

Aus dem  
Institut für Arbeitsmedizin, Sozialmedizin und  
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**In-company vaccination against COVID-19 from the  
perspective of crisis management teams.  
A qualitative interview study in Germany**

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**Linder, Vanessa Marina**

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Dekan: Professor Dr. B. Pichler

1. Berichterstatter: Professorin Dr. M. A. Rieger

2. Berichterstatter: Professor Dr. H. Cramer

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## Table of content

List of figures and tables	4
Abbreviations	5
1 Introduction	6
1.1 COVID-19 Pandemic	6
1.1.1 Development of the pandemic in Germany	7
1.1.2 National Corona crisis management	8
1.1.3 National COVID-19 vaccination campaign	9
1.2 Crisis management in companies	10
1.2.1 Crisis management in companies during COVID-19 pandemic	11
1.3 Vaccination in an occupational setting – Pilot Projects	12
1.4 Objectives and research question	14
1.4.1 Objectives	14
1.4.2 State of current research at the time of data collection	14
1.4.3 Research question	15
2 Methods and Materials	17
2.1 Study design	17
2.2 Quality criteria in qualitative research	17
2.3 Recruitment and study population	18
2.4 Development of the interview guide	20
2.5 Conduction and processing of the interviews	21
2.6 Data analysis	22
2.6.1 Definitions	22
2.6.2 Analysis	23
2.7 Approval of the ethics committee	27
2.8 Financial funding	27
3 Results	28
3.1 Crisis management in companies during COVID-19 pandemic	29
3.1.1 Field of competence and activity	29
3.1.2 Structure of crisis management	31

3.1.3	Pandemic plan _____	32
3.2	Pandemic related changes of working conditions _____	35
3.2.1	Operational measures taken _____	35
3.3	In-company COVID-19 vaccinations _____	37
3.3.1	Access to the pilot COVID-19 workplace vaccination program _	39
3.3.2	Motivation behind participation _____	40
3.3.3	Involved participants _____	42
3.3.4	Information about the vaccination _____	43
3.3.5	Organization of the vaccination process _____	43
3.3.6	Received feedback on the vaccination program _____	48
3.4	3G rules applied in the workplace _____	49
3.4.1	(Non) adherence to the 3G rule _____	50
3.4.2	Data protection _____	50
3.4.3	Vaccinated vs. non-vaccinated _____	52
4	Discussion _____	53
4.1	Discussion of findings _____	53
4.1.1	Crisis management in companies during COVID-19 pandemic _	53
4.1.2	General measures and initial position (Operational measures taken) 55	
4.1.3	COVID-19 vaccinations at work _____	55
4.1.4	3G at the workplace _____	60
4.2	Strength and Limitations _____	61
4.3	Conclusion and Outlook _____	65
5	Summary _____	66
5.1	Summary _____	66
5.2	Summary in German _____	67
6	References _____	69
7	Declaration of own contribution _____	84
8	Publications from the present study _____	85
9	Attachment _____	86

9.1	Interview guideline for interviews with members of companies taking part in the pilot COVID-19 vaccination program _____	86
9.2	Full category system derived from interviews with members of crisis management teams of companies taking part in the pilot COVID-19 workplace vaccination program _____	88
10	Acknowledgements _____	129

## **List of figures and tables**

Figure 1: Visualization of recruitment of the study population and interview process

Table 1: Overview of the interviews

Table 2: Definition of terms regarding qualitative content analysis

Table 3: Relevant main categories and subcategories regarding experiences and attitudes of company crisis management teams with regard the in-company COVID-19 vaccination campaign

Table 4: Subcategories of the main category “Crisis management in companies during COVID-19 pandemic”

Table 5: Subcategory of the main category “Pandemic related changes of working conditions”

Table 6: Subcategories of the main category “In-company COVID-19 vaccinations”

Table 7: Subcategories of the main category “3G rules applied in the workplace”

Table 8: Full category system derived from interviews with members of crisis management teams of companies taking part in the pilot COVID-19 workplace vaccination program

## Abbreviations

AHA	Abstand einhalten, Hygieneregeln beachten, Alltagsmasken ( <i>Englisch: keep distance, follow hygiene regulations, wear masks</i> )
ASU	Arbeitsmedizin, Sozialmedizin, Umwelt – Zeitschrift für medizinische Prävention
BDI	Berufsverband deutscher Internistinnen und Internisten e.V.
Corona-ArbSchV	Corona Arbeitsschutzverordnung
CoronaImpfV	Corona Impfverordnung
COVID-19	Coronavirus disease 2019
DGAUM	Deutsche Gesellschaft für Arbeitsmedizin und Umweltmedizin e.V.
FFP 2	Filtering face piece
KVWL	Kassenärztliche Vereinigung Westfalen Lippe
PrävG	Präventionsgesetz
RKI	Robert Koch Institut
SARS-CoV-2	Severe acute respiratory syndrome coronavirus type 2
STIKO	Ständige Impfkommission
TestV	Testverordnung
WHO	World Health Organization
3G	Genesen, getestet, geimpft ( <i>Englisch: vaccinated, tested, or recovered</i> )

# **1 Introduction**

As the novel coronavirus SARS-CoV-2 emerged in 2019 and rapidly spread around the world, it quickly became clear that the only solution to the pandemic was an effective vaccine. When the first vaccine was developed approximately one year later and was approved by official agencies, vaccination campaigns were launched across the world. In order to achieve sufficient coverage in Germany, various institutions were empowered to vaccinate against COVID-19 as regulated by the Ordinance on the entitlement to vaccination against SARS-CoV-2 (CoronaImpfV). Occupational health physicians constitute one of the three pillars of the German vaccination campaign (CoronaImpfV). According to the Corona Occupational Health and Safety Ordinance (Corona-ArbSchV), companies had to allow their personnel to be vaccinated during work time. Furthermore, companies had to support occupational health physicians who delivered vaccinations for the protection of the population with organization, resources and personnel (Corona-ArbSchV). Thus, operational crisis management teams faced exceptional challenges.

This dissertation focuses on in-company vaccinations against COVID-19 from the perspective of crisis management teams and reports on the experiences and attitudes in the context of standard care supply by large and medium-sized companies in Germany.

