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Financing COVID-19-related health care costs in the Dutch competitive health system during 2020 and 2021: Overall experiences and policy recommendations for improving health system resilience

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ABSTRACT

The Dutch health 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 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? Overall, 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 due to an effective combination of regulatory and self-regulatory measures. However, based on the overall experiences in the Netherlands, from the health policy perspective improvements are needed aimed at (i) refining the catastrophic costs clause included in the Health Insurance Act, (ii) reducing the vulnerability of the Dutch risk equalisation system to distortions due to unforeseen catastrophic health care costs, and (iii) establishing more equal financial risk sharing between health insurers and health care providers. These improvements are also relevant for other countries with a health system based on the principles of managed (or regulated) competition.

1. Introduction

The COVID-19 pandemic was an important test for the sustainability and resilience of health care systems. This proved to be particularly the case for the decentralized Dutch health care system. How the COVID-19 pandemic was handled in the Netherlands and whether the system was institutionally resilient has been extensively described and analyzed [5, 16]. However, these studies did not analyze whether and how the Dutch health care system was able to absorb the huge financial consequences of the pandemic for payers, health care providers, and the general population. To guarantee financial sustainability was particularly challenging for the Dutch care system with competing health insurers and health care providers [11]. This paper examines how, during the first two years of the pandemic (2020 and 2021), the negative financial consequences of the COVID-19 pandemic 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?

2. Policy background

The health 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 Dutch health system. There were three components to the financial

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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 amongst 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.

2.1. 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" [10]. 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. This threshold was defined as 4 % of the average risk equalisation payment per year received by the insurer. 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.

The catastrophic cost clause of the HIA 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 [8]. 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 1, 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) almost all insurers were fully compensated for COVID-19-related expenses. In total, 97 % of all COVID-19-related expenses (€2941.6 million out of €3026.7 million) were compensated [15]. In 2021, COVID-19-related costs (€1686 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). Table 2 also shows that the vast majority (87 %) of all COVID-19-related costs were borne by hospitals (including, but to a much lesser extent, independent treatment centres).

Table 1
COVID-19 expenditure under the catastrophic cost regulation in 2020 and 2021 (in € million).

Type of care	Direct COVID-19 related expenses for patients	Additional COVID-19 related expenses	Total COVID-19 related expenses
Primary care	103.7	66.7	170.3
Hospital care	1213.7	1423.0	2636.8
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	**1388.1**	**1638.7**	**3026.7**

Source: VWS [15].

Table 2
Continuity contributions to providers in 2020 and 2021 (in € million).

Type of care	2020	2021	Total
Primary care	214.5	0.0	214.5
Hospital care	1865.9	125.3	1991.2
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	**2326.8**	**170.9**	**2497.7**

Source: VWS [14].

2.2. 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 [4]. As shown in Table 2, 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.

2.3. 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 [7], 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 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 [1]. 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 [2]. According to ACM, the higher financial risk would provide insurers with sufficient incentives to be efficient and to critically monitor COVID-19-related costs. Overall, during the COVID-19 pandemic, enforcement of the antitrust rules proved to be sufficiently flexible to deal with the need for less competition and increased collaboration amongst health care providers and health insurers [12].

2.4. Financial risk-sharing between government and health insurers

The financial shock caused by the pandemic also made it difficult to calculate individuals' expected costs on which risk equalisation payments to health insurers were based [9]. 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 temporarily reintroduced a form of risk sharing, known as macro ex-post calculation ('*macronacalculatie*'). Since it reduced insurers' financial incentives for cost containment it was only a one-year risk-sharing arrangement. In case actual total health care costs in 2021 exceeded the macro budget on which the risk equalisation payments were based, the government would compensate 85 % of the additional costs and if the actual costs fell below this budget, insurers would be required to refund 85 % of the excess payments.

2.5. 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 [13,15]. Therefore, state-financed COVID-19-related health care costs substantially exceeded the costs financed by social health insurance.

3. Policy 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. As shown by Wallenburg et al. [16] during the unfolding COVID crisis workable interventions were developed to align the required top-down orientation of the public health infrastructure with the decentralized and fragmented structure of the Dutch health care market. This institutional resilience was also demonstrated by a series of collective temporary measures to absorb the financial shock, 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 payments 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 [7]. 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. Because this definition did not include the substantially reduced lower costs due to forgone care during the pandemic, some insurers were substantially overcompensated. If these reduced costs were included in the calculation of catastrophic cost compensation, the voluntary – and anticompetitive – solidarity agreements between health insurers would not have been necessary [7]. This 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 [9], the COVID-19 pandemic has also distorted the Dutch risk equalisation system, resulting in under- and overpayment to insurers. They proposed two general temporary 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 actually implemented in 2021.

4. Conclusion

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 amongst 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, which after the pandemic fuelled the already ongoing political debate about shifting the focus in Dutch health policy from competition to collaboration.

In a recent synthesis report by the Partnership for Health System Sustainability and Resilience (PHSSR), based on twenty individual country reports, it is concluded that making additional financial

resources available was critical to the COVID-19 pandemic response but across countries relied largely on ad-hoc approaches [6]. In countries with a decentralized health care system this was particularly challenging. For instance, in the United States the pandemic has significantly undermined health insurance coverage of people losing their job, as well as the financial position of a substantial number of hospitals, primary practices and rural providers [3].

Although in the decentralized Dutch health care system effective measures were taken to counteract the negative financial effect of the pandemic, we explained that there is substantial room for improvement. This leads us to the following recommendations that are also relevant for other countries with a health system based on the principles of managed (or regulated) competition. First, as an overall recommendation, central decisive overriding authority at the national government level needs to be established to prevent situations in which conflicting stakeholder interests may hamper self-regulatory measures. Although the Dutch culture of corporatism may have facilitated self-regulatory measures to equally share the uneven financial burden of the pandemic, these responses were largely ad hoc, cumbersome and time consuming. Second, 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 have made anticompetitive 'solidarity' agreements between insurers superfluous. In addition, the current maximum threshold above which insurers are fully accountable for catastrophic cost should be removed. Third, 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 [9]. Fourth, 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.

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CRediT authorship contribution statement

Frederik T Schut: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Supervision, Writing – original draft, Writing – review & editing. **Frédérique M.E. Franken:** Formal analysis, Investigation, Writing – review & editing. **Stéphanie A. van der Geest:** Formal analysis, Investigation, Writing – review & editing. **Marco Varkevisser:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Supervision, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

None.

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References

[1] ACM. Reactie ACM voorgenomen overeenkomst verdeling impact corona zorgverzekeraars voor 2020. Den Haag: Autoriteit Consument & Markt; 2020.
[2] ACM. Reactie ACM voorgenomen solidariteitsregeling 2021. Den Haag: Autoriteit Consument & Markt; 2021.
[3] Blumenthal D, Fowler EJ, Abrams M, Collins SR. Covid-19 — Implications for the health care system. N Engl J Med 2020;383:1483–8.
[4] NZa. Samenvattend rapport Zorgverzekeringswet 2021. Utrecht: Nederlandse Zorgautoriteit; 2022.
[5] OECD/European Observatory on Health Systems and Policies. The Netherlands: Country health profile 2021, State of health in the EU. Brussels: OECD Publishing, Paris/European Observatory on Health Systems and Policies; 2021.
[6] PHSSR. Building sustainable and resilient health systems: key findings from country reports. Partnership for Health System Sustainability and Resilience (PHSSR), London School of Economics and Political Science; 2023.
[7] Schut FT, Varkevisser M. Vormgeving catastroferegeling verstoort concurrentie verzekeraars. ESB 2021;106(4799):344–6.
[8] Staatscourant. Regeling van de minister voor medische zorg van 4 december 2020, kenmerk 1790136-214958-WJZ, houdende wijziging van de regeling zorgverzekering ter aanvulling van de regels voor de extra bijdrage voor zorgverzekeraars bij een catastrofe. Staatscourant; 2020. 65006 (14 December 2020).
[9] Van Kleef RC, Reuser M. How the COVID-19 pandemic can distort risk adjustment of health plan payment. Eur J Health Econ 2021;22:1005–16.
[10] Varkevisser M, Schut FT. Kosten corona geven geen aanleiding om zorgstelsel fundamenteel te hervormen. ESB 2020;105(4785):204–7.
[11] Varkevisser M, Schut FT, Franken F, van der Geest SA. Sustainability and resilience in the dutch health system. a. Partnership for Health System Sustainability and Resilience (PHSSR), London School of Economics and Political Science; 2023.
[12] Varkevisser M, Franken F, van der Geest SA, Schut FT. Competition and collaboration in health care: reconciling the irreconcilable? Lessons from The Netherlands. Eur J Health Econ 2023;24(7):1019–21.
[13] Ministerie van VWS. Vaststelling van de begrotingsstaten van het Ministerie van Volksgezondheid. Welzijn en Sport voor het jaar 2022, Tweede Kamer der Staten-Generaal, 35925 xvi.:Vergaderjaar 2021-2022.
[14] Ministerie van VWS Jaarverslag en Slotwet Ministerie van Volksgezondheid, Welzijn en Sport 2021, Tweede Kamer der Staten-Generaal, 36100 xvi.: Vergaderjaar 2021-2022.
[15] Ministerie van VWS. Vaststelling van de begrotingsstaten van het Ministerie van Volksgezondheid, Welzijn en Sport voor het jaar 2023, Tweede Kamer der Staten-Generaal, 36200 xvi. Vergaderjaar 2022-2023.
[16] Wallenburg I, Helderman JK, Jeurissen P, Bal R. Unmasking a health care system: the Dutch policy response to the Covid-19 crisis. Health Econ. Polic Law 2022;17 (S1):27–36.