



Building capacity and preparing for the worst is sound economic policy: Recommendations for the coming weeks and months¹

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1. Introductory remarks

The next few months will see the Czech Republic in a delicate balance between as much normality as possible and as much physical and social distancing as necessary. The country has made enormous progress in suppressing and controlling the virus, through enormous economic and personal sacrifices made by the whole population. These achievements need to be safeguarded through constant watchfulness. It is still unknown whether immunity is acquired from surviving the disease, and for how long, but in any case the frequency of immunity in the Czech population is likely to be negligible; the conditions are thus qualitatively unchanged and should the virus reemerge we could see it spread quickly, exponentially.² There will invariably be local outbreaks as schools, offices and restaurants reopen, just as there are in other countries that otherwise have the epidemic well under control. Examples of renewed outbreaks in South Korea and other

¹ This text represents the opinions of the authors of CERGE-EI studies in the serie “IDEA Anti COVID-19”. The comments of the International Scientific Council for the Initiative “Model AntiCOVID-19 for the Czech Republic” were used to finalize the text.

² Consider e.g. the large-scale antibody study, which found that less than 1% of the Czech population is likely to have antibodies to SARS-CoV2.

countries demonstrate the importance of continuous vigilance, but they also show that sudden outbreaks can be brought under control with quick and decisive action supported by the right preparation.

This means that besides constant watchfulness we now need to take steps to prepare for new outbreaks and increases in the number of cases, and we need to make sure we are constantly learning about how the virus is best fought under local Czech conditions. This document discusses the most important policies for increasing preparedness that can be implemented now, as well as those that will be useful if infection numbers rise again and difficult decisions have to be made.

2. Further local outbreaks—and maybe a "second wave"—are possible

During the coming weeks and months, the Czech people will hopefully get to enjoy the fruits of the country's fight against the pandemic. However, several parallel developments will mean that there could be fertile ground for new localised outbreaks, possibly in several locations at the same time:

- Lockdown measures will continue to be lifted, to allow for the gradual resumption of economic and social life.
- The general population may take its cues from the relatively low case numbers and the lifting of lockdown measures to be less careful in their personal conduct: friends and families will meet and visit each other more frequently, and mixing between groups and households will increase. These effects will only increase over time: if case numbers are still low a month or two from now, ever more people will see less of a need to follow physical distancing guidelines, regardless of when certain restrictions are lifted.
- There is also a general, self-enforcing fatigue in the population: people who have not seen their friends and family or who have worked with a mask for months find it harder to continue to follow official rules and guidelines. As they see others taking a more relaxed stance or breaking the rules, they may feel less inclined to follow precautions themselves, which can lead to a sudden "tipping" towards non-compliance.

- While many meetings and small events can be held outside in the summer months, falling temperatures will cause life to gradually move inside again in autumn and winter, meaning that more people will be close to each other in badly-ventilated spaces.
- Besides these continuous, gradual processes, random events can also lead to sudden local flare-ups: a hairdresser or waiter who is infectious but asymptomatic may infect both colleagues and customers, new outbreaks may occur in hospitals or care homes. The more the other developments have advanced, the more likely it is that such random flare-ups will turn into larger outbreaks.

Most outbreaks will be local in nature and can be fought with the tools of *chytrá karanténa* (“smart quarantine”): tracing all known contacts, isolating them, testing them, finding further possible contacts, and so on. This can be complemented by broader though still local measures: informing the population (who will react by being more careful), introducing further, temporary physical distancing guidelines, canceling large events and, in extreme cases, closing local shops or schools.

If such outbreaks can be kept under control, they will fizzle out locally without ever spreading to other parts of the country. Only if this fails, or several outbreaks arise simultaneously, would we then be talking about a "second wave" that would require a broader and more centralized response.

3. How to prepare now

a. Collect information

Due to the delayed onset of infectiousness and symptoms, followed by further delays in testing and reporting, we learn about infections with a delay of 10 days or more even when things work well. If a cluster arises among mostly asymptomatic people (for example in a school), we may only learn about cases once second- or third-degree contacts have been infected and become seriously ill, and we may not realize the size of the outbreak until even later. This is why several continuous information flows must inform policy:

- First of all, *chytrá karanténa* contact tracing must be rigorously carried out and the resulting data must be processed and made available both to decision makers and (in more abbreviated form) to the general population.
- In particular, information about *where* infections took place (and during which kind of interaction) must be continuously collected and analyzed. This can then inform intelligent countermeasures to quell new outbreaks or a second wave. (This topic is being studied all over the world, but it is important to gather this knowledge in the Czech context, since interactions between salespeople and customers are different in the CR from the US, for example.)
- There are several indicators that can give an incomplete yet informative picture much faster than test results. One study in the US suggests that RNA concentrations in municipal sewage sludge could help predict Covid-19 outbreaks earlier than compiled test results. Preliminary data analysis suggests that online searches for "I can't smell" may predict Covid-19 cases.³ (Loss of smell is a common, early symptom.)
- Aggregate mobile phone data, as well as the congestion and footfall data that is already collected by companies such as Google, can give an impression of the overall activity level in the population, and hence of how quickly a new outbreak could spread.
- We suggest establishing a working group of external experts that can develop better ways of analyzing existing information, and new ways of obtaining information more quickly or with greater precision. This should include social scientists, IT experts, lawyers and other relevant fields.
- It will be crucial to spot unexpected outbreaks (whether from imported cases or missed contacts) before they lead to sustained community transmission. This will require intelligent targeting of tests at people who do not have a clear contact history but do, for example, have a combination of suspicious symptoms and a high potential for infecting others. We propose that the possibility of creating a smart risk-scoring system to search for undetected outbreaks in the population should be considered, and that additional test capacity should be created for this purpose.

³ See [Peccia et al.](#) for the study on municipal sewage sludge. See [this preliminary analysis](#) by Joshua Gans on Internet searches and a [report about a tentative tracking project](#).

b. Build capacity

Just like firemen who are not currently fighting a fire, partially unused testing capacity or idle contact tracers are not a waste of resources but a necessary buffer for emergencies. Experience around the world shows that an outbreak that has got out of control can grow by around 20% a day. Even a testing and tracing regime that operates at 60% capacity could therefore be overwhelmed by new cases within a few days of exponential growth (especially given that such growth may only be spotted after more than a week, see above).

- We propose that the government should build testing and tracing capacity to be able to trace about 500 infections per day without delay. This is only slightly above the highest daily total from late March, which was reached only 10 days after the country had been consistently reporting fewer than 50 cases per day. Following the [capacity calculations](#) by the European Centre for Disease Prevention and Control, adapted to the Czech context, this would mean having **at least 1000 trained contact tracers**—either active, or ready to be deployed at short notice. At least part of the testing and tracing capacity needs to be deployable around the country in response to local outbreaks that could quickly exceed local capabilities. Building such capacities is not as big an economic burden as one might think: many people with experience in customer service jobs and hence the right skill set for contact tracing will not be able to work in their usual jobs until the end of the pandemic and can quickly be trained as contact tracers. It should also be noted that if the attempt to control the virus fails, the numbers of deaths will be far higher than the number of contact tracers and other staff necessary to prevent such a scenario.
- **A national testing strategy** should prioritize testing anyone with suspicious symptoms and every contact of any confirmed case. Additional testing capacity should be built up to protect vulnerable groups and institutions as well as workers in the health and care sectors. This requires the capacity for processing roughly 30,000 to 50,000 tests a day (not all of which need to be carried out every day). In particular, effective contact tracing that is not easily overwhelmed will require a reserve of up to 10,000 daily tests (assuming 15-20 contacts per infected individual and some multiple testing); add to this 5,000 tests for clinical testing, 5,000 tests to protect hospital and care staff, and several thousand tests in reserve to ring-fence vulnerable institutions and groups in areas affected by local outbreaks.

- Such investments in testing and tracing capacities are extremely cheap compared to the cost of further lockdowns, which could cost several hundred billion crowns in economic output—not even counting the loss of lives and economic and political confidence they would entail.

c. Build credibility

- The government should campaign for people to adopt *eRouška* and possibly other low-cost tools to support contact tracing. Since distrust in the population is an obstacle to contact tracing in general and app-based tracing in particular, this campaign should include clear statements and possibly legislation that guarantees privacy rights and mandates that epidemiological information is kept out of the hands of police, tax investigators and the civil court system. It should ideally also involve political leaders of all persuasions, civil society figures and even social media "influencers".
- Great care needs to be taken to ensure that anti-Covid policy is discussed truthfully, without either exaggeration or a false sense of security. The health authorities should clearly and unambiguously state that it is the goal of the government's actions that as few citizens as possible get infected, regardless of age or status. This will provide clarity and increase confidence in the authority's statements and interventions. But it will also increase general economic confidence, since it gives everybody the perspective of participating in economic and social life with a minimal risk of getting ill. Discussions of "herd immunity", and the idea of infecting younger people so that they can develop immunity, can risk undermining trust in the government's policy.

4. What to do once the second wave hits

Once there is a new outbreak or a second wave of outbreaks, the preparation we have described will make all the difference. In particular, the more fine-grained the information that has been collected and the smarter its analysis, the more targeted the countermeasures can be.

Particular societal measures to combat any outbreak are as follows:

- Contact tracing needs to be maintained and possibly intensified. If possible, staff and resources from less affected parts of the country should be used to speed up the tracing and testing of contacts, as well as to enforcement isolation rules.
- Information gathered about types and locations of transmission (see above) can be used to initiate highly targeted restrictions. For example, further distancing rules can be implemented in restaurants or shops if either of these are shown to be heavily involved in new transmission. If activities can be ordered according to their riskiness and societal importance, restrictions can start with those which reduce the most risk at the lowest cost, and then gradually move down the list in response to how case indicators (see above) develop.
- Spare testing capacity can be deployed to ring-fence hospitals, care homes and other vulnerable sites in affected areas *in addition to intensified contact tracing*.
- If work has been done to maintain and enhance trust in the health authorities (see above), factual announcements will be highly effective. Simply announcing that the infection risk has increased in a certain area will lead to an immediate reduction of economic and social activity, which will reduce the risk of infection.
- Localized outbreaks, centered on hospitals, companies or other gathering places, are most likely. A real “wave”, with parallel community transmission in several parts of the country, is most likely avoidable if local outbreaks are swiftly brought under control. In fighting outbreaks, local authorities exert positive externalities: they bear the costs of admitting that there is an outbreak and cracking down (both in monetary and reputation terms), but the consequences of their failure to do so would be hugely costly for everyone in surrounding localities and around the country. Local authorities should therefore receive support and encouragement from the central government when dealing with an outbreak, but should also be properly incentivized to bear the large temporary costs in order to protect the rest of the country.

List of IDEA anti COVID-19 studies

- [# 19](#) “*Startups during the Covid-19 pandemic: experience for Czechia from the USA*”, IDEA anti COVID-19, May 2020, Author: Petr Sedláček
- [# 18](#) “The Covid-19 pandemic and socio-economic inequality in education”, IDEA anti COVID-19, May 2020, Authors: Miroslava Federičová, Václav Korbel
- [# 17](#) “How to reawaken the economy: Soothe, warm up, say some farewells”, IDEA anti COVID-19, May 2020, Author: Filip Matějka
- [# 16](#) “Macroeconomic policy during the coronavirus epidemic”, IDEA anti COVID-19, May 2020, Authors: Marek Kapička, Michal Kejak, Ctirad Slavík
- [# 15](#) “Serological tests for Covid-19 antibodies: What could they be good for?”, IDEA anti COVID-19, May 2020, Author: Ludmila Matysková
- [# 14](#) “Using Bluetooth technology for COVID-19 contact tracing”, IDEA anti COVID-19, April 2020, Authors: Ole Jann, Pavel Kocourek and Jakub Steiner (full study in English)
- [# 13](#) “Short-time Work and Related Measures to Mitigate Consequences of a (Partial) Economic Shutdown to Mitigate Consequences of a (Partial) Economic Shutdown”, IDEA anti COVID-19, April 2020, Authors: Nikolas Mittag, Filip Pertold (full study in English)
- [# 12](#) “Compliance with bans in the coronavirus period: enforcement must be effectively targeted”, IDEA anti COVID-19, April 2020, Author: Libor Dušek
- [# 11](#) “Collecting personal data for smart COVID-19 tracing: How to motivate people and not scare them off”, IDEA anti COVID-19, April 2020, Author: Ole Jann
- [# 10](#) “How should the government’s crisis measures be communicated? Through frequent repetition”, IDEA anti COVID-19, April 2020, Authors: Václav Korbel, Vladimír Novák, Michal Šoltés, Lukáš Tóth
- [# 9](#) “How best to communicate with the public? Findings from behavioural economics in the fight against COVID-19”, IDEA anti COVID-19, April 2020, Author: Vojtěch Bartoš
- [# 7](#) “Households’ attitudes to infection and to the government measures: The latest survey data”, IDEA anti COVID-19, March 2020, Authors: Václav Korbel, Vladimír Novák, Michal Šoltés, Lukáš Tóth
- [# 6](#) “What behavioural economics can teach us about prevention: another way of fighting COVID-19”, IDEA anti COVID-19, March 2020, Authors: Michal Bauer and Julie Chytilová
- [# 5](#) “The economics of testing for COVID-19: beware of greater damage than benefit”, IDEA anti COVID-19, March 2020, Authors: Jan Kulveit and Jakub Steiner
- [# 4](#) “Insolvency during the Coronavirus period: a proposal for temporary changes to the Insolvency Act”, IDEA anti COVID-19, March 2020, Author: Tomáš Richter
- [# 3](#) “Helping companies to maintain employment: fast, simple, economically meaningful”, IDEA anti COVID-19, March 2020, Author: Daniel Münich