## **1.1 COVID-19 Pandemic**

In December 2019, the World Health Organization (WHO) was informed about a rapidly increasing number of pneumonia cases in the city of Wuhan in the province of Hubei, China (World Health Organization, 2020a). Shortly thereafter, a new strain of a coronavirus was identified as being responsible for the new evolving lung disease, by that time named 2019-nCoV (World Health Organization, 2021). The first cases in Europe were identified in France, followed shortly thereafter by other European states (World Health Organization Europa, 2020). On 30<sup>th</sup> January 2020, the WHO announced a public health emergency of international concern (World Health Organization, 2020b).

### **1.1.1 Development of the pandemic in Germany**

The first pandemic wave lasted from March 2020 until May 2020 (Schilling et al., 2021). Germany's first case was confirmed on 27<sup>th</sup> January 2020 in Bavaria (Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit & Robert Koch Institut, 2020). Several sporadic cases followed. After confirmed cases in other federal states of Germany, a national crisis management team of the Federal Ministry of the Interior and Federal Ministry of Health was convened at the end of February (Bundesregierung, 2020a). The wave reached its peak in the beginning of April. To protect vulnerable groups and stop the spread of the virus, the government mandated a lockdown and contact restrictions. Every non-essential business had to close, and companies had to arrange alternative working environments (Bundesregierung, 2020b). With the change of the seasons and rise in temperatures, however, the number of cases decreased, and the pandemic reached a plateau. The government offered free tests for persons entering Germany during the summer holidays. Rapid antigen tests were used in nursing care homes from autumn (Bundesministerium für Gesundheit, 2022).

The second COVID-19 wave started at the end of September 2020 and lasted until the end of February 2021, with its peak in the middle of December 2020 (Schilling et al., 2021). This wave was perceived as more aggressive, with more severe cases, and had a much longer duration (Schilling et al., 2021). The government introduced a partial lockdown and contact restrictions. Free FFP-2 (filtering face piece) masks were available for persons aged 60 or over. The Coronavirus Ordinance on Testing (TestV) that came into force on 8<sup>th</sup> March 2021 gave every citizen the opportunity to have a rapid antigen test free once a week. The offer was stopped in autumn but reintroduced shortly thereafter (Bundesministerium für Gesundheit, 2022).

Although most of the population (66.64% by 01<sup>st</sup> September 2021) (Statista, 2022), had received their COVID-19 vaccine, Germany was hit by another COVID-19 wave in autumn 2021 (Tolksdorf et al., 2021a) due to new SARS-CoV-2 variants against which vaccines were less effective (Robert Koch Institut, 2021). A recommendation for booster doses for everyone above the age of 18

was issued by the Standing Committee on Vaccination at the Robert Koch Institute (STIKO) in November 2021 (Ständige Impfkommission, 2021). In November 2021, workplaces were subject to a 3G rule (Gesetz zur Änderung des Infektionsschutzgesetzes und weiterer Gesetze anlässlich der Aufhebung der Feststellung der epidemischen Lage von nationaler Tragweite): a person was only permitted to enter a facility if they had been vaccinated, tested, or recovered (German: *Geimpft, getestet, genesen*). While in general the measures were enforced strictly during the first two pandemic waves, the development and introduction of vaccines made it possible to ease those measures.

### **1.1.2 National Corona crisis management**

The development of the pandemic in Germany was decisively influenced by the German government and its organization of the pandemic crisis management. As well as the regular cabinet meeting every Wednesday, a small and a large corona cabinet were established (Bundesregierung, 2020c). The small cabinet met every Monday, and the large cabinet met every Thursday (Bundesregierung, 2020c). The implementation of decisions taken by the cabinets was conducted by the crisis management team of the Federal Ministry of the Interior and Federal Ministry of Health (Bundesregierung, 2020c).

#### Robert Koch Institute

A particular role during the pandemic was played by the Robert Koch Institute (RKI). This research institute and reference center is a central institution of the federal government and is under the direction of the Federal Ministry of Health (Bundesministerium für Gesundheit, 2024). By collecting and analyzing epidemiological data and assessing the pandemic situation, the RKI was able to generate a management strategy (Halm et al., 2021). A situation report by the experts of the RKI was presented in every cabinet meeting (Bundesregierung, 2020c). Furthermore, the RKI is an important consultant of the Federal Ministry of Health and other departments (Halm et al., 2021). While the RKI develops recommendations, politics decides on their implementation (Halm et al., 2021).

### Principle of Federalism in Germany

According to the principle of federalism, the national corona crisis management took place across the federal level, provincial level, and municipal level (Franzke, 2020).

Communication between the federal government and the federal states took place via the “Bund-Länder-Konferenzen” (Kuhlmann et al., 2023). This regular meeting between the federal chancellor and the heads of government of the federal states quickly became the major decision-making body (Kuhlmann et al., 2023). While crisis management teams were convened at all levels, the crisis management at the municipal level was responsible for the implementation on-site and thus coordinating the tasks of public offices. Crisis management teams were convened in companies, too (*see chapter 1.2*).

#### **1.1.3 National COVID-19 vaccination campaign**

The vaccination campaign in Germany started at the end of 2020. The campaign was implemented through the abovementioned federal structure of the German national crisis management. A step-by-step plan was introduced by the STIKO (2021) in which – among others - vulnerable groups, including elderly and comorbid persons, were prioritized.

The German federal government provided the vaccines. Immunization centers were built by the federal states, which also organized the distribution and organization of the vaccines to the immunization centers and mobile vaccination teams from the beginning of the campaign (Bundesministerium für Gesundheit, 2021).

The campaign proceeded slowly. In the beginning, a shortage of vaccination doses restricted the speed of the campaign (Bundestag, 2021) and thus triggered resentment in the population. Eventually, with the approval of other vaccines (Paul-Ehrlich-Institut, 2023), further doses became available. To increase the speed of the campaign and thus rapidly achieve herd immunity, general practitioners were allowed to vaccinate against COVID-19 from April 2021 on (COVID-19 Vorsorgeverordnung). With the intention to support the national campaign and provide low-threshold opportunities for vaccination, occupational health physicians and private practices were included in the

coronavirus vaccination campaign from June 2021 (CoronaImpfV). With an increase in vaccinations, the prioritization of vulnerable persons was lifted, and by summer 2021 every citizen had the opportunity to be vaccinated (Bundesregierung, 2021).

## **1.2 Crisis management in companies**

The framework of conditions, the uncertainty of the pandemic progression, and later the establishment of vaccination programs forced companies to change the organization of their whole working structure. This reorganization was the responsibility of the crisis management teams.

