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Public policy response to the second wave of the COVID-19 pandemic (the second half of 2020) in the Netherlands. Experts' report

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Abstract

In a previous report we answered a number of questions by the editors about the Dutch strategic policy in the first half year of the SARS-CoV-2 crisis. In the present paper we reply to a number of additional questions of the editors about the steps put by the Dutch policy during the second half of 2020, when the SARS-CoV-2 and COVID-19 pandemic developed its second wave. Especially, the awareness of an upcoming second and third epidemic waves, the specific preventive actions and measures taken by the government and the changing compliance and trust of the public in the government's strategy are described. Actions such as the Dutch test strategy, the division of regional vs national competences, partial and complete lockdowns, and cooperation with other member states and the (or their lack) are also briefly treated. Specific temporary and structural adjustments in the public health and health care system are mentioned.

No hard conclusions or qualifications about the adequacy of the Dutch public health and health care policy are drawn. Nevertheless, in retrospect it is clear that a straightforward, focussed and highly effective strategy in this unprecedented crisis by a new and dangerous and rapidly mutating virus is a great challenge for every country. Many things go well, but many more could or should have be done better. We have to learn, also from each other.

Key words: **COVID-19, health care systems, lockdown, Netherlands, pandemic, public health, public policy, SARS-CoV-2**

Słowa kluczowe: **COVID-19, Holandia, pandemia, polityka zdrowotna, system zdrowotny, SARS-CoV-2, zdrowie publiczne**

Introduction

End 2020 and on request of the Editors of this special Journal issue, we published a first report on the Dutch public health policy during the COVID-19 pandemic of the first half of 2020 [1]. End of June 2020, the Dutch government presented a step-by-step easing of the lockdown and, as in the rest of the EU, the infection rate remained rather low in the beginning of the second half year. For the most part people resumed and, most relevant for the developments to come, seemed to abandon their follow up of preventive measures. However, every easing and loss of discipline opened new opportunities for the virus and its broader transmission. In the Netherlands the second wave announced itself after the summer holidays and became gradually visible from the mid of September. A partial lockdown in October could divide the second wave into two peaks ("two rimples"). In the present paper we reply to the additional questions of the editors of this special issue of the ZNOZ. ZPiZ (Golinowska and

Tambor [2]) about the steps put by the Dutch policy during the second half of 2020 and the second wave of SARS--CoV-2 and COVID-19.

Limited awareness of the threat of a second wave of rising coronavirus infections

At the beginning of the second half of 2020, was there a sense that COVID-19 was no longer a threat. To this perception contributed:

Politicians

Especially the rightwing populistic parties contributed to this unrealistic perception. They openly denied the seriousness of the situation and heavily criticized the still existing basic measurements. This was most evident on the national political level and less visible in the regional and local politics (Provincial, municipal). The national political circuits have more often access to TV and other media. In the Parliament, they repeatedly put pressure on the responsible Ministers to undo the heavily freedom-restricting measures which they find unjustified. At the same time, it must be said that the temporary suspension of the periodic COVID press conferences by the Prime Minister and the Minister of Health during the holiday flaw have also contributed to the decline of the sense of urge among the population in this period.

Experts

Generally, most officially recognized experts (epidemiologists, microbiologists, medical specialists, public health experts etc.) were well aware of the unbroken threat of the SARS-pandemic. They continued to express their serious concerns and strong appeal for staying alert. Nevertheless, a few other colleague-experts (mostly of other than medical background but for sure recognized professional qualifications) sometimes took the floor or became the opportunity to present more favourable interpretations of the epidemic situation and the infection statistics. They denied prophecies of further serious waves, stating that the measures and lockdowns of the government were not effective, not necessary, exaggerated and too much damaging the economy and social life. These contra-experts repeatedly caused doubts among the people and, therefore, may have seriously undermined the compliance of the public with the official preventive measures.

Media

"Corona news" remained the dominant item in all media. Generally, it can be stated that the mainstream media covered the existing situation quite objectively and that they gave enough room to views and opinions on the perspectives, including the controversies. Some media (f.i. mainstream channel NOS) contributed with own behavioural studies on the population's confidence and compliancy with the preventive measures. It can, however, not be excluded that the typical holiday and travel items and related advertisements on TV and in the written media have contributed to a wrong feeling of safety among the general public in this period. A feeling which was also fed by the rather low figures of daily new infections after the first lockdown and during the beginning of the second half year.

From early afternoon till late evening most main TV Chanel's have daily talk and discussion programmes with a common pool of "rotating" COVID-experts as guest, sometimes also members of the OMT (national Outbreak Management Team). These TV talk shows have high watching figures and the experts gradually gained national fame. Some members of the OMT gave public lessons and answered direct questions of the public, on TV or in interviews of main journals. Without exception, these lessons underlined the necessity of obeying the rules to prevent a second wave.

It is no surprise that the corona was also a major issue in the social media. These media are highly used but barely controlled nor assessed on the quality of their content and effects. Undoubtedly, they have had an influence on the people's expectations of an upcoming second wave (or a third, etc.) and its consequences.

Common knowledge on the second wave of COVID-19 pandemic

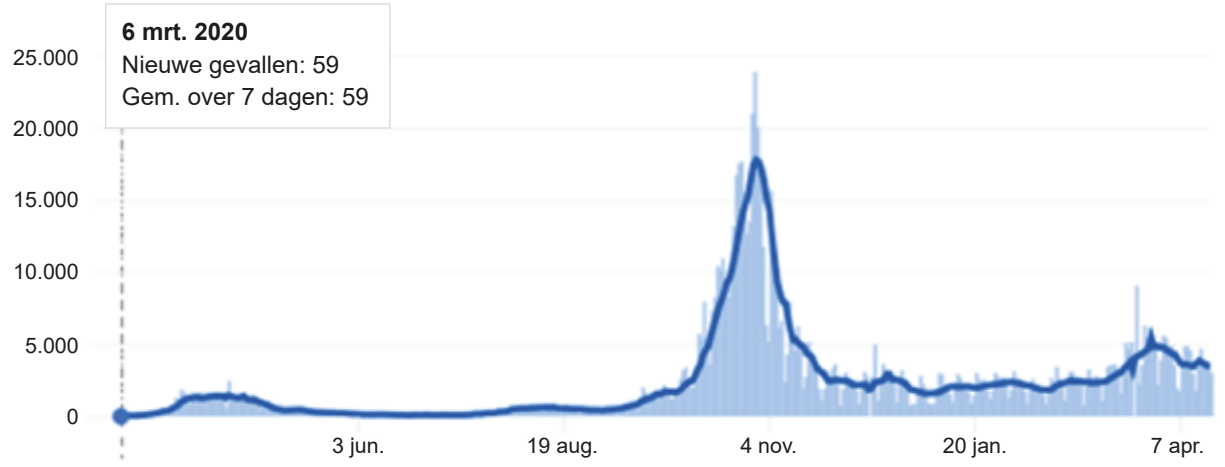
By the start of July 2020 the daily numbers of newly infected and positively tested people were very low (around 50 pd, which was the level of "caution" in the then existing Dutch coding system). This remained rather stabile, but in the last week of August a steady rise started. End of August people turned back from holidays abroad and the increase started in Rotterdam, then Amsterdam and Den Haag. No serious local or regional measures were taken, except first obligatory mask wearing in few shopping streets. However, at this time different to most other European countries, mask wearing in public in-door places was not recommended in the Netherlands (except for public transport) and recommendation had to wait another 3 months and only beginning of December it became obligatory for all public in-door places. Beginning of September it was decided to open and restart the universities and the academic years with student gatherings and introductory weeks. Recommendation for measures existed but were merely ineffective, as after the official meetings, unofficial student activities, parties and due to the simple fact that student housing in typical Dutch student organisations contributed to a rapid increase of infection among the student population. Within 7 days an almost tenfold of 500 pd and the level of "concern" was reached. From then there was a rapid surge to 1500 in the middle of September, and over 3000 new infections pd by its end (level "serious"). This made clear that a second wave was at hand and that the existing measures were not sufficient to prevent it. Measures were clearly taken too late and it had been better to implement 'hit hard and early' measures in the West of the country combined with mobility restrictions, so national lockdown measures could have been less strict.

THE NETHERLANDS

solid line: 7-day average; thin lightblue bars: daily number of infections

Figure 1a. Daily changes in the number of SARS-CoV2 infections in the Netherlands, in the period March 6th 2020 – April 7th 2021
Source: COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University, https://coronavirus.jhu.edu/ (accessed: 8.04.2021)

BELGIUM

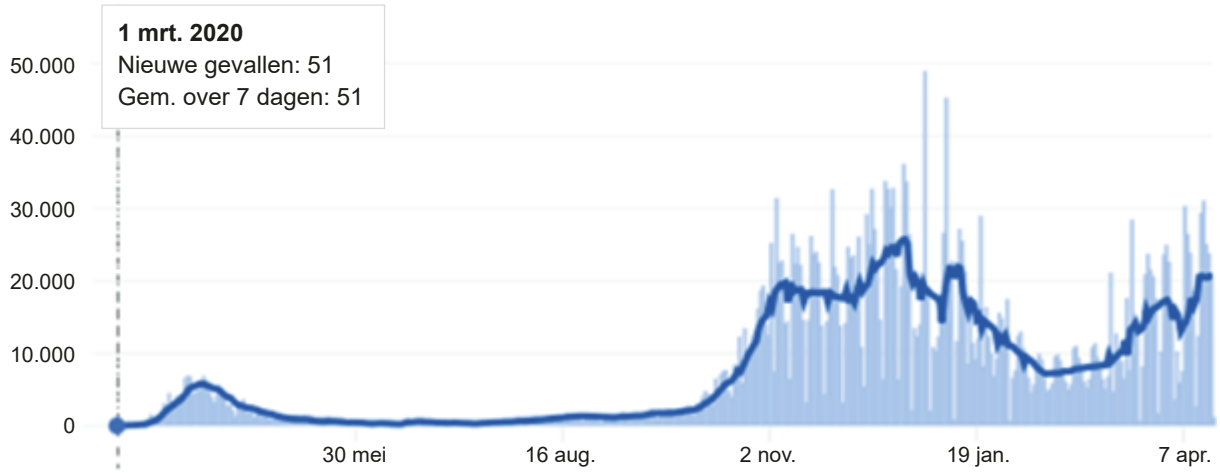


solid line: 7-day average; thin lightblue bars: daily number of infections

Figure 1b. Daily changes in the number of SARS-CoV2 infections in Belgium, in the period March 6th 2020 – April 7th 2021
Source: COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University, https://coronavirus.jhu.edu/ (accessed: 8.04.2021)

In the 2nd week of October the infection level rose further from "serious" to "very serious" in 16 of the 25 Safety Regions, and in 8 of them to "severe" (> 250 infections per 100.000 inhabitants per week).

Roughly spoken **the second wave in the Netherlands lasted from early October till the end of January**. It appeared to consist of two clearly separated peaks, which were named "two large wrinkles" by the OMT chair (Figure 1a). The strong decline from the first peak was considered as proof of the effect of the (partial) lockdown which had been ordered by the government two weeks before in sight of the upcoming second wave.



solid line: 7-day average; thin lightblue bars: daily number of infections

Figure 1c. Daily changes in the number of SARS-CoV2 infections in GERMANY, in the period March 1st 2020 – April 7th 2021

Source: COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University, https://coronavirus.jhu.edu/ (accessed: 8.04.2021)

In the perspective of the traditional December feasts, the public and entrepreneurs started a nation- and branch wide lobby to have less restrictions during this socially and traditionally important period. For entrepreneurs and restaurants December is their most important month and source of income. In the past year they had already suffered so much under the restrictions and, therefore, "deserved some easing" especially in Christmas time. However, in the middle of a steadily increasing infection rate the OMT strongly warned for the serious risk of an even higher flare-up of the epidemic by the inevitable and uncontrollable busy travelling, shopping, dining and gatherings which characterize the Santa Claus and Christmas celebrations. The government followed the OMT's advice and withstood the public's lobby.

The second peak's high occurred on December 20th; the steady decline thereafter was considered as the credit of the government's caution to have withstood the pressure of the public. It appeared to consist of two clearly separated peaks named "two large wrinkles" by the OMT chair. The decline from the first peak to the valley was considered as proof of the effectivity of the (partial) lockdown ordered by the government two weeks before, in sight of the upcoming second wave.

Second wave in neighbouring countries

Since many decades a vivid cross-border mobility exists between the Netherlands, Belgium and Germany. People go over the borders for work, leisure, trade, education and many other reasons. Therefore, it might be interesting to compare the course of the corona epidemics in the Netherlands with that in the two neighbouring countries.

In Belgium (Figure 1b), the 2nd wave reached its high on precisely the same day as the Dutch first peak (October 29). However, the further course of the second wave appeared remarkably different in Belgium, as it had only a single peak. After a somewhat faster decline from the peak than in the Netherlands, the Belgian infection rate remained rather stabile for the rest of the year on a much lower level than in the Netherlands and without a "Christmas peak".

The development of the second wave in Germany (Figure 1c) followed another pattern which is more parallel to the Dutch one as it has "a wrinkle and a peak".

In Germany the first high in the second wave occurred about a week later than in the Netherlands (Figure 1c). Due to earlier implementation of measures, it then slowed down (though less deep than in the Netherlands) and reached a second high on December 29 (again almost a week later than in the Netherlands). From first analysis of data it seems that transmission from the higher incidence in the Netherlands towards Germany was a major driver for import of the infection for the spread of SARS-CoV-2 in the West-Germany. One major reason why Germany implemented in the third wave an "invisible wall" of testing for whoever wants to cross the border.

There is not enough knowledge to correctly interpret the complex epidemiologic dynamics of the SARS--CoV-2 and the effects of the various preventive policies of

countries. However, it is clear that the epidemic spreads between neighbouring countries especially when measures are not coordinated between member states. Closing of borders is not possible as goods and people cross the border every day. Around 50.000 commuters cross only the Dutch-German border region every day [3], of them around 8000 healthcare workers. Closing fully the border would lead to danger to the border citizens. Further life-important goods are transferred across the borders. The export-stop of PPE in the first wave from France and Germany to the other countries had an enormous impact on the availability of PPE in Dutch hospitals.

Changes in the government

In the second half of 2020, changes in the government and its ministerial structure took place:

- After the end of the first wave the ministerial crisis structure was downscaled and a temporary Ministerial Commission COVID-19 (MCC-19) was installed. This "Sub council" consists of the Prime Minister (Chairman) supplemented with the specific Ministers responsible for the items which the MCC-19 has to prepare for the plenary Council of Ministers.
- The Minister of Justice and Safety installed a new temporary Program-Directorate-General "Samenleving en COVID-19" (Society and COVID-19). This Program is led by an own Program-Director-General DgSC-19 of the ministry and consists of the two existing program directorates Evaluation and Responsibility (DEV), and Strategy and Knowledge COVID-19 (SKC-19). The main tasks of this dedicate Program-Directorate-General are: a) *monitoring* of the (mid)long term COVID-19 related trajectories which are running within the various *ministerial* departments; b) *monitoring* of the developments in *society* caused by the crisis and being of a societal or a socio-economical nature; c) *exploring society* during and after the crisis, on the basis of long term (interdepartmental) policy themes; d) taking care for *action perspectives* for medium term tackling the COVID-19 crisis.
- In addition, a "Landelijk Operationeel Team Corona" was installed (National Operational Team Corona or LOT-C). This is a national hub that connects Security Regions, the national government and crisis partners and supports them in giving shape and content to the unambiguous and jointly acting government. It unites forces, knowledge and expertise to support others. The LOT-C consists of professionals from different organizations who work together in a network, such as the national government, Safety Regions, GGD-GHOR, Defence, VNG (Association of Dutch Municipalities), TNO, Police, Fire Brigade, Red Cross, Landelijk Operationeel Coordinatie Centrum (LOCC, National Operational Coordination Center) and the IFV (Instituut Fysieke Veiligheid, Institute Physical Safety).
- In the communication about its COVID-19 strategy after the first wave, the Dutch Cabinet and the RIVM often used metaphors to characterize the essence of their strategy and tools, such as "hammer and dance strategy", "steering by looking in the rearview mirror", "100% decision making with only 50% knowledge", dashboard, toolbox, etc. During the flaw of the epidemic between the first and second wave, the government followed the "Hammer-and-dance" strategy of Tomas Pueyo (see figure in https://tomaspueyo.medium.com/coronavirus-the-hammer-and-the-dance-be9337092b56; The hammer and dance strategy means that a large-scale virus outbreak or a pandemic should first be fought with tough measures ("the hammer" that sells the virus "a big blow", leading to the end of the first wave), after which the virus alternately dies out and flares up for a while thanks to other, milder measures, such as testing and source and contact research. This hammer-and-dance strategy is presented in a graph as a line that first forms a high peak and a deep valley, after which a fluctuating, 'dancing' line depicts the further course of the pandemic until there is a definitive solution: the vaccine. In the Technical briefings and debates in the Parliament about the government's Corona-strategy, this graphic was often presented. "The hammer to knock down the virus must be big enough", Prime Minister Rutte said about the new corona measures before the second (partial) lock down in October).
- However, in the Netherlands the implementation of the hammer came too late. This is probably due to the fact that the Dutch surveillance system was in that time mainly analysed on a national scale, although the country is big enough for large regional differences. Soon after, the hammer-and-dance picture silently disappeared from the stage and was replaced by other sounding metaphors, but usually each of them was soon replaced by another one.
- From the beginning of the crisis in 2020 the imposed measures, rules and restrictions ordered by the authorities were legally based on emergency ordinances of the "Wet Publieke Gezondheid". These emergency ordinances make it possible to rapidly response to the permanently changing situations without debates in Parliament. This solution is only suited for relatively short periods and really high-risk emergencies. Therefore, a replacing and more robust "Tijdelijke Wet Maatregelen COVID-19" (Temporary Act on Measures COVID-19) was written, It was discussed and accepted in the Parliament, became in force on December 1, 2020 and has a term of 3 months. If necessary, this "Corona law" can be extended by 3 months at a time. It is also possible to withdraw the law in the meantime, when it appears no longer necessary. The Parliament is always involved in these decisions.

The Temporary Corona Measures Act applies from 1 December 2020. This means that the powers are back with the mayors of the municipalities and there is parliamentary control. The municipalities still coordinate their measures every week under the chairmanship of the chairman of the Safety Region.

The Netherlands distinguishes 4 risk-levels:

CAUTION

The situation is manageable. The number of new confirmed cases is low. 50 positive test results per 100.000 inhabitants per week (signal value: 7 positive test results per 100.000 inhabitants per day). There is sufficient healthcare capacity.

CONCERN

The situation is becoming difficult to manage. There are many new confirmed cases > 50, but 150 positive test results per 100.000 inhabitants per week; pressure on healthcare capacity is increasing.

SERIOUS

The situation is serious. The number of new confirmed cases is large, > 150, but 250 positive tests per 100.000 inhabitants per week per week; pressure on healthcare capacity is very high.

SEVERE

The situation is severe. The number of new confirmed cases is extremely high, > 250 positive test results per 100.000 inhabitants per week; pressure on healthcare capacity is extreme.

At least once every two weeks – or more often if necessary – the risk level of each region is assessed on the basis of the number of new confirmed cases and the number of hospital admissions there. This assessment is done automatically. Changes to a region's risk level are published each time on the Corona dashboard of the government (Rijksoverheid.nl).

Regional and local responsibility

As already mentioned, from the beginning of the Corona crisis the legal responsibilities of government, municipalities and their regional cooperation structures (Safety Regions) in the Corona crisis were based upon the Wet Publieke Gezondheid and the Wet Veiligheidsregio's. The new Temporary act did not change the division of responsibilities, and the motto remains: "regional when possible, national when necessary". However, as soon as risk level 3 or 4 applies in three or more Security Regions, the measures at national level apply. The mayor determines whether additional measures apply in his/her municipality.

However, the implementation of measures did not follow the principle of "obsta principiis" and came regularly too late. This is probably due to the fact that the Dutch epidemic response system is based only on a national scale, although the country is big enough for large regional differences. In fact already during the first wave, the country was divided epidemiologically in four major regions. The same showed up in the second wave. However, due to decisions based in the national average, no measures were taken during the initial phase of very high regional increase in incidence. The fact that crisis measures are always taken or for the whole country or not taken at all, seems to be a disadvantage compared to other (also smaller countries), like Austria that are used to take regional measures on governmental or administrative level.

Establishing of new teams of experts

In his letter of July 21 to the Parliament (Kamerbrief COVID-19: Deskundigen traject Lessons Learned), the Minister of Health described extensively the large number of experts who, in addition to the OMT, had been asked or were foreseen to be asked for advice. Many additional experts were even mentioned with their full names. Of most others, the area of their working field and expertise was mentioned as well as the reason to consult them was explained (f.i. in medical, economic, social, governance, behavioural, communication, safety, rehabilitation, mental health, youth care, and other specialisms). The ministry organized discussions with medical professionals, patient representatives, administrators, professors, professionals from other sectors, experts "by experience" and people from GGDs and municipalities, among others. These experts made written contributions and often entered discussions with the ministry and with each other. For an overview of the great manifold of expertise and fields we refer to the specific Ministerial letters (COVID-19 letter Experts Trajects Lessons Learned nr 1721-208130-BPZ; COVID-19 letter Lessons learned 1736332-209353-PG).

Also during summer 2020, the Algemene Rekenkamer (Court of Audit) presented its analysis (Test on Corona, What happened in the Spring, August 2020) of the first wave reponse, especially focusing on the test strategy in order to improve. The results of the analysis were very critical on the response of the government and the public health institutions on the diagnostic capacity. Preparation for diagnostic capacities were too late and not proper. The Algemene Rekenkamer came to the conclusion, that there was in fact enough laboratory capacity for performing tests, even enough laboratory consumables and what has been said by authorities and politicians in March/April 2020 that capacity was limited was not true. The problem was that the test capacity was not activated for the COVID-response. Further, it seems that it was not a lack of lab capacity, but a lack of capacity at the public health service of performing swabs was at that time the most important bottle-neck as PHS was not prepared for a pandemic and GP-services and other healthcare institutions were not activated at that time to contribute to the test-strategy. Third, it seemed a misjudgement of the authorities and some experts themselves over to better safe the capacity for later the year, which lead to the fact that testing was not strongly upscaled until June/July 2020, which led to the paradoxal situation that healthcare workers were not allowed to get a diagnostic test but just had to stay at home when sick. This policy allowed spread of the virus via healthcare workers who were naturally a-/or presymptomatic or just without symptoms because of the Dutch common practice of self medication of analgesics.

In line with the critics of the Court of Audit, an expert health economist of University of Maastricht who was

often invited on prime TV Channels, repeatedly criticized the government's strategy in the first year of the corona crisis, qualifying this as 2 "incompetence, complacency, making empty promises and with week knees for lobbyists". With repect to the governments purchasing of tests, PPS and vaccines contracted in 2020, the intentions were characterized as undoubtedly good, but the practice turned out differently every time. (W. Groot, De Limburger, March 9, 2021). Far over 100 millions of Euro's were spent last year for unused test capacity and for PPEs, including one 100 million for insufficiently qualified mouth masks which July 2021 are still stored in July 2021.

A special group of high level experts, the "Red Team", should also be mentioned here. This is a small group of recognized experts who consider it necessary that in a complex crisis a red team is appointed to provide a response. "Red Team C19 NL" is an unofficial group that offers the necessary contradiction in discussions, voluntarily and without any specific assignment or status. Its core members are retired or still active high level leading advisors to the Dutch or other governments in Europe, or even the WHO. It includes the former Dutch Chief Inspector of Public Health, the former Head of the Outbreak Management Team of RIVM, a former high officer of the ECDC in Stockholm, an active advisor of the WHO a.s.o. Members of this Dutch Red Team were regularly asked by the media to explain their vision and give advice. Red Team core members have also been invited to brief the Parliamentary Commission on COVID-19 measures, or were individually consulted by the Ministry or by mayors of large cities (see www.c19redteam.nl; Kamerbrief Deskundigen letters learned). Early in the 2nd wave, the Red Team recommended the Dutch government to better follow the German and Danish preventive strategies. AF, also member of the Dutch Outbreak Management Team, agreed with the Red Team that the Netherlands can indeed learn from its eastern neighbors in terms of timing its response, and commented that a completely German policy would most likely fail in the Netherlands, because both countries are constantly in different phases of the epidemic and they are simply different countries.

Increase of international cooperation

a. In the second quarter of 2020 the Adviesraad Internationale Vraagstukken AIV (the independent advisory body of government and parliament for international issues) recommended as follows:

- In its efforts to combat the COVID-19 virus the Netherlands should cooperate as much as possible with EU institutions and Member States, or in coalitions with like-minded countries;
- A coherent package of support measures should be developed, which should include medical assistance, health care, food aid, a social safety net, socio-economic perspective, support for refugees and displaced persons and an air transport initiative;
- The Netherlands should make an amount of EUR 1 billion available to meet the most acute need;
- The EU should also strengthen the position of the World Health Organization because effective and mandatory rules for reporting and dealing with impending pandemics are more important than ever.

In its response to the advice July 10, 2020 (BZDOC-906517737-64), the Cabinet decided to follow the recommendations as far as possible. A budget of 500 million Euro was assigned for this international COVID-cooperation, to support the most vulnerable countries and the people most at risk, including children, women, the elderly and disabled people.

The budget should be integrated into the "Team Europe" package of 20 billion Euro launched by the European Commission.

In a later letter to the Parliament (October 13), the Dutch Minister of Health declared that "we are inspired by (new) insights from abroad and in the Netherlands and experiences about what works and what doesn't. This means that our toolbox continues to evolve".

b. After rather stiff negotiations with the other EU member states about its additional conditions, the Dutch government finally agreed with the so-called EU Corona Repair Funds of 750 million Euro (August 2020). The Netherlands was heavily blamed for inflexibility and unsolidarity.

c. In June 2020, an Alliance of the Netherlands and 3 other EU member states (Germany, France, Italy) signed a contract with the British/Swedish pharmaceutical company ASTRA/Zeneca for the development of an effective SARS--CoV-2 vaccine. By the end of the year 300 million doses should be delivered, with an option for 300 million doses extra and the perspective of distribution to other EU countries. The British government had previously subscribed for a purchase of 30 million vaccines from the same pharmaceutical firm AZ. In September, Mrs Ursula von der Leyen, the new President of the EU Council, announced in her first "State of the Union" that the European Commission would coordinate the purchasing and distribution of vaccines within Europe. The Dutch government also endorsed the intention of the European Commission to enlarge the mandate of the European Centre for Disease Prevention and Control (ECDC), which was needed in order to realize a better coordinated and more effective combat of infectious diseases in the EU and abroad.

d. During the first wave the Dutch hospitals were often confronted with shortage of IC capacity. After an urgent request, the Dutch government was helped out by certain German hospitals with a higher IC capacity. They did so and even at no costs.

During the second wave the Dutch Minister of Medical Care again approached the German hospitals for help, stating that her request was made "just as a precaution". According to the German Coordinator of IC-department Van Aken (University of Münster) the German hospitals again pledged 100 to 200 beds for Dutch patients when needed. This offer has only been used very scarcely.

e. Euroregions are bodies which promote and facilitate cross-border cooperation between neighbouring countries in the EU, f.i. between the Netherlands, Germany and Belgium. In these border areas there is a vivid cross-border mobility of people for work, study, leisure, shopping, medical help, enterprising etc. The many preventive measures and restrictions taken by the 3 countries are quite different. Also, they are changed frequently by each of the countries to cope with the developing epidemiological situation, usually without mutual consultation. This results in a constantly changing package of rules and measures in border areas which is not easy to oversee. This causes much confusion, especially for the inhabitants who are used to go over the border, or even must go over the border for their work or other activities. In response to this, some of these Euroregions initiated projects to dissolve or mitigate the difficulties which the preventive corona measures and restrictions cause for the citizens and entrepreneurs for cross-border travel and activities. An example.

EMRIC is a unique partnership of government services in the Euregion Meuse-Rhine (EMR) which are responsible in their area for fire services, technical assistance, emergency care and disaster and crisis management. EMRIC produces an updated bulletin with the latest regulations and measures which are in force in the whole cross border area of the Netherlands, Germany and Belgium (including information on testing and vaccination strategies). The information is easily readable and accessible for government officials (such as border officers), citizens, health workers, and all others in the public who have to deal with the different systems of the three countries. The bulletin is updated whenever there is a relevant change in the policy and rules in any of the three countries. At the end of 2020 the 71st version appeared (the 100th edition on May 20, 2021), which clearly reflects how rapid the rules change and how much confusion arises for inhabitants who have to cross the border frequently for work or study or medical care.

Actions taken in health care system

Increase overall spending on health care

The overall spending by the state was increased, and the state provided the budget which the regional GGD's needed for their extra preventive efforts, such as testing, contact tracing, logistics, additional staff, etc. Early July the cabinet assigned 365 million Supplementary budget to the GGD's and the Safety Regions for their Corona-related efforts. Extra budget was assigned for the purchase of medical means and devices and PPE. The government also decided to increase the IC-capacity in the hospitals with 500 extra (IC) beds, including the necessary budget and trained staff. At the time being, shortage of qualified IC-staff is still a major bottleneck for the expanding of the ICUs than the budget.

In total, at the start of the 2nd half year 2020 an extra budget of over 1 billion Euro was assigned by the government for Corona-related activities (including 20 million Euro extra for scientific Corona research).

Remuneration of medical and auxiliary health care workers

The remuneration of the healthcare workers was not increased. However, as a token of acknowledgement for their physically and mentally exceptionally hard work during the first wave, the government decided to give every healthcare worker a one-time extra bonus of 1000 Euro. A majority in the Parliament estimated this reward as being far too low, and insisted on increasing the remuneration structurally. At the time being, this is still under discussion. It is fi not clear whether and if, how many additional, non-clinical workers like driving, cleaning, technical staff deserve a similar award. According to a precise analysis of the Minister of Health, the existing remuneration grades would suffice and no general upgrade would be needed.

The hard work of the care professionals especially the nurses during the peak occupation of COVID- and ICU-wards was not only appreciated with applause and some financial award. The crisis in the hospitals made, once again, clear how important the role, creativity, motivation and organizational skills of nurses are in extreme circumstances. The management and board of the hospitals has learned from this that the nursing staff should be more directly represented in the steering of the hospital, also under normal circumstances. In many hospitals this has resulted in the return of a Nursing Director at the highest management level in the house, in a stronger representation of nurses in the forums of health policy making, and also in the media fi on TV discussions about COVID and the hospital care sector in general. The Parliament has even insisted on official regulations to facilitate, strengthen and guarantee the role of nurses in hospital management and hospital policy.

Some organizational changes in hospital care

During the first wave, most hospitals had to downscale their regular "non-COVID-care" with sometimes more than 30%, in favour of special COVID-wards and the enlarged IC-units. This also required extra IC-qualified staff, which could not be acquired from outside but was mostly found by internal reshuffling and additional training of nursing and medical staff of the non-COVID wards. The lessons learned during the first COVID-wave, and the shortage of IC-staff during a possible (almost certain) next wave, have stimulated hospitals to better anticipate on such situations. They are re-organizing the educational programmes of general nurses and have started a broader basic education in acute care, and more skills for acute care are built in before specializing. This meets the demand for flexible personnel who can be deployed in acute wards when the demand for care is very high there. This way, it can be scaled up faster if necessary. COVID-19 has learned that it must be possible to switch faster.

The downscaling of regular, non-COVID care also resulted in long waiting lists for the regular care and for cancer screening programs. It is presumed that these changes

and their adverse effects on regular hospital care will be transient after the crisis. On the other hand, some of the successful managerial adjustments to the crisis will probably find a more permanent place in hospital policy, structure, protocols and management, as is the case with the adjusted education described above.

In the height of the first wave, spreading of patients over the regions and even over the border was necessary, and was effectively coordinated by a dedicated National Centre for the Spread of Patients (LCPS). This "success" might lead to a rethinking of planning of hospital capacity and specialisms on the regional and national level, also in the future normalized and rationalized situation. In the post-crisis period of time the experience and assistance of the LCPS might also be useful for catching up of non-Corona care that had to be postponed due to the corona crisis.

The COVID-crisis has also highlighted the need of specialized care for COVID-patients who after discharge from hospital still experience various and chronic symptoms. The significance of this "long-COVID" syndrome was initially underestimated but during the 2nd half year of 2020 it has become more and more visible. Up to 10% of recovered COVID-patients may suffer from it, whether or not they were in the hospital or even if they had only mild disease. These long-COVID patients need special care of medical specialists, general practitioners, rehabilitation specialist, psychologists, physiotherapists etc. Therefore, there is a need to consider the organization of specialized long-COVID care networks of hospital and primary care professionals. In the Netherlands the government supports the development of "C-support networks" (an analogy with the earlier "Q-support" network for the coordinated for patients with chronic Q-fever syndrome).

Scope of testing

As explained before under 6 (as well as in the previous paper about the Dutch COVID-19 policy in the first half year), the testing strategy was very restricted in the beginning, and even care workers who were sick were not allowed to be tested but only had to stay at home when sick.

In the middle of the 2nd half year 2020 the policy on testing and tracing was in full swing. Together with the GGDs and the LCDK (Landelijk Coordinatieteam Diagnostische Keten, the National Coordination Team Diagnostic Chain), the test capacity was increased significantly, various types of rapid tests were coming and should be given a place in the test policy. After a number of failures or unrealistic prognoses about the speed of the test program, the chain of testing and tracing was better controlled by the ministry (f.i. by the end of the year 2020 the Ministry of Health installed a special DOTT Regiegroep, "Regiegroep Digitale Ondersteuning Test- en Traceerketen"; Steering group Digital Support Test and Tracing Chain). In addition, the GGDs scaled up their tracing capacity to the maximum for the winter. Also, the aim was to contract more external laboratory capacity, as larger volumes of *PCR tests* could be carried out by high-volume labs and regional labs are mainly deployed based on their expertise and proximity to the test streets, for example in outbreak situations.

In the 2nd half year of 2020 various *rapid test* products were taken under scope because they might be useful for an acceleration of the re-opening of society (f.i. initially at airports). Therefore, a broad Steering Committee for rapid tests was installed which initially focused on the potency of rapid test in airtraffic. Also, particular attention was paid to the impact of adding risk-based testing of people without complaints.

Introducing an infection control (tracing) system

Source- and Contact Tracing (SCT) was already existing in the Netherlands before the crisis. However, especially during the second COVID-wave the staff capacity for SCT was still insufficient for the rapidly growing number of clusters which they had to handle every day. Therefore, many thousands of new staff members were acquired and trained for this work. In addition, "risk-controlled" SCT was temporarily introduced.

In "risk-controlled SCT", the GGD employee uses contact inventory and source research to determine whether a Contact Tracing case or cluster falls into one of the defined risk categories. This is the case, for example, if the infected person works in the care sector or at school, is at risk of a serious course of the infection, or has a language or cultural barrier. In such cases, the GGD carries out the SCT in a regular manner. At all other SCTs, the GGD employee carries out the contact inventory and the source investigation and the infected person is then instructed how his or her contacts should be informed. The GGD provides the necessary information materials for this purpose. As said, this use of risk-based SCT should be stopped as soon as the infection figures give room for a return to the regular SCTY protocol.

Implementation of a second lockdown

A second national (partial) lockdown was implemented on October 15 which lasted throughout the rest of the year and into 2021 (sometimes with temporary strengthening or easing of certain measures). On December 14 it became the second full lockdown, with closing of all non-essential shops and only allowing online-education. Incidentally, certain cities or regions with a low infection rate asked for local or regional easing of rules, in order to allow more societal life and commerce, but these requests were often refused.

The public perception of the new restrictions in economic activities

An opinion poll on this subject was performed by an international research group "COVID-19 Impact Lab" which started in mid-March 2020 by economists at Bonn University and consists of researchers from the University of Mannheim, the University of Lausanne, Tilburg University, and the Institute of Labor Economics (IZA, Germany). COVID-19 Impact Lab surveyed the LISS-panel of 5000 Dutch people in order to assess how COVID-19 is

impacting individuals, households, and communities and to monitor how they responded to the COVID-19 crisis. Aim is a.o. to generate insights from near-real-time data which can help decision-makers and the public.

In March 2020 the large majority of the Dutch population expects to be financially affected by the outbreak of the corona virus and the measures to combat it. About one in six employees expect to lose their job in the next 12 months. More than 40% of the self-employed expect to be without assignments. 60% of respondents aged 65 and older assume that their pension will be cut. Half of the respondents expect a sharp fall in the value of properties (houses and other investments) in the coming months. This while at the time of the survey, for example, stock indices had already shown a substantial decline. In the coming year, two out of three Dutch people expect to be personally confronted with i) loss of job or virtually all assignments as a self-employed person, ii) reduction of pension rights, or iii) a significant fall in the value of assets. These concerns have consequences for the financial situation of consumers, the majority of whom indicate that they will spend less. One in eight Dutch people expect to have difficulty paying their debts in the next 12 months.

The opinion of this Dutch LISS-panel was monitored in multiple survey waves, with accents on various aspects of economy and employability. The data on a total of 7 survey waves can be assessed on https://liss-covid-19--questionnaires-documentation.readthedocs.io/en/latest/wave-6/index.html.

Decline in trust and support for political and media messages

Surveys by I&O Research

At regular intervals a cohort of at least 2000 Dutch citizens is questioned by the research institute I&O Research (www.ioresearch.nl) about their support for the cabinet's Corona-measures (and since June 2020 also the willingness to be vaccinated). Figure 2 shows the development of the people's support for a group of 7 of the cabinet's main behavioural measures and its change from March 2020 to February 2021.

The Dutch are still in a (large) majority behind the corona measures. However, the way in which the cabinet deals with the corona *measures in general* diminished slowly and decreased from 91% in government's measures in the middle of the first wave to 75% in July and 65% in December. Similarly, the support for the *measures related to health* was 88% in March 2020 but went down to 80% in July and to 65% in December. Support for the *economic measures* went also down from 75% in March to 63% in July and 54% in December. The latter is in line with the peoples worrysome expectation about the economic perspectives that were mentioned in the answer to the previous question.

The subsequent surveys of I&O Research give insight into the changes, fluctuations or stability of the public's appreciation of the COVID-policy and how it influences their life, society and the economy. They also follow the changes in sentiment about specific measures such as the necessity of the curfew and its duration, the willingness to be vaccinated, the loosening of lockdown, etc. The fact that a majority still supports the government's corona policy does not necessarily mean that there is no criticism within the panel. F.i. the question "Do you want a stricter or a looser approach from the government with regard to the corona behavioral guidelines?" showed a strongly divided picture. In September 75% of the people supports the measures, but only a third (37%) thinks it is good as it is now, 37 percent would also like to see a stricter approach and a quarter (26%) think that it should be (much) looser.

The polls also studied the possible effects of the panel's preferences for political parties which is also of interest to authorities and politicians.

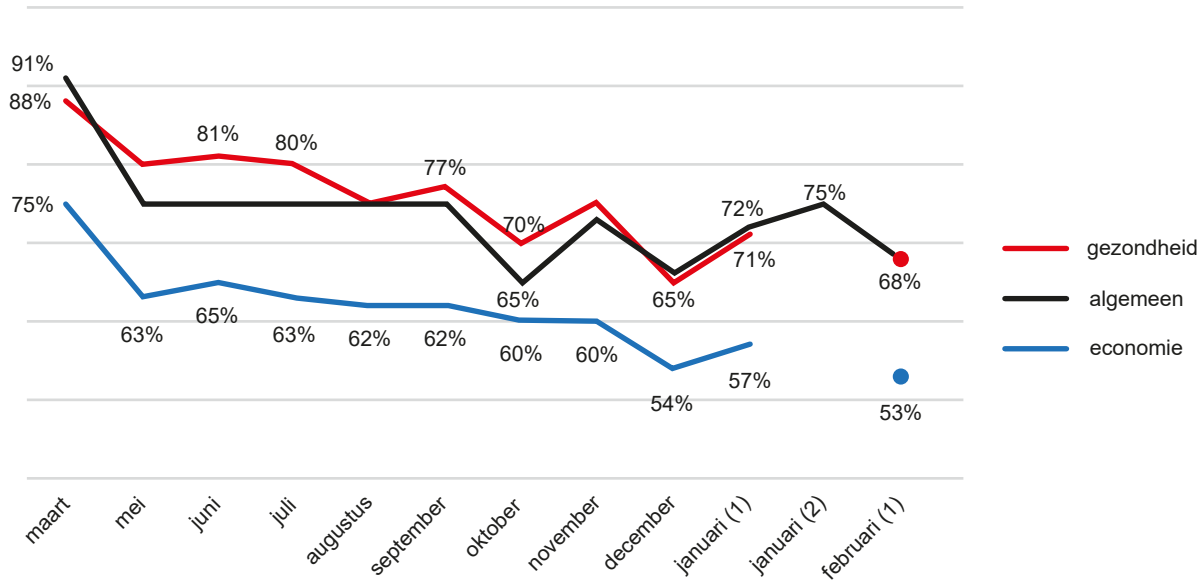
RIVM Studies on behavioural measures and well-being

The measures taken by the government have a major impact on the daily lives of everyone in the Netherlands. The government must know whether people can follow these rules, and what they think of them. Are people feeling uncertain or worried about the future, or are they also having positive experiences in these times? The RIVM (the National Institute for Public Health and the Environment) and GGD--GHOR (the Netherlands Municipal Public Health Services and Medical Assistance in Accidents and Disasters) are, therefore, conducting a large-scale survey on this topic which is repeated every 4 to 6 weeks. Also, a dedicated corona Behavioral Unit of RIVM was formed which aggregates the country's highest scientific and practical knowledge and expertise on behavior, psychology and health and communication to inform and support policy and communication at the national and regional levels.

In 11 rounds of the survey between March 2020 and April 2021 a cohort of between 50.000 and 90.000 Dutch people have filled in an extensive questionnaire on what they think of the government's behavioral measures and how they are physically, mentally and socially in this corona era.

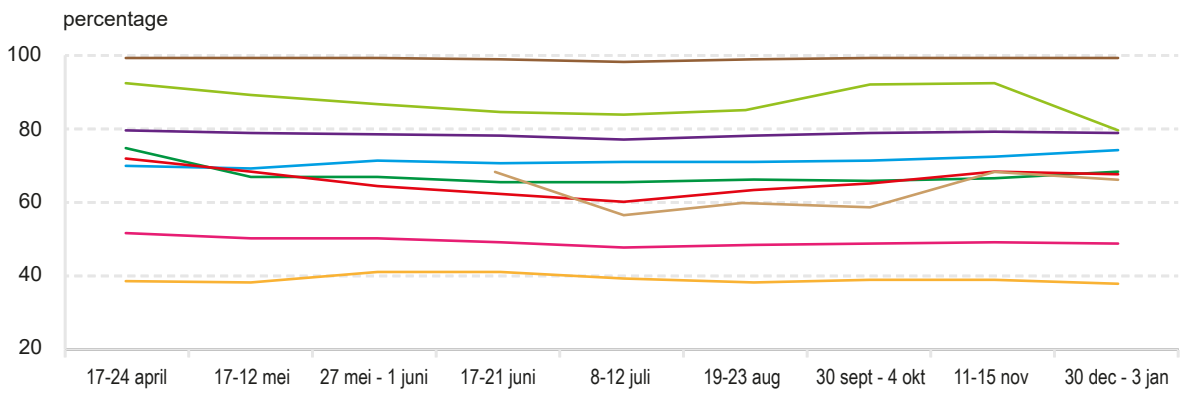
Round 4 to 9 of the survey covered the 2nd half year of 2020, round 9 was done at the end of December 2020 and included the Christmas period in a total lockdown. It is not possible to mention here the results of the multitude of measures and items which the people were questioned about in the survey, and which included attitudes as to working from home, testing, staying at home when positive, going out even in busy or crowded situations was followed, and as from June, also the willingness to be vaccinated was added.

Figure 3 gives the population's rather stabile compliancy with 8 of the main behavioral measures from the beginning of the crisis in March. The behavioral research of measurement round 9 show that "no shaking hands" was still the measure that is most followed, 99% of the participants say they no longer shake hands. Of the total number



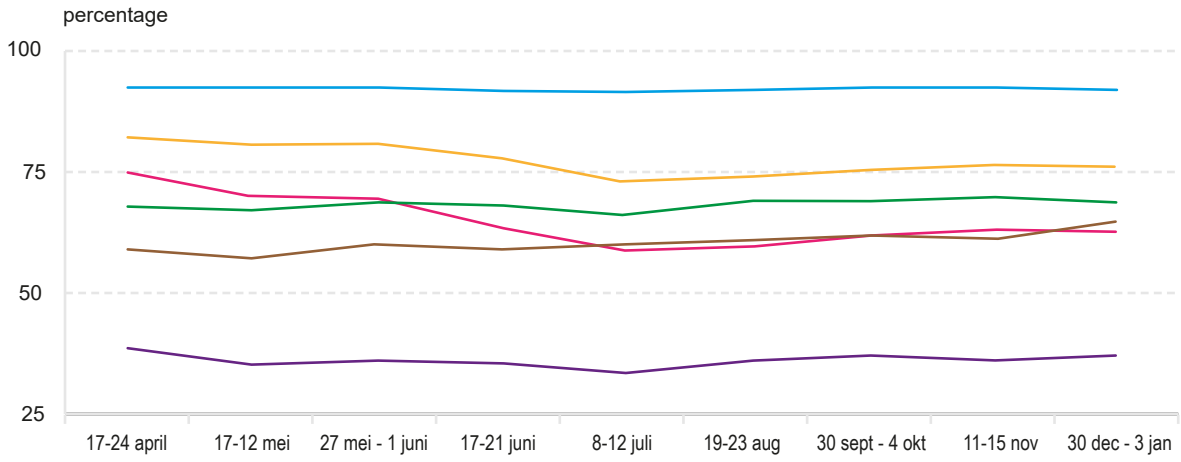
red: preventive measures regarding health
black: "general" measures
blue: measures regarding economy

Figure 2. Decline of support of Dutch citizens for the cabinet's corona measures in the period March 2020 to February 2021
Source: www.ioresearch.nl; Rapport Draagvlak coronamaatregelen en vaccinatiebereidheid, Rapport 2021/049, Februari 2021



darkbrown: not shaking hands
lightgreen: allowing maxim number visitors at home.
black: washing hands when necessary
darkgreen: use of tissue paper
red: keeping sufficient distance
blue: coughing and sneezing in elbow
purple: meticulous hand washing >20 sec
orange: frequent hand washing
lightbrown: not going to busy places

Figure 3. Changes in compliance to behavioural measures during the period April 2020 – January 2021 (9 monthly measurements)
Source: https://www.rivm.nl/gedragsonderzoek/maatregelen-welbevinden/resultaten-9e-ronde-gedragsonderzoek/naleven-gedragsregels



blue: after toilet visit
orange: when coming home
purple: when visiting someone
green: before eating
brown: after nose-blowing
black: before going outside

Figure 4. Changes in washing hands in the period April 2020 – January 2021

Source: https://www.rivm.nl/gedragsonderzoek/maatregelen-welbevinden/resultaten-9e-ronde-gedragsonderzoek/naleven-gedragsregels

of times people are in a situation where they have to wash their hands, they do this on average in 77% of those situations. When they have to sneeze or cough, they do so in the elbow on average 74% of the time. When we ask people how many times a day they think they wash their hands, 37% report having done this frequently (more than 10 times a day) with soap and water or with disinfectant hand gel. 93% of the participants indicate that they always use a face mask in public indoor spaces. If we look at measures that should limit the number of contacts between people, 80% of the participants indicate that they have not received more than the maximum number of people visiting. 62% of the participants said they had not been in a too busy place in the week prior to the study, and of those who had been in a too busy place, 23% said they had turned around at least once (not in figure). If we combine these results, we arrive at 67% who avoided crowds by not visiting crowded places or turned around every time when it was too busy somewhere.

Figure 4 may illustrate the detailedness of the surveys, and shows a subdivision of the handwashing questioning. It gives further information about the habits of people in situations in which people might wash their hands, which might be helpful for the targeting of possible handwash--promoting campaigns.

Altogether the studies and surveys showed that compliance with the COVID-19 measures since the beginning of the crisis could still be improved, even though it appeared to remain more or less the same overall in recent months. There is still broad support for the measures. There does not appear to be any immediate "COVID-19 fatigue" in the sense of a decrease in urgency and compliance, but a gradual slope. However, since stricter measures that been implemented in the partial lockdown of mid-October, a decline in social and mental well-being has become more and more visible, with younger people scoring the worst.

In this regard, an interesting incident is worth noting. The Minister of Justice and Security is primarily responsible for establishing, issuing and enforcing the cabinet's preventive corona measures. The Minister was secretly photographed during his own wedding party when he and others, including his Secretary of State, repeatedly failed to comply with his own measure of keeping 5 feet social distance. This incident and its possible consequences for his position and credibility were widely discussed in the press and scornfully also by the people in the street. The minister had to answer for this in Parliament but was allowed to stay on post. This incident has undoubtedly influenced the people's compliancy with the corona-measures.

The peoples's confidence in policy decreased slowly. At the end of 2020, 45% of the respondents are positive or very positive about the government response in the Netherlands, which represents a decrease compared to November (58%). 21% are positive or very positive when comparing the Netherlands to other countries, compared to 43% in November. Also, compared to the previous

measurement, fewer respondents feel that the government is carefully considering different social interests (from 63 to 55%) and explaining its decisions well (from 63 to 56%). The survey took place at the turn of the year and after the refuse by the government to allow ease for Christmas and New Year[1].

Earlier that year (August 2020) a survey performed by the mainstream journal Algemeen Dagblad had also shown that the people's support for the cabinet's policy was shrinking. More than four in ten Dutch people said they had no confidence in the policy of RIVM and the cabinet. In March, when a representative group of Dutch people answered exactly the same questions, this was only 15 percent.

Unequal treatment of industries and employers in support and restrictions during a pandemic

There were some clear examples of measures and privileges which gave mixed feelings and reactions in society:

- The disproportionally huge and repeated loans (of several billion Euro) to the national airline KLM to prevent its bankruptcy and to keep this national pride alive were felt as disproportionally and were broadly disputed within society.
- During lockdowns the so-called "essential" shops were allowed to be open, such as those providing food, pharmacies, drugstores, etc. This included the supermarkets that also sell much non-food. Supermarkets have made even better profits during the crisis than before, their competitors in the non-food were closed. In some cases, this criticism led to much stricter controls of shops which were only open for food but also sold non-food, their non-food products should not be openly visible or lawfully covered and the shelves with them blocked.
- Great web shops have done better during the lockdown, which has been difficult to accept by the shops that had to close. At the same time, this stimulated many keepers of non-essential shops to also offer their goods online, with home delivery or a pickup by the client at a special desk outside the shop.
- The branch of restaurants, bars, hotels, pubs etc. (in Dutch called "the horeca") was disproportionally hit by the lockdown, especially during the Christmas time which in normal circumstances is their golden period. They argued that according to the existing epidemiological data, most infections occurred in home and family situations, and not in their branch. In addition, they considered themselves perfectly capable of guaranteeing "Corona-proof conditions" in their establishments. Nevertheless, their begging remained unsuccessful.
- A particular measure by the government has been the closing of mink farms. Many mink farms had infected animals, they were isolated and all animals were culled. In most cases the virus had been transmitted by a positive caretaker. Over one hundred mink farms have been closed, mainly as a precaution to prevent them to become possible reservoirs of the SARS-CoV-2 virus. Financial compensation was given by the authorities. By the way, the closure of all mink farms in the Netherlands, ultimately in 2024, had already been decided years before by the government. Due to the transmission risk, this decision will now be implemented no later than 2022.

Changes in perception on cooperation within the EU (and the international solidarity in general)

In point 7 of this paper (answer to question 3 under "international cooperation") several actions and policies were mentioned which show that the international cooperation and solidarity within the EU is an important element in the pandemic strategy of the Netherlands. This was confirmed in the meeting of the European Council in December in Paris. The Netherlands endorsed the Team Europe and additional EU-initiatives in the pandemic, including the initiative of Mrs. von der Leyen's strategy to extend the mandate of the ECDC. The latter is absolutely necessary to achieve more harmonized strategies in the common combat against disease outbreaks, as the present SARS-CoV-2 pandemic.

The Dutch Prime Minister Mark Rutte underlined the relevance of the cooperation and solidarity of EU countries in the common purchase of vaccines.

The feelings of the Dutch population about EU and the COVID measures are mixed. Just a few observations and thoughts are given below.

The Dutch population does not understand why the policies of the Member States in the combat differ that much, it is abundantly clear and fills the media and talks in the streets. "The borders are back again", traveling and frontier work is almost as difficult as it was before the existence of EU. Sometimes, one (neighbouring) country makes many restrictions for foreigners but allows more easing for its own inhabitants; next week it might be the reverse. As to vaccine and vaccination, the countries and their people often appear very selfish. We should keep in mind that historic predecessors of the EU, fi the Habsburgian Empire, once has died by the selfishness of only a few countries.

At the same time, people have become more and more aware that in a pandemic all countries and continents are interdependent. The ultimate banishing of a dangerous pandemic can only be achieved by a *solid and solidary co-operation*, without exclusion of any country and with a putting aside of ethnic, religious and geopolitical issues.

Not only the Dutch, but most citizens in the EU were positively astonished to see how a worldwide co-operation of pharmaceutical industries and international authorities has led to a series of effective vaccines, not in the least thanks to many hundreds of thousand citizens all over the world who participated in the clinical trials. And this within a year, where it often takes 5 years or more to have a single candidate. Such successes (even when mistrusted by some) undoubtedly encourage Europe and its people to go ahead along this route. The same can be said of the

European Corona Repair Fund. Admitted, consensus was not immediately reached about the amount and the (extra) conditions. Nonetheless the final Europe-wide approval by all member states gives hope that solidarity within the EU is strong enough to conquer the most serious economic crisis by taking each other by the hand, the strong ones and the weak ones. "Today I, tomorrow you…"

There is more. Only one single, small example. During the pandemic new epidemiological models have been developed to describe and understand the spread of the virus. They are of help for choosing effective strategies in the combat of the virus, by making the efficacy of certain preventive measures plausible. Such models have been developed for pandemics, but they may also be applied in the fight against a worldwide spread of other threats such as misinformation, fake news, and financial catastrophes such as bank and stock market crises.

We just preferred to end up the answers to the editor's questions with a rather positive than negative expectation…

Notes

1. For more details on these topics the reader is referred to the extensive page on the behavioural study of the RIVM which also gives links to the complete results of each of the 11 survey rounds since April 2020 (rivm.nl).

References

1. Scheres J., Curf L., *Dutch public health policy during the COVID-19 pandemic of the first half of 2020. Answers to questions on public health activities January-June 2020*, "Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie" 2020; 18 (1): 36–45.
2. "Zeszyty Naukowe Ochrony Zdrowia. Zdrowie Publiczne i Zarządzanie" 2020; 18 (1), editors: S. Golinowska, M. Zabdyr-Jamróz in collaboration with M. Tambor.
3. Centraal Bureau voor de Statistiek, https://www.cbs.nl/