisation payments, the government would compensate 85% of the additional costs and if the actual costs fell below this amount, insurers would be required to refund 85% of the excess payments.

State-financed COVID-19-related health care costs

Finally, a large proportion of COVID-19-related health care costs – primarily public health related expenses – were directly financed by the government. For instance, the costs of purchasing and distributing personal protective equipment (PPE), additional ICU-capacity and ventilators, establishing and maintaining test capacity, developing and purchasing vaccinations, financial support for municipal health services (GGD) and financial bonuses for health care personnel were all paid out of general taxation. In 2020 and 2021, these costs were approximately €5.1 billion and €8.2 billion, respectively (VWS, 2021e; 2022j). Therefore, state-financed COVID-19-related health care costs substantially exceeded the costs financed by social health insurance.

8.5 Analysis

The handling of the financial shock of the COVID-19 pandemic in 2020 and 2021 by the Dutch competitive health system demonstrated that the system was sufficiently resilient. The financial shock was effectively absorbed by a series of collective temporary measures at the expense of competition. Health insurers were effectively sheltered by a catastrophic cost clause in the HIA which made almost full compensation possible for all COVID-19-related costs that had to be covered by social health insurance. Continuity of care was effectively guaranteed by health insurers and the Dutch Healthcare Authority (NZa) by offering health care providers of all kinds continuity contributions to compensate for forgone revenue due to a huge decrease in regular health care utilisation. Both in 2020 and 2021, solidarity agreements between health insurers effectively mitigated the uneven distribution of COVID-19-related costs to maintain fair competition. Insurers were also collectively protected from a miscalculation of the total amount of risk equalisation payment by a financial risk-sharing arrangement with the government. Finally, most COVID-19-related health care costs were borne by the government and, therefore, were financed outside the competitive social health insurance system. This also implied that Dutch residents were largely sheltered from raising health care costs due to COVID-19 – at least in the short-term – which was reflected by only a moderate increase in health insurance premiums during the pandemic (Reuser & Van Veen, 2021).

In hindsight, however, the various measures taken to absorb the financial shock caused by the COVID-19 pandemic were unnecessarily complex and market distorting (Schut & Varkevisser, 2021). Specifically, the catastrophic cost regulation that specified how the compensation of insurers should be administered and calculated was based on an unnecessarily restrictive definition of COVID-19-related costs, i.e., it did not include the substantially reduced lower costs due to forgone care during the pandemic. Therefore, some insurers were substantially overcompensated. By including these reduced costs in the calculation of catastrophic cost compensation, voluntary – and anticompetitive – solidarity agreements between health insurers would not have been necessary (Schut & Varkevisser 2021) and would have resulted in lower compensation payments and less market distortion. In addition, the catastrophic cost clause, as currently formulated in the law, does not protect insurers from extremely high catastrophic costs, since insurers are fully accountable for all catastrophic costs exceeding 20% of the average risk equalisation payment they receive. Given that the purpose of the clause is to protect insurers from the unforeseeable extremely high costs of a catastrophe, full exposure to extremely high costs is inconsistent with this goal. During the pandemic, however, this inconsistency did not pose a problem as COVID-19-related costs did not exceed the 20% threshold.

Furthermore, the measures taken to counteract the financial impact of the pandemic did not remove all market distortions. As shown by Van Kleef and Reuser (2021), the COVID-19 pandemic has also distorted the Dutch risk equalisation system, resulting in under- and overpayment to insurers. They propose two general measures to mitigate the impact of COVID-19 on risk equalization: (1) redesigning the risk adjustment method (for instance, by retrospective instead of prospective calculation of the payment weights of the various risk adjusters) and/or (2) introducing some form of risk-sharing between insurers and the government, which was implemented in 2021 (see section 4.4).

8.6 Key findings and recommendations

The Dutch competitive health system proved to be sufficiently flexible and resilient at absorbing the financial shock caused by the COVID-19 pandemic in 2020 and 2021. The financial shock was effectively addressed by a combination of five regulatory and self-regulatory measures: (1) a catastrophic cost regulation to compensate health insurers for COVID-19-related costs, (2) continuity contributions from health insurers to health care providers to compensate them for forgone revenues due to a huge drop in the use of regular health care, (3) solidarity agreements among health insurers to mitigate the different impact of the pandemic on their financial results, (4) the financing of a large part of the COVID-19-related costs (primarily costs that could not be related to individual patients) by the government rather than from the social health insurance scheme and (5) a risk-sharing arrangement between government and health insurers to share the risk of miscalculating the total amount of risk equalisation payments to health insurers. As a result of these measures, competition in the Dutch health system was temporarily substantially reduced (see Case study 2).

Although these measures were effective in counteracting the negative financial effect of the pandemic, there is substantial room for improvement, as discussed, leading us to the following recommendations:

RECOMMENDATION CS1

The catastrophic cost regulation can be improved by including the additional costs of a catastrophe to the health system and by considering the reduction of costs due to a drop in the utilisation of regular health services. Compensation of the net costs would make voluntary, and anticompetitive, agreements between insurers obsolete. In addition, the current maximum threshold above which insurers are fully accountable for catastrophic cost should be removed.

RECOMMENDATION CS2

To reduce the vulnerability of the Dutch risk equalisation system to distortions due to unforeseen catastrophic health care costs, redesigning the risk equalisation method should be considered, as proposed by Van Kleef and Reuser (2021).

RECOMMENDATION CS3

The financial risks of the pandemic were largely borne by the government. To partially preserve incentives for efficiency in a future pandemic, it would be worthwhile to evaluate the measures taken and to examine whether and how a larger share of the risk might be borne by insurers and/or health care providers even in the stages of the pandemic that require the most collective action (LNAZ, 2021).

8.7 Limitations

A limitation of this case study is that it only examined how the financial impact on the Dutch health system was handled during the first two years of the pandemic. Although the pandemic eased in the spring of 2022, several measures were or will be ongoing in 2022 and 2023, depending on how the pandemic develops. For instance, the associations of health insurers and hospitals agreed that health insurers will compensate care in 2022 and 2023 if this care can no longer be provided due to the pandemic and will provide a generic reimbursement of additional costs due to COVID-19.⁹⁵

⁹⁵ https://assets.zn.nl/p/32768/none/Mooi%20Echt%20foto's/221010_Gezamenlijke%20COVID-afspraken%20MSZ%202023%20Fase%20d%20en%203_versie%201_0.pdf

9. CASE STUDY 2

Competition and collaboration



Competition and collaboration in the Dutch health system: Reconciling the irreconcilable?

9.1 Context

Since the Dutch health system is based on the principles of regulated (or managed) competition, effective competition regulation to prevent anticompetitive mergers and cartels as well as the abuse of dominant positions is a crucial precondition that must be fulfilled to safeguard public health care interests (Van de Ven et al., 2013; Loozen, 2015). However, from the perspective of health system sustainability and resilience, integration and collaboration become increasingly important. This results in an important challenge for the authorities responsible for enforcing competition law in health care (Baicker & Levy, 2013):

“There is often – though not always – a trade-off between coordination and competition. (...) Coordinated systems may deliver the right care to the right patient at the right time, but at the wrong price. Competitive markets may do a better job of keeping prices low, but with the well-documented drawbacks of fragmentation.”

9.2 Goal

Integration and collaboration may reduce coordination problems and facilitate better integrated health care. However, in a setting where (regulated) competition is used as an instrument for improving health system outcomes, both may also reduce incentives for efficiency, increase market power and restrict consumer choice. This case study, therefore, will discuss how the Netherlands Authority for Consumers and Markets (ACM) deals with this challenge when applying the cartel prohibition in health care, both in normal times and during the COVID-19 pandemic.⁹⁶

9.3 Relevant domains

Domain 1 – Governance

Domain 2 – Financing

Domain 5 – Service delivery

9.4 The case

Cartel prohibition

As the national competition authority, ACM is responsible for enforcing the general Competition Act (Mw) in health care sectors where the government has created room for competition (Schut & Varkevisser, 2017).⁹⁷ As part of the cartel prohibition in the Mw, agreements “which have the intention to or will result in hindrance, impediment or distortion of competition on the Dutch market or on a part thereof” are prohibited. However, an exception can be made for agreements “which do

⁹⁶ The focus of this case study is on how the general prohibition on cartels applies to collaborating health care providers and health insurers. The role of preventive merger control is beyond its scope. This topic was already briefly discussed in Domain 2: Health System Financing, which included the observation that the recent increase of the threshold for health care merger assessment is a step in the wrong direction as it makes it impossible for the Dutch competition authority to effectively prevent strategic anticompetitive mergers between local health care providers.

⁹⁷ In addition to ACM, since 2006, the Dutch Healthcare Authority (NZa) has been responsible for enforcing the Health Care Market Organisation Act (Wmg). In addition to its regulatory tasks, the NZa is responsible for monitoring and improving the general performance of deregulated health care markets. For this purpose, the NZa is allowed to take (preventive) action against parties with significant market power (SMP).

not (a) impose any restrictions on the undertakings concerned, ones that are not indispensable to the attainment of these objectives, or (b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products and services in question.”

Formal decisions

In 2004, anticipating market-based health system reforms, ACM started to enforce cartel prohibition in health care. Initially, this resulted in eight cases in which (representative associations of) health care providers were fined for anticompetitive practices such as market sharing (home health care), price fixing (mental health care) and entry deterrence (GP care). However, as a result of court rulings following appeals against the ACM's decisions, most of these fines were reversed. From these cases, it can be concluded that when applying the cartel prohibition in health care, the competition authority failed to meet the burden of proof required by the court (Van der Schors & Varkevisser, 2022). This was particularly true regarding the justification of whether (1) there was room for competition in the specific sectors and (2) the alleged conduct restricted competition in practice and thus constituted an infringement of competition law. In three cases, the court explicitly ordered that additional research regarding the legal and economic context was required, which ACM deemed unfeasible due to staff shortages and the time elapsed between the start of the investigation and the court decision.

Informal guidance

Since the last cartel case in health care in 2012, ACM seems to have shifted policy from formal punitive enforcement to providing ex ante informal guidance (Van der Schors et al., 2020a; Varkevisser & Van der Schors, 2020). This has resulted in a series of publications from which the following can be concluded (Van der Schors & Varkevisser, 2023). First, informal guidance was sometimes issued at ACM's own initiative but most often at the request of health care organisations. The guidance then involved a preliminary assessment of the efficiency claims brought forward by the collaborating parties. An interesting example of the latter is the informal opinion concluding that three competing hospitals were allowed to collaborate in providing high-complexity low-volume cancer surgery because the benefits of meeting the minimum volume standards were expected to exceed the anticompetitive effects, such as reduced freedom of choice for patients and potential price increases (Van der Schors et al., 2020b). Second, most of ACM's guidance focused on the application of the cartel prohibition in health care purchasing by insurers. Third, competition law does not seem to be unnecessarily restrictive. While it was frequently emphasised that some conduct was clearly anticompetitive and thus illegal (e.g., exchanging information on negotiated prices), for most types of collaboration, it was informally concluded that the cartel prohibition was either irrelevant or not being violated. Fourth, over time the focus has shifted from horizontal collaborations (e.g., between hospitals only) towards novel forms of non-horizontal collaborations (e.g., provider-purchaser agreements, mixed agreements with health care providers from different sectors, cross-market agreements between organisations that are not regional competitors, or cooperative associations with a linking function between health care purchasers and providers, mainly for joint purchasing).

As an example, in 2019, the competition authority published its policy regarding collaborations as part of the government supported stakeholders' initiative The Right Care in the Right Place, aimed at (1) preventing the need for more expensive forms of health care, (2) providing health care closer to people's homes and (3) replacing some traditional forms of health care with other newer forms, such as e-Health. In its policy, ACM (2019) explained that when arrangements ex ante meet each of the following five criteria it will not impose any fines in case the arrangements ex post nevertheless turn out to violate the cartel prohibition:

- The arrangements are based on a factual and public analysis of regional health care needs;
- Health care providers, health care purchasers and patients (or their representatives) are fully involved;

- The arrangements' objectives are concrete, measurable and verifiable, and they are phrased in terms of quality, accessibility and affordability of health care;
- Market participants substantiate why the arrangements, if they restrict competition, are necessary for achieving the stated objectives; and
- The objectives, the arrangements and the substantiation of the necessity are made public.

In a recent publication, ACM (2022d) also explained that competition law offers “plenty of room” for collaboration between health care organisations to deal with health care staff shortages,⁹⁸ for example, by creating an online platform to facilitate employer-employee matching. However, agreements that harm the positions of health care workers (e.g., when collectively defining terms of employment other than in a collective labour agreement⁹⁹) are not allowed.

Cartel enforcement in special times

During the COVID-19 pandemic, competition law was relaxed for both health care providers and health insurers to facilitate the collaborations needed to deal with those extraordinary circumstances. Shortly after the COVID-19 outbreak in the Netherlands, health insurers were allowed to make collective agreements to provide financial support to health care providers (ACM, 2020a). This involved the set-up of so-called continuity contributions (see Case study 1) to health care providers allowing them to pay most of their expenses while they were temporarily unable to generate revenue due to the nationwide measures taken to control the spread of the virus. ACM concluded that, because providers get their revenues from different payers, cooperation among insurers was needed for the continuity of health care during and after the pandemic. At the same time, hospitals, hospital pharmacies and pharmaceutical companies were allowed to collaborate closely to prevent, or reduce, any shortages of essential medicines (ACM, 2020b). It was concluded that the set-up of a National Coordination Centre for Prescription Drugs (LCG) to assess the supply and demand for 14 essential medicines and to coordinate their allocation and distribution among hospitals did not pose anticompetitive risks.¹⁰⁰

In the second year of the pandemic, Dutch health insurers were allowed to continue their pooling of the “exceptional additional costs” related to the COVID-19 crisis in order to “ensure the continuity of health care and to avoid significant disruptions to the health system” (ACM, 2021b). However, following ACM's request, financial risks for individual health insurers were substantially higher in 2021 than in 2020. Additionally, both insurers and health care providers expressed their intention to return to regular individual contracting. This was confirmed in the main principles of the new arrangements for 2022. These were considerably less far-reaching and, thus, ACM (2022a) again had no objections. However, due to the extraordinary and unexpected severity of the Omicron variant of COVID-19, joint arrangements were added to the bilateral contracts in the first months of 2022. The need for these joint arrangements was recognised by ACM (2022b), but it was also concluded that after April 2022 arrangements regarding the reimbursement of production losses caused by COVID-19 should be made part of regular bilateral provider-insurer contracting. According to the competition authority, new joint arrangements “can only be made in special, new circumstances in which the impact of COVID-19 hits the hospital landscape in such a way that a disruption to our health system becomes a looming threat.”

⁹⁸ See Domain 3 (“Workforce”).

⁹⁹ These are agreements about the collective terms of employment (e.g., wages, working hours, notice periods or pensions) negotiated between employers (or employers' organisations) and employees (trade unions).

¹⁰⁰ Similar to the LCG, a National Coordination Centre for Patient Distribution (LCPS) was also set-up. But other than the LCG, the LCPS did not ask ACM about the anticompetitive risks of this collaboration.

9.5 Analysis

Although the government does not want to fundamentally reform the current system based on regulated (or managed) competition, the focus in Dutch health policy is clearly shifting from competition to collaboration. For this reason, the Ministry of Health has stated that ACM will be requested to create as much room as possible within the current legislation to facilitate the necessary coordination for these transformations, referring to the existing rules and guidelines to enable collaborative agreements about Right Care in the Right Place. In recent years, the informal guidance published by ACM shows that collaboration and competition are not irreconcilable. The fact that collaboration is already widespread within the market-based Dutch health system (see, for example, Van der Schors et al., 2021; KPMG, 2022), illustrates this as well. In addition to this structural challenge, the COVID-19 pandemic has put competition enforcement in Dutch health care to the test. As discussed above, ACM seems to have succeeded in temporarily offering both health care providers and health insurers the extra room for collaborations that were needed to deal with these extraordinary circumstances.

9.6 Key findings and recommendations

It can be concluded that, both in normal and special times, the cartel prohibition offers ample opportunities for collaboration in health care. As the informal guidance issued by ACM clearly shows, competition and collaboration are certainly not irreconcilable in the Dutch competitive health system, thus contributing to its sustainability. Additionally, during the COVID-19 pandemic, ACM's enforcement of the cartel prohibition proved to be sufficiently flexible to deal with the need for increased collaboration among health care providers and insurers. This flexibility is important for the resilience of the Dutch health system.

Overall, the findings presented in this case study lead to the following recommendations:

RECOMMENDATION CS4

Effective collaboration between providers and insurers should be encouraged, but within the system of regulated competition. Strategic anticompetitive agreements to increase market power should be counteracted by strict enforcement because these would destroy incentives for efficiency.¹⁰¹ Therefore, while acknowledging the benefits of better coordination and integration, collaboration in health care should be assessed critically to ensure that the benefits exceed the costs.

RECOMMENDATION CS5

To improve enforcement of the cartel prohibition in health care, collaborations contributing to the aimed for transformations in health care should be monitored and evaluated to (1) detect best practices, (2) identify the critical factors affecting their success or failure and (3) better understand (potential) anticompetitive effects.

RECOMMENDATION CS6

ACM should continue with its guidance that explains that collaboration and competition are reconcilable if (1) the legal boundaries are considered and (2) collaborations do not go beyond what is necessary for achieving the claimed efficiencies.

9.7 Limitations

This case study examined how the cartel prohibition is applied in the specific institutional setting of the Dutch health system, which may limit the generalisability of the key findings and recommendations presented above.

¹⁰¹ See also Domain 2 (Financing).

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