### Principles

The basis of successful crisis management is the provision of correct and adequate information, determination of the risks, establishment of early-warning systems, creation of a prevention plan, and the formation of a crisis prevention team (Sahin et al., 2015). Thus, the aim of crisis management is to minimize potential damages, be prepared for all types of crises, and offer a reasonable response to the crisis (Sahin et al., 2015). Organizational leaders and stakeholders play crucial roles in the management of crises. Decision-makers must build a network of experts to ensure effective crisis management.

### Crisis Management Teams

Ideally, a crisis management team consists of a team leader, a core team, and an extended circle of case-related experts (Bundesministerium des Inneren, 2011, p. 24). The leader is usually the chief executive officer or at least part of the senior management. He or she is the final decision-maker (Bundesministerium des Inneren, 2011). The core team should include representatives from different fields related to the company (Mikušová & Horváthová, 2019). It should be as small as possible. The extended circle of the team depends on the type of emergency situation. During a pandemic, occupational health physicians should have a fixed role in the teams (Landesgesundheitsamt Baden-Württemberg im Regierungspräsidium Stuttgart & Bundesamt für Bevölkerungsschutz und Katastrophenhilfe, 2010).

## Pandemic Plan

The crisis management team is responsible for the pandemic plan and its regular updating. Creating a crisis management plan is part of the prevention strategy of the crisis management process. Considering different scenarios, identifying potential risk factors, and preparing for any kind of difficulty is crucial for companies to survive and keep their business going (Taneja et al., 2014). The crisis management team defines the type of internal communication and thus ensures a reliable flow of information. Decision-makers and persons in charge are determined in advance, and everyone in the company should be aware of the in-house pandemic plan (Deutsche Gesetzliche Unfallversicherung, 2021).

### **1.2.1 Crisis management in companies during COVID-19 pandemic**

On the basis of Section 18, paragraph (3) of the Occupational Safety and Health Act, the German Federal Ministry of Labour and Social Affairs introduced the SARS-CoV-2 Health and Safety Regulation in January 2021. This legislation required employers to assess the risk of transmission of the coronavirus in the workplace and thus implement or renew anti-epidemic measures and develop an appropriate hygiene concept. For example, equipment for mobile work had to be organized, and appropriate working time models had to be applied to reduce contact between employees. Personal protective equipment had to be provided such as surgical or FFP-2 masks and gloves. Social distancing measures, disinfection, and cleaning protocols had to be established.

## Vaccinations

In September 2021, section 5 was added to the SARS-CoV-2 Occupational Health and Safety Ordinance. Employers now had to allow their personnel to be vaccinated against COVID-19 during working hours (Section 5 [1] CoronaArbSchV, of 06<sup>th</sup> September 2021). Occupational health physicians and occupational medical services offering vaccinations had to be supported in organization and staff by the companies (CoronaArbSchV). Furthermore, enterprises were obligated to inform their employees about potential health risks of COVID-19 and thereby provide information about the possibility of a COVID-19 vaccination (CoronaArbSchV).

Although companies were not obliged to organize their own vaccination programs, a substantial number of businesses arranged in-company vaccination options for their staff (Bellmann et al., 2021). The Federal Employers' Association (Bundesvereinigung der Deutschen Arbeitgeberverbände, 2021) stated that German employers made large investments to build an appropriate infrastructure, and the willingness to contribute to the national vaccination campaign was strong.

### **1.3 Vaccination in an occupational setting – Pilot Projects**

#### Review: Swine flu pandemic

Previous pandemics also involved in-company vaccinations. The first pandemic challenge of the century was the swine flu pandemic in 2009. The first cases were reported in California in March 2009 (Robert Koch Institut, 2010). Shortly after, the WHO announced a public health emergency of international concern (Robert Koch Institut, 2010). Germany's epidemic consultants prepared recommendations for surveillance and infection protection on the basis of the national pandemic plan (Robert Koch Institut, 2010). In the beginning, the focus was on preventing importation of the virus by travelers, and the so-called containment strategy was applied (Marcic et al., 2010). With an increase of numbers due to summer holidays spent in Spain, the cases increased, but the data collected by RKI made it possible to adjust the recommendations (Robert Koch Institut, 2010). The prospect of a vaccine contributed to the easing of the measures (Robert Koch Institut, 2010). When a vaccine became available, the STIKO gave a recommendation for prioritization of vulnerable groups. By the time the vaccination campaign started, some German companies also started organizing in-company vaccinations (ASU, 2009).

Retrospective views by Krause et al. (2010), Deutsches Ärzteblatt (2010), and Marcic et al. (2010) were that, in general, the preparedness for a pandemic was satisfactory and early-warning systems were reliable. In terms of vaccination, however, the need for improvement was discussed. Although vaccination was available within a few months, organization and funding were in need of improvement. In particular, poor communication about vaccinations between

public authorities and medical doctors resulted in poor implementation of the vaccination campaign.

### COVID-19 pandemic

The COVID-19 pandemic differs in duration and extent to the swine flu pandemic of 2009. Several federal states (Ärztezeitung, 2021b) started pilot projects for in-company vaccinations to gain experience of the vaccination procedure in companies during the COVID-19 pandemic, meet common challenges in the organization, and explore other contextual subjects (Ministerium für Soziales und Integration mit IHK Region Stuttgart, 2021). Taking the example of Baden-Württemberg's pilot project, the selected companies covered a variety of industrial sectors and were supposed to be part of the critical infrastructure (Land Baden-Württemberg, 2021b). They were given the opportunity to start vaccinating their employees in May 2021. During this time, there was still a shortage of vaccination doses. Nevertheless, a limited number of vaccine doses was made available for the pilot project by the federal states for both the first and second shots of vaccination. Large companies and small companies that could not organize in-company vaccination by themselves and therefore had to share immunization centers were included to gain experience during the course of the pilot program (Land Baden-Württemberg, 2021a). While in public, prioritization of vulnerable groups was still applied, the companies participating in the pilot project were able to define their own prioritization. The prioritization of vaccinations in public was lifted on 7<sup>th</sup> of June (Bundesregierung, 2021).

Bavaria had already started with its pilot project in April 2021 (Deutsches Ärzteblatt, 2021a). The pilot project aimed to involve companies that were not able to offer mobile work and whose employees therefore had to work on-site (Deutsches Ärzteblatt, 2021a). In Rhineland-Palatine, a pilot project started in April (Bund Verlag, 2021), and in Saxony a large automobile manufacturer started vaccinating its employees in spring (Deutsches Ärzteblatt, 2021c). The official start of occupational health physicians vaccinating against COVID-19 was on 7<sup>th</sup> June 2021 (CoronaImpfV).

## **1.4 Objectives and research question**

### **1.4.1 Objectives**

With the start of the COVID-19 pandemic and the subsequent legal provisions, companies had significant organizational tasks to complete. The focus was on providing care for employees. Work and health are subjects of operational health management (Deplazes & Künzli, 2010). Work affects health both through the working conditions and the accompanying changes of lifestyle (Deplazes & Künzli, 2010). To protect employees from physical harm and psychological stress, prevention measures were established to promote workplace health (Hartung et al., 2021).

Occupational healthcare research examines, inter alia, the healthcare provision of the workforce and work arrangements and thus contributes to the promotion of workplace healthcare (Sears et al., 2023). To improve occupational healthcare, organizational structures must be studied (Graf et al., 2015).

Organization-related healthcare research deals with processes, structures, and conditions of healthcare organizations (Ansmann et al., 2019). Thus, aiming to improve patient-centered care (Ansmann et al., 2024). Deficits can be pointed out, and structures can therefore be established or optimized (Pfaff, 2020).

Vaccinations are part of preventive occupational health care. In the event of an increased risk of infection in the workplace, it is obligatory for companies to offer certain vaccinations. With the passing of the prevention act in 2015 (PrävG), companies could offer standard vaccination services on a voluntary basis covered by the individual's health insurance. For the influenza vaccination, for example, the demand is rather low (ASU, 2016).

### **1.4.2 State of current research at the time of data collection**

At the time of data collection, the literature focused on medical aspects (Attaway et al., 2021; Batah & Fabro 2021), country policy responses (Kakoullis et al., 2021), and public reforms (Mauro & Giancotti, 2021). Leadership and thus crisis management during the COVID-19 pandemic was predominantly evaluated in terms of organizational effectiveness rather on governmental level. No research has investigated in-company vaccinations and how company crisis

management is involved in the process.

Crisis management during the pandemic has been highlighted from different perspectives. Dwiedienawati et al. (2021) tracked organizational crisis management and the subsequent reputations of companies during the pandemic. Crisis management that is perceived to be effective by the employees has a direct influence on the reputation of the company (Dwiedienawati et al., 2021). Fasth et al. (2021) investigated how small and medium-sized companies in Sweden were prepared for the pandemic. Most did not have a specialized crisis management team and instead used their regular business management team to handle the upcoming challenges. Furthermore, the researchers found that most companies did not have a pandemic plan in advance, and if they did, it had not been updated regularly. Gianfredi et al. (2021) reviewed the literature on mass vaccinations against various diseases, in particular against the influenza virus. Although only one article concerned the COVID-19 vaccination campaign, Gianfredi et al. (2021) presented general organizational tasks regarding location and staff including training of the staff and transportation of the vaccine that need to be considered in any case. Riccò et al. (2021) studied occupational health physicians in Italy and their acceptance of the COVID-19 vaccine, which in general was wide, leading them to endorse a vaccination mandate, which can help to improve the rate of vaccination. Chirico et al. (2021) composed a letter to the editor regarding a paper, that dealt with occupational health and safety measures in the field of health care. Chirico et al. (2021) stated, that not only did protective measures play a crucial role, but occupational health surveillance and collaboration with public health authorities were also important in maintaining safety in the workplace.

An editorial by Riva et al. (2022) reflected the opportunities and challenges of workplace COVID-19 vaccinations, including the vaccination process itself, and highlights the relationship between patients and the occupational health physician.

### **1.4.3 Research question**

Previous research has largely focused on the acceptance of the COVID-19 vaccine (Lazarus et al., 2023; Lindholt et al., 2021) and, separately, on general

crisis management (Boin & Rhinard, 2022; Fasth et al., 2021). This dissertation examines how crisis management teams experienced their in-company vaccinations. It analyzes data from an explorative study about "adjusting working conditions and evaluating the risk of infection during the COVID-19 pandemic in different workplace settings in Germany" (Rind et al., 2020). The aim of this explorative study was to identify how companies and their employees dealt with pandemic-related changes and how they organized adjusted working conditions as well as to evaluate the risk of infection (Rind et al., 2020).

The study used a modular design comprising qualitative and quantitative parts. An additional section of the study was introduced to evaluate the pilot project of in-company COVID-19 vaccinations in Baden-Württemberg. Some of the results of this study listing me as a co-author were presented at the German Conference for Health Services Research 2022 (Preiser et al., 2022a).

Using the data from the sub-study about the pilot projects, I seek to answer the following research question:

What experiences and attitudes do experts from crisis management teams report about the in-company vaccination campaign in their companies?

## **2 Methods and Materials**

### **2.1 Study design**

This dissertation used a qualitative research methodology to explore the experiences and attitudes of company stakeholders during the course of the sub-study. It examined the data of the qualitative semi-structured interviews with operational leaders of the pilot projects. The focus was on experiences, attitudes, and processes during the in-company vaccinations. There was no preexisting knowledge about in-company vaccinations from the perspective of crisis management teams. A qualitative approach was chosen for exploration purposes. This approach allows one to gain insights into the research question with little previous knowledge. A semi-structured interview guide was used to adhere to the research concept, and expert interviews were conducted. In expert interviews, the interviewee has knowledge and experience in a specific industry or topic (Meuser & Nagel, 2009). This was therefore an appropriate method for the current study, as the interviewed persons had expert knowledge of crisis management.

### **2.2 Quality criteria in qualitative research**

There is a broad spectrum of views about the evaluation in qualitative research. A common understanding is that classical criteria used in quantitative research cannot commonly be used for qualitative research (Kuckartz, 2016, p. 202), because qualitative research does not have the goal of representativeness or generalization. The aim of a qualitative interview study using qualitative content analysis is to systematically analyze qualitative data on the basis of specific rules (Kuckartz, 2016, p. 26) to explore a field of science and existing theories (Flick, 2008, p. 17). The quality criteria of quantitative data are therefore not applicable. Rather, specific quality criteria for qualitative data come into effect. In the current study, the qualitative data analysis of Kuckartz (2016) was used to analyze the interviews. Kuckartz (2016) differentiates between internal and external study quality. Internal quality is measured by criteria such as reliability, credibility, dependability, authenticity, and intersubjective comprehensibility

(Kuckartz, 2016, p. 203). External study quality is a measure for generalization (Kuckartz, 2016, p. 217) and is associated with the overall study.

### **2.3 Recruitment and study population**

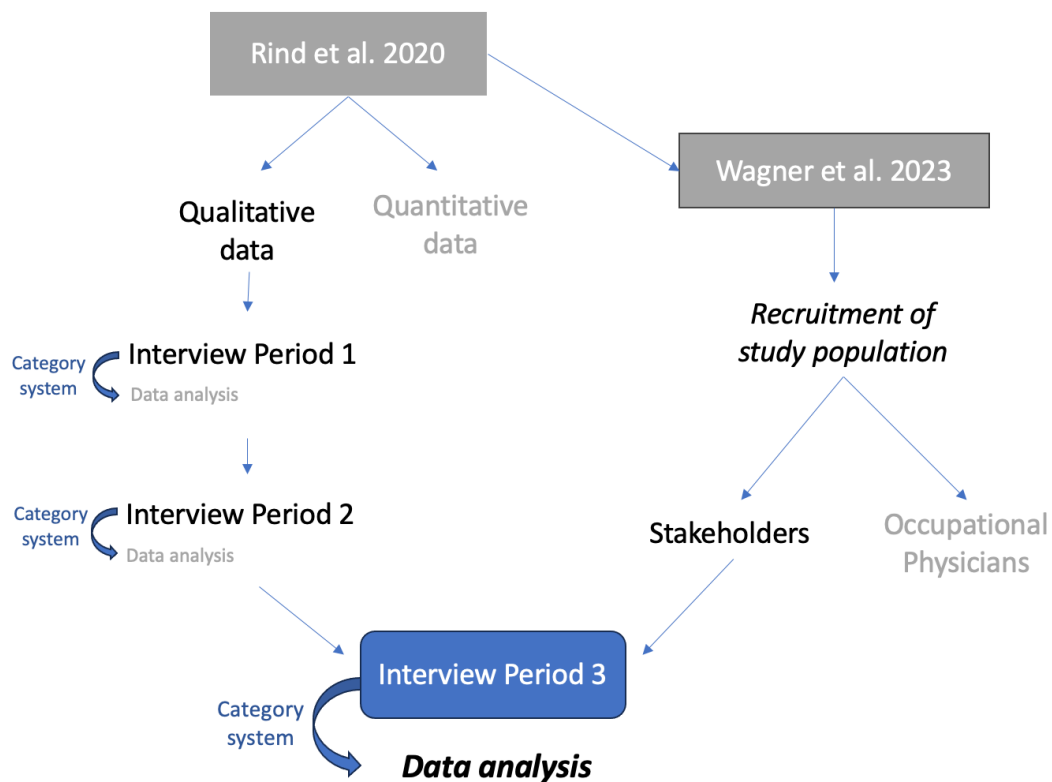
As variables that define information power in order to estimate the appropriate sample size, Malterud et al. (2016) identify (a) the aim of the study, (b) sample specificity, (c) use of established theory, (d) quality of dialogue, and (e) analysis strategy. The more specific a dimension is, the fewer cases are needed. In contrast, the broader the dimension is, the more cases are needed (Malterud et al., 2016). Given its focus on experiences exclusively in a vaccination pilot project, the aim of this study can be described as narrow. Only crisis management members hold the characteristics that are necessary for the study aim, so only a small sample is needed to achieve sufficient information power. The following quotation describes the recruitment of the present study, as the quoted study (Wagner et al., 2023) is another sub-study of the main study (Rind et al., 2020) (see fig.1). Wagner et al. (2023) studied the COVID-19 workplace vaccination program from the perspective of occupational health physicians. The interviews of this dissertation result from the recruitment of the quoted sub-study (Wagner et al., 2023):

“The Ministry of Social Affairs, Health and Integration in Baden-Württemberg supported the study and, in agreement with the 15 participating companies, provided a list of contact persons that E.R. contacted by email in August 2021 to inform the stakeholders within the companies about the planned retrospective evaluation. Five companies agreed to participate and cooperation agreements were developed and signed. Two of the five companies consented to take part in the employee survey, and four of the five companies agreed to participate in qualitative interviews. The five companies cover medical technology, medical device production, pharmaceutical production, supply chains for food, medicines, water, energy, and other essentials, and energy supply. The remaining ten companies did not agree to participate. Reasons for non-participation were mostly related to a lack of time for staff to participate in the

employee survey or an interview.”<sup>1</sup> (Wagner et al., 2023).

The following figure shall demonstrate recruitment of the study population regarding the main study and associated sub-studies as well as demonstrate the interview process from the beginning of the main study (Rind et al., 2020) until the interview period belonging to the present dissertation.

Figure 1 Visualization of recruitment of the study population and interview process



Participants were selected based on their function in the company. Inclusion criteria included holding a leading position at different hierarchical levels, such as head of department, site manager, or multi-site manager, and being part of the crisis management team of the respective company. If the corresponding persons met the inclusion criteria, they were asked to participate. One of the researchers (C.P.) then contacted the participants, informed them about the study, ensured privacy, and scheduled the appointments.

<sup>1</sup> A long quotation is used because the quoted paper is another substudy of the main study, therefore the interviews of this dissertation result from the mentioned recruiting

In total, fifteen companies took part in the pilot COVID-19 workplace vaccination program in Baden-Wurttemberg, southern Germany (Wagner et al., 2023). In our sub-study, seven interview partners from four companies participated. It included five interviews with seven persons, as two interviews involved two interviewees participating together. The interviews were held in the course of the main study (Rind et al., 2020). Therefore, the numbering is incoherent. The research design involved five expert interviews (Meuser & Nagel, 2009) with seven key actors in different fields of operation.

Table 1 Overview of the Interviews

Interview-ID	Industrial sector	Department	Interviewer	Length (min)
G-09	Medical Engineering	Occupational safety, Human Resources	CP	63
G-11	Metal-/electrical industry	Strategy development, Human Resources	CP	73
E-10	Energy supply	Management	CP	38
E-12	Pharmaceutical industry	Strategy development	CP	41
E-13	Pharmaceutical industry	Plant safety	CP VL	52

## 2.4 Development of the interview guide

Interview guides were developed in a multi-level process using the SPSS method (Helferrich, 2011). SPSS stands for “collect” (*sammeln*), “verify” (*prüfen*), “sort” (*sortieren*), and “subsume” (*subsummieren*). One of the researchers (C.P.) conducted all four steps of the process to draft a first version of the respective interview guide. She discussed each interview guide with the larger research group, refined the questions, and finalized the interview guide. In total, three interview guides were used. The second and the third interview

guides were based on the previous interview guide and were adjusted to the respective situations.

The interview guide used for our module within the evaluation of the pilot COVID-19 workplace vaccination program contained the following of topics:

- Adjustment of working conditions during the COVID-19 pandemic
- Pilot COVID-19 Workplace Vaccination Program
- Work-related demands in the context of the COVID-19 pandemic
- Experiences with COVID-19 cases in a work-related context
- Leadership
- Closing: Review and outlook

The final interview guide is included in the appendix (page 86).

## **2.5 Conduction and processing of the interviews**

Before the interviews, informed consent was gathered verbally, and an informed consent form was signed. A semi-structured interview form was chosen, because it allows flexibility and speech flow but adheres to a structure and keeps the focus on topics relevant to the research question. The interviews were conducted from November 2021 to January 2022 as video or telephone calls due to infection control. The average length of the interviews was 54 min (shortest 38 min, longest 76 min). For reasons of quality assurance and communication on an expert level, all interviews were conducted by C.P.. I attended one interview of the third interview period lasting from November 2021 to January 2022 and wrote a detailed report afterward. It was planned that I would attend another interview, but I could not take part, as the interview had to be conducted spontaneously on the telephone due to technical difficulties with the videocall software. The interviews were audio recorded. The videos were not recorded. The audio files were transcribed verbatim by an external company (amanu GmbH, Stuttgart).

To exclude conclusions on the interview partners and preserve the

interviewees' privacy, the transcripts were pseudonymized by one of the researchers (C.P.), meaning that any information that could be used to draw conclusions about the interviewee was removed from the transcripts and replaced by square brackets. Professions were not removed to keep contextual information.

## 2.6 Data analysis

The data was analyzed by the qualitative content analysis method of Kuckartz (2016). In total, three interview periods were analyzed. The first two periods belonging to the main study (Rind et al., 2020) and the third interview period belonging to the sub-study (Wagner et al., 2023) (see fig.1). For coding, the MAX QDA 20 software was used (VERBI GmbH, Berlin).

### 2.6.1 Definitions

This method uses a coding technique for analysis of the data. For a better understanding of the analysis process, some terms need to be explained. A sampling unit represents a selection of data from all potential available data. It can be chosen by chance, by quota sampling, or by random selection (Kuckartz, 2016, p. 30). In this dissertation, one sampling unit is represented by one interview person.

The terms “category” and “code” can be equated. Kuckartz says that in the literature there is no strict definition; rather, it is assumed that there is a common understanding of the concept (2016, p. 32). A unit of coding refers to a text passage that is related to a specific category (2016, p. 41). The person who assigns text passages to a certain category is a coder (2016, p. 44). In this dissertation, the term “researcher” is used in the same context.

*Table 2 Definition of terms regarding qualitative content analysis*

<b>TERM</b>	<b>DEFINITION</b>
<b>SAMPLING UNIT</b>	Selection of data from all potential available data, e.g., interview, book, newspaper (Kuckartz, 2016)

<b>CATEGORY</b>	“Any of several fundamental and distinct classes to which entities or concepts belong” (Merriam-Webster Dictionary, 2022)
<b>UNIT OF CODING</b>	Text passage related to a specific category (Kuckartz, 2016)
<b>CODER</b>	Person who assigns text passages to categories (Kuckartz, 2016)
<b>CATEGORY SYSTEM/CODING FRAME</b>	Entirety of all categories (Kuckartz, 2016)

### **2.6.2 Analysis**

#### Quality control

The data was analyzed in a team consisting of researchers with different specialist backgrounds. The data was reviewed and worked through by means of coding and later paraphrasing by each researcher. After each step, the corresponding tandem met and discussed unclear aspects. If no consensus was found, C.P. was consulted. A regular exchange with the interdisciplinary study team took place during the generation of the categories and coding.

#### Interviews during the main study

Parts of the category system of the main study were used for the evaluation of the pilot COVID-19 workplace vaccination program and were later augmented with further categories. The analysis procedure of the main study is described here. A deductive-inductive approach was used. Main categories were deductively derived from the interview guide. With regard to the central research issue, nine main categories were defined for the data of the first interview period. Two researchers (C.P., E.Ö.) separately started the first coding process. Three interviews were revised, and important text passages were assigned to an appropriate main category. Then, all units of coding that fit into one main category were listed together. By paraphrasing the units of coding belonging to the associated main categories, subcategories were inductively built. A

preliminary coding frame was created that contained the names, descriptions, and illustrative quotations for all main categories and subcategories. The full study team discussed the coding frame, and the two researchers revised it according to the feedback. The same three interviews were again coded with the revised coding frame, and final corrections were made. The coding frame was then finalized. In the last step, the remaining five interviews were categorized with the same coding frame.

For the second period, the same coding frame was initially used. It was tested on two interviews and adjusted. As new aspects in the interviews emerged, the main categories “leadership in pandemic conditions” and “in-company COVID-19 vaccination” were added and “assessment of the risk of infection” was included as a subcategory of “experiences with COVID-19.” All categories related to antibody testing were deleted, as this was no longer part of the in-company procedures. Eventually, the coding frame was finalized again and applied to all remaining interviews.

Before the next step of the analysis, I joined the study team. At that time, the team consisted of the following researchers:

- Dr. Christine Preiser (C.P.; sociologist, postdoc researcher at the Institute for Occupational Medicine, Social Medicine and Health Services Research) was the postdoc researcher responsible for the qualitative module in the mixed-method project (Rind et al., 2020). She developed the interview guides and conducted all of the interviews.
- Eylem Ög (E.Ö.; sociology student) and Ourania Amperidou (O.A.; empirical cultural sciences student), both student research assistants, joined the team during the data analysis. EÖ left the team shortly before termination of the categorization of the second period.
- I, Vanessa Linder, M.D. (V.L.; external doctoral candidate) joined the study team during the analysis of the second phase.

I joined the team when the intra-comparison of categories was started (i.e., when all units of coding belonging to one category were compared with each other to identify patterns in the data). I therefore read all the transcripts of the

interviews of the second and third periods. As mentioned before, working in a team is one of the quality measures in qualitative research (Kuckartz, 2016, p. 212). All codes and units of coding belonging to one main category were listed together. O.A. and I prepared the analysis under the supervision of C.P.. We worked parallelly: Each of us paraphrased all units of coding within a given category and organized them along emerging thematic patterns. Another researcher reviewed paraphrases and the thematic order. We discussed unclear aspects in the tandem. If no consensus was found, we discussed the aspects with C.P..

### Interviews of the pilot COVID-19 workplace vaccination program

For the data analysis of the pilot COVID-19 workplace vaccination program, we repeated the previous process (i.e., the coding frame of the second period was used for the data analysis of the interview period of the pilot COVID-19 workplace vaccination program). Beforehand, I read all transcripts of the pilot COVID-19 workplace vaccination program.

First, O.A. and I applied the coding frame on the transcripts. We highlighted new aspects that arose. Difficult text passages were paraphrased to build preliminary inductive subcategories and were discussed among the small research team (C.P., O.A., V.L.). We added the main categories “3G rules applied in the workplace” and “crisis management in companies during COVID-19 pandemic” and refined the main category “in-company COVID-19 vaccination” by adding new subcategories such as “access to the pilot COVID-19 workplace vaccination program”, “motivation behind participation”, “involved participants”, “information about the vaccination”, “organization of the vaccination process”, and “received feedback on the COVID-19 vaccination program”. After revising four interviews, the whole study team discussed the new coding frame. Similarities and differences were visible between the coding frame of our study and the coding frame of Anke Wagner and Kamil Keles, who worked with qualitative interviews with occupational health physicians. O.A. and I analyzed the four interviews again with the refined coding frame. We discussed the new coding inside the small study team (C.P., O.A., V.L.). The pending fifth interview was worked through with the final category system, again

by O.A. and me, under the supervision of C.P..

Categories relevant to the research question, i. e. the experiences and attitudes of company crisis management teams with regard the in-company COVID-19 vaccination campaign, are listed in Table 3.

*Table 3 Relevant main categories and subcategories regarding experiences and attitudes of company crisis management teams with regard the in-company COVID-19 vaccination campaign*

<b>Main categories</b>	<b>Subcategories</b>
Pandemic related changes of working conditions	Operational measures taken
	[...]
Crisis management in companies during COVID-19 pandemic	Field of competence and activity
	Structure of crisis management
	Pandemic plan
In-company COVID-19 vaccinations	Access to the pilot COVID-19 workplace vaccination program
	Motivation behind participation
	Involved participants
	Information about the vaccination
	Organization of the vaccination process
	Received feedback on the COVID-19 vaccination program
3G rules applied in the workplace	Testing on the workplace
	(Non) adherence with the 3G rules
	Data protection
	Vaccinated vs. non-vaccinated

The full category system is included in the appendix (page 88).

All codes belonging to the same category were listed together, ordered, and paraphrased by O.A. and me. We revised each other's order and paraphrases and discussed unclear passages. If no consensus was reached, C.P. was asked to join the discussion to reach a mutual agreement.

This process was conducted for the categories "pandemic-related changes of working conditions", "management under pandemic conditions", "crisis management in companies during COVID-19 pandemic", "in-company COVID-19 vaccinations", and "3G rules applied in the workplace". To answer the research question of the present dissertation, I chose the categories "pandemic-related changes of working conditions", "crisis management in companies during COVID-19 pandemic", "in-company COVID-19 vaccinations", and "3G rules applied in the workplace".

## **2.7 Approval of the ethics committee**

Approval was given in June 2020 under number 423/2020BO by the local ethics committee of the Medical Faculty of the University of Tübingen and University Hospital Tübingen.

## **2.8 Financial funding**

This project first was funded by own resources of the Institute of Occupational and Social Medicine and Health Services Research and in the following received a grant by the Ministry of Science, Research, and Art in Baden-Württemberg (Grant number 42-5400/136/1). The funding bodies had no influence on the design, execution, or publication of the study.

### 3 Results

The interview period lasted from November 2021 until January 2022, when the initial COVID-19 vaccination campaign in conjunction with basic immunization had been completed and some of the companies had already started their booster campaigns. The interviewees therefore gave a retrospective view of the initial vaccination campaign and current reports on their ongoing booster vaccination campaign. Furthermore, by that time companies were authorized to ask about the 3G status of their employees (Gesetz zur Änderung des Infektionsschutzgesetzes und weiterer Gesetze anlässlich der Aufhebung der Feststellung der epidemischen Lage von nationaler Tragweite).

The interviewees were substantially involved in the pandemic management of the respective companies. During the course of the interviews, the interviewees expressed pride about their achievements. Thus, it was noticeable that the interviewees identified themselves with the respective company and especially their role as a member of the crisis management team. The implementation of the vaccination program was dependent on the organization of the crisis management teams, their commitment, and teamwork. The main category “crisis management in companies during COVID-19 pandemic” was therefore included to answer the research question.

To describe the tasks of the crisis management teams and measures coming along with the pandemic, notably the protective measures, and describe the initial situation before starting the COVID-19 vaccination campaign, the subcategory “operational measures undertaken” of the main category “pandemic-related changes of working conditions” was analyzed.

Thus, in regard to the research question and objectives, the main categories “in-company COVID-19 vaccinations”, and “3G rules applied in the workplace” were analyzed separately. The subcategory “tests in the workplace” in “3G rules applied in the workplace” was set aside, as it was not relevant for answering the research question.

All quotations used were translated from German into English by me. As there is a focus on the general content of the collected data, I do not assume that there is any loss of meaning.

### 3.1 Crisis management in companies during COVID-19 pandemic

As the commitment and knowledge of the interviewees made a major contribution to the implementation of the vaccination campaign, the results of the main category “crisis management in companies during COVID-19 pandemic” are presented. This category consists of the subcategories “field of competence and activity”, “structure of crisis management”, and “pandemic plan”. Table 4 provides a definition of each subcategory.

*Table 4 Subcategories of the main category "Crisis management in companies during COVID-19 pandemic"*

Subcategory	Definition
<b>Field of competence and activity</b>	The subcategory summarizes the remits and turning points of the crisis management with regard to the COVID-19 pandemic. It describes the general crisis management as well as the role of the interviewed persons of the crisis management.
<b>Structure of crisis management</b>	The subcategory summarizes the different hierarchy levels.
<b>Pandemic plan</b>	The subcategory includes all text passages that focus on how crisis management was (not) prepared for a pandemic, e.g., by having a pandemic plan.

#### 3.1.1 *Field of competence and activity*

This subcategory “field of competence and activity” reflects the interview partners’ role in the respective company and crisis management. Remits and turning points are addressed.

The tasks and roles of the interview persons included leading positions in the context of crisis management. One of the interviewees was the leader of the crisis management teams of all locations of the company (E-13). The interview participant described he/she was the leader of the crisis management team of the respective location as well as the deputy head of the Germany-wide crisis

management team and member of the worldwide team (E-13).

The competences that the interviewee mentioned included plant safety and technical management (E-13):

*“Well, it is organized like a cascade. And in my role, I manage the crisis team of [location of the interviewee]; I am the deputy head of the German crisis team and member of the international crisis team. So, that is the cascade.” (E-13)*

Another interview partner was the technical director of a network provider and provided energy for the region (E-10). The interview participant was the head of the crisis management team (E-10):

*“... that overrides the line function of the company and the crisis team takes over. Of course, there, I am the head” (E-10)*

The crisis management teams were built in extraordinary situations. A cycle of stakeholders was convened. The interviewee explained that members of the crisis management needed to have certain “suitabilities” (E-13):

*“For us, the role in the company not automatically includes the membership of the crisis management team, but the personality has to fit, too. We need someone who can take major decisions with little or no information in a short period of time.” (E-13)*

Members of the crisis management team usually held the position of a manager in different departments including research, production, law, medical service, and technical service (E-13). In the respective company (E-13) there was a sub-team of pandemic-related medical specialists that assisted the crisis management team in an advisory capacity (E-13):

*“... there was a sub-team consisting out of specialists, that addressed the thematic of the pandemic.” (E-13)*

Focusing on the time course of the pandemic, one interview partner mentioned the crisis management team immediately became active when the first media reports were published (E-12). Another interview partner explained that internal

virologists initially assessed the situation. Thus, issues regarding the pandemic were handled by the common crisis management team and their consultants (E-13):

*“... they are functioning in a way that, if a question comes up, it is handled as in the normal standard operation. So, we are not in an emergency situation.” (E-13)*

Later on, the respective company dealt with the question of what effects the omicron variant of the virus would bring (E-13). Furthermore, the company handled with external events such as the low availability of recourses and future economic development (E-13). The company evaluated the prospective events together with their virologists (E-13).

### **3.1.2 Structure of crisis management**

The subcategory “structure of crisis management” summarizes the different hierarchical structures of the crisis management team in the different companies.

Two interview partners mentioned that crisis management teams were convened in every extraordinary situation (E-13, E-10):

*“This location crisis team is summoned in every extraordinary event.” (E-13)*

Furthermore, they were authorized to override the general line function of the company (E-10).

The structure itself was explained by a few interview participants (E-10, E-12, E-13). One interview partner described their crisis management teams operate on different levels (E-13). Every location had its own crisis management team consisting of five to ten managers (E-13). Higher levels included a Germany-wide crisis management team and a worldwide crisis management team:

*“And superior to it is the Germany-wide crisis management team. So, if there is an incident that affects more than one location, a Germany-wide crisis management team will be built. This Germany-wide crisis management team coordinates the measures of this or the respective*

*location, and next higher level is the worldwide crisis management team of [the company]. That means, if there is, as for example... during the pandemic every location is affected, certain regulations, certain topics are given by the worldwide crisis management team. So, it's built up like a cascade.” (E-13)*

Another company forewent their regular crisis management (E-10). Instead, they built a large team of persons responsible for crisis management, consisting of more than twenty stakeholders, including lawyers (E-10). As their gatherings were unstructured, they built a smaller cycle consisting of the personnel directors, the legal director, the in-company occupational health physician, and the manager (E-10). They met three times per week, and the small team informed the large one once a week (E-10):

*“.. and it is still like that, that the small coordination cycle Corona - that is the name - it meets three times a week. Mondays, Wednesdays, Fridays and Thursdays the big cycle is informed, what we have done for almost two years, every week without any exception, ...” (E-10)*

Another interview person also mentioned a COVID-19 subgroup in the context of their crisis management team (E-12).

### **3.1.3 Pandemic plan**

The “pandemic plan” subcategory addresses the preparedness of the companies for a pandemic. Statements describing if and how the enterprises were prepared are presented.

When asked about the existence of a pandemic plan and thus about the preparedness for a pandemic, two interviewees (E-13, G-09) responded that they were prepared in some way. One of the stakeholders built a plan for another company and therefore initially used this one for the COVID-19 pandemic (G-09). Furthermore, they emphasized how their preparedness depended on the close teamwork and trust of the company staff in the crisis management team (G-09):

*“So, we were not totally unprepared, but that is only partly due to the plan. Generally, in the team, we grew closer together, worked more closely than before, and ensured understanding. And we got the trust from the company in order to manage it.” (G-09)*

Another interview partner pointed out they already had a crisis management sub-team for pandemics due to the avian flu (E-13). They had therefore already established an organizational structure (E-13).

One interviewee described how they were not prepared for the COVID-19 pandemic, although they had emergency plans for a variety of different scenarios (E-10). Thanks to contacts to aid organizations (e.g., Technisches Hilfswerk) through their employees, they could promptly get some pandemic plans and modify them (E-10):

*“We were prepared for a lot of things, we have a crisis management team, and we have already overcome crises, and we practice a lot, and so on, but that was more about some terrorist attacks, cyber-attacks, vandalism and so on... principally sabotage and stuff. Or a technical breakdown, an accident. We practiced all of that, and we had that in our files, but we did not prepare anything for a pandemic until that point of time.” (E-10)*

Preparations aimed at maintaining the safety of the staff as well as maintaining the production line and research department (E-13). One of the participants reported that about 80 percent of their plans worked out, whereby the extent of the pandemic and the amount of mobile work were underrated (E-13):

*“In the initial plans, mobile work in this quantity was never foreseen. And we must say, thanks to God, we or the company had built up the IT infrastructure even before COVID, so that a majority or many office workplaces were able to work from home. So, for example: notebook equipment, appropriate systems such as Teams were already introduced. All of that was already existing beforehand, which we could use then. But in the initial plans it was not foreseen in this quantity.” (E-13)*

Emergency concepts regulated the handling of a reduced number of employees but also a potential change of working areