The Pandemic in Germany in the Coming Months - Objectives, Key Topics, and Tools for Infection Control

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- Introduction
- Baseline and Situation Today
- Scenarios of Pandemic Development in the Coming Months
- Objectives
- Key Topics and Tools for Infection Control

Change to the version dated 13.10.2020: The infographic "RKI Overview Regarding Prevention Measures and Anti-Epidemic Measures during the COVID-19 Pandemic" (Appendix 2) was added.

Introduction

The SARS-CoV2 pandemic presents our society with enormous challenges. The goal for the coming months must be to prevent infections and at the same time to maintain all areas of public and economic life to the greatest extent possible in spite of the continued risk of infection. The behaviour of every single person counts – strict adherence to distancing and hygiene rules not only serves to protect ourselves and others from SARS-CoV-2, but can also curb other infectious diseases. With a combination of collectively supported measures, adapted to the respective situation, the occurrence of infection can be managed such that human suffering and deaths are minimized without bringing social and economic life to a standstill. These measures are continually reviewed and adapted.

This strategy paper highlights key points for managing the pandemic in the coming months from past experience with the SARS-CoV2 pandemic. The aim of the paper is to demonstrate a perspective for the development and containment of the pandemic in Germany (Appendix1: COVID-19: The Pandemic in Germany in the Coming Months (PDF, 38 KB, file is not fully accessible)).
Appendix 1: COVID-19: The Pandemic in Germany in the Coming Months

Source: Robert Koch-Institute

Baseline and Situation Today

The first months of the SARS-CoV-2 pandemic in Germany were managed through considerable joint efforts and cross-sectoral restrictions (e.g. bans on personal contact, business and school closures). The measures taken in March 2020 in Germany had drastic economic and social impacts.

The relatively successful interim results, compared to the rest of Europe, in curbing the pandemic in Germany must not disguise current challenges and the need for further development. Below is an outline regarding which tools can be used to reduce the spread of SARS-CoV-2 in Germany. Public responsibility is also important for fighting the pandemic. Recent months have clearly demonstrated that, e.g. a ‘shielding approach’ (completely shielding individuals at home or in a nursing home) alone is not sufficient for effectively protecting particularly vulnerable population groups. Protection can only occur through the shared responsibility of the community. Likewise, it is not specific locations or situations in which an increased risk of infection prevails, e.g. a specific area or a means of transportation, but rather an interaction between individual behaviours and the environment. Infections can therefore be transmitted locally as well as through travel, including infections abroad, by which the virus is transmitted to Germany.

Scenarios of Pandemic Development in the Coming Months

For the coming months, we are expecting a course of the pandemic that could be characterised as follows:
1. **Individual cases**, locally and temporally limited outbreaks with several new infections that can tie up capacities at any time and require a local approach tailored to the risk.  
2. **Outbreaks in individual settings** (e.g. through family gatherings or in education facilities, such as day-care centres, schools), also further amplified in the fall/winter due to changed behaviours (e.g. spending more time indoors).  
3. **Outbreaks in multiple settings, regional spread that can no longer be traced back to individual chains of infection** and that lead to a reinstatement of measures in the affected regions (see Appendix 2).

**Objective**

One or more vaccines are expected to be available next year (2021). This can enhance the fight against and significantly improve the course of the pandemic. Despite introducing a vaccine(s), RKI expects that it (or they) will initially only be available in limited quantities, such that at first certain risk groups must be vaccinated, and the remaining population thereafter. 

**Even if vaccines are important for fighting the pandemic, by themselves (particularly in the first phase of undoubtedly limited availability) they will not suffice. We must continue to implement responsible behaviour and certain modifications to social gatherings, particularly in the context of continued adherence to AHA+A+L rules (maintaining social distance, observing hygiene rules, wearing a mask on routine basis, using the Corona Warn app, and ventilation), as well as moving leisure activities outdoors, if possible, so that closed spaces with poor ventilation and crowds packed with people in one location are avoided.**
The primary goal is to minimise the spread and negative health ramifications of the pandemic, while ensuring that public and economic life (including educational facilities) in Germany are affected to the least extent possible. The potentially necessary measures and restrictions will be tailored to the specific risk, and regionally and temporally implemented. The measures should be legally and organisationally proportionate and capable of being implemented on a practical level.

Effective vaccines, enhanced therapeutic approaches, and non-medical measures (e.g. observing AHA+L rules) shall prevent an overload of the healthcare system, to ensure the best possible treatment of COVID-19 patients as well as the regular treatment of all other patients, to minimize long-term effects of the disease and fatalities.

The strategic goals for public health and infection control are:

1. **Reducing the risk of infection** during activities at work and in social life of all sections of population in Germany,
2. **Preventing another uncontrolled and rapid spread of the virus**,  
3. Long-term reinforcement and cross-linking of the Public Health Service (ÖGD) and healthcare sector in order to further build a crisis-proof system,  
4. Developing comprehensive COVID-19 care in both outpatient and inpatient areas.

### Key Topics and Tools for Infection Control

*The majority of the population is aware of the measures for minimising the risk of infection and implements them in essential areas of life:* The AHA+L rules (maintaining social distance – observing hygiene rules – wearing a mask on routine basis, and ventilation) must continue to be observed. Awareness for risky behaviours must be achieved so that the individual can be enabled to adjust their behaviour accordingly.

*The measures for minimising the risk of infection will be continually evaluated and new scientific knowledge will be incorporated:* Scientific knowledge about routes and processes of infection will be used to guide control measures in different areas of life (at home, schools, public transportation, businesses, offices, restaurants, large events, etc.) and communities to further develop and implement customised strategies for minimising risk in professional and private life. Experience with measures and their effectiveness must be shared on all levels, particularly on the state level.

*Keep educational facilities open:* Educational facilities, such as schools and day-care centres, are an essential part of public life. The evidence of the effect of schools and day-care centres on the pandemic is heterogeneous, however, it demonstrates that educational facilities are one of the locations that play a role in the occurrence of infection. At the same time, schools and day-care centres are crucial for the development, education, and socialisation of children and youth, as well as for parents being able to pursue their professional activities. It is important to continue to keep these facilities open by adhering to hygiene concepts. Organisational preparations and measures are necessary in close and cross-sectoral collaboration of all parties to prevent the entry of infections to the greatest extent possible, and to detect infections early. This is the only way to ensure that the number of affected
individuals can be kept at a minimum and a spread can be prevented without the need to close facilities.

**Treating mobility (national and cross-border) safely:** It is important to continue the analysis of the global situation and to proactively tailor measures and strategies. It is crucial to emphasise that increased mobility (professional or private travel) represents a higher risk, however, this risk is not primarily linked to the location of the travels or to a specific region, but rather depends significantly on the behaviour of the individual in a region with virus transmissions. Risky behaviour must be noted so that it can be avoided. For travellers, communication media in various languages must be presented so that they are informed of testing, quarantine, and isolation practices.

**Differentiated infection control at larger events:** Gatherings, particularly indoors, increase the risk of spreading SARS-CoV-2. Under these conditions, so-called “superspreading events” have also repeatedly and dramatically intensified the occurrence of breakouts in many countries over the past months – more than would have been the case due to transmission between a few individuals. While applying the general recommendations, differentiated, transparent, and comprehensible guidelines for holding events must be established by those responsible from the respective sectors. In doing so, the type of event as well as the reasons for size restrictions should be taken into account.

**Strategic crisis communication:** The “Corona situation” is highly complex and new insights continue to arise, requiring a revision of the guidelines. Communication and interaction with vulnerable groups and groups of people, who are harder to reach from an information-technology standpoint, are essential.

**Continuous development of a national testing strategy / ensure extensive diagnostics:** Occasion-related and regionally available diagnostics for identifying infected persons is the basic requirement for the reporting system and for managing the pandemic. The results from direct (pathogen detection) and indirect (antibodies) detection methods are taken into consideration according to the respective current knowledge and the respective questioning for assessing the situation in the National Testing Strategy. When applying tests, a targeted approach considering pre-test probability and risk disposition with respect to gaining knowledge and the effective use of resources is essential. Testing of symptomatic persons and protecting vulnerable groups, such as the elderly in nursing homes, are a priority. Despite high testing capacities in this area, personnel and material resources are fundamentally limited. Thus, the indication and significance of the analyses must be generally known for optimal use. For example, a negative virus test result is only a snapshot and must not lead to a false sense of security – similarly, a negative test should not dispense one from infection-preventing behaviour, such as observing hygiene and protective measures.

**Implementing short time sequences in the testing process:** To effectively reduce risks of transmission, a prompt detection of acutely infected persons and the rapid submission of the findings are essential and should be enabled within 24 to 36 hours (between performing the test and communicating the findings). This must be organised and continually reviewed by the parties involved, particularly in collaboration with the respective panel physician association and the Public Health Service. Certified antigen tests for COVID-19 are available
and supplement the capacities of PCR diagnostics. Antigen tests are somewhat less sensitive than PCR tests conducted in a lab. However, they also enable testing on-site and provide a result after only a few minutes. Studies for enhanced assessment of the performance of available tests are ongoing. Application options are currently advised during the development of the National Testing Strategy.

**Make epidemiological and case data available promptly:** The objective is that the Public Health Service is informed about SARS-CoV-2 infections as early as possible. This ensures first of all that specific infection control measures can be introduced on site, and secondly that regional prevention measures can be managed. For this purpose, the continued development of the “German Electronic Reporting and Information System” is important for the infection control (DEMIS). The reporting system reliably provides national, dependable and prompt data for assessing the epidemiological situation in Germany. Syndromic surveillance (monitoring based on symptom combinations) of infectious respiratory diseases and other diseases will be sustainably built up and developed. Furthermore, studies on seroprevalence and health-related behaviours during the pandemic, as well as additional data collections (e.g. lab-based surveillance, Corona day-care centre study, routine data from emergency departments) are intended to provide supplemental information regarding the acute occurrence of infection.

**Sustainably organise contact tracing for cluster detection and interrupting the chain of infection through scouting epidemiology:** The present occurrence of outbreaks proves the effectiveness of the already introduced measures for supporting the health authorities in states and communities – determining potentially infectious persons and contact tracing are effective measures for interrupting chains of infections. We are often able to reliably and promptly identify suspected cases, to isolate them, and to perform the necessary diagnostics, and to implement infection control measures depending on the situation. This ability must be consolidated and further developed. Gained experiences are analysed and findings are provided and implementation assistance is offered. The necessary resources for supporting the health departments currently stem primarily from the programme “Containment Scouts,” which is temporally limited. However, the potential epidemiological scenarios require a sustainable and substantial personal reinforcement of the Public Health Service by the states. The newly established Public Health Service contact point of RKI is able to contribute to the qualification of new personnel together with partners.

**Ensuring the availability of adequate personnel protection gear:** For the outpatient and inpatient areas, the competent institutions (panel physician association, practitioners, hospitals, communities, states, federal government) ensure sufficient local availability and stocks of protective material to be equipped for all situations.

**Comprehensive healthcare under pandemic conditions:** A substantial part of any successful strategy is full accessibility of the health system for all symptomatic persons, i.e. that all facilities of the public health sector and healthcare system can be used in a straightforward manner. At the same time, complete healthcare is significant from an outpatient and inpatient perspective in all likely future epidemiological scenarios (i.e. in various patterns of spreading of the virus). For this purpose, past experiences, particularly with the necessary intensive capacities, enable sustainable regional care planning. Limitations to healthcare
should be preventable using discharge planning. The inpatient as well as the outpatient care structure should continually enable separate care of infectious and non-infectious patients.

**Provide flu and pneumococcal vaccines and achieve high vaccination coverage, particularly in risk groups:** For pandemic management of the coming months, vaccines against respiratory diseases play a decisive role, particularly during the colder months. The clinical presentation of these diseases cannot always be differentiated from COVID-19 with sufficient reliability without supplemental diagnostics. To protect people and to relieve the healthcare system, the greatest effect can be achieved if the flu and pneumococcal vaccination rates are significantly increased according to the STIKO recommendations, primarily in risk groups. With regard to the flu, high vaccination rates should also be achieved in particularly exposed and epidemiologically significant professional groups (medical and nursing personnel, other employees in healthcare) to prevent transmission in hospitals, nursing and senior living facilities.

**Develop vaccination strategy against SARS-CoV-2:** A nationwide vaccination campaign is being prepared, even if an effective and safe vaccine is not immediately available. For this purpose, viable concepts are now being developed for storage, cold chains, distribution logistics, implementation, prioritised target groups, and comprehensive monitoring of vaccine safety and effectiveness within the scope of broad application. The corresponding planning takes place with the involvement of various parties and institutions on the federal and state level, as well as the Standing Committee on Vaccination and the National Steering Committee for Vaccinations. It should be assumed that vaccines will not immediately be extensively available for the entire population. Thus, vaccinations will be carried out gradually in a reasoned and coordinated order. The introduction of the vaccine must be communicatively accompanied as early as possible with the involvement of relevant parties in order to prevent disinformation and the creation of myths, and to enable an informed vaccination decision by the people.

**This catalogue of operative objectives makes no claim to completeness.**

It must be emphasised that Germany will only be able to overcome the pandemic through a cooperation of all these various elements. The implementation of the activities outlined in this strategy should be understood as a goal for all of society.

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1 The order of the operative goals does not imply any prioritisation; planning and implementation must occur in large part simultaneously.


8 Reintjes R. Lessons in contact tracing from Germany. BMJ. 2020 Jun 25;369:m2522. doi: 10.1136/bmj.m2522.


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To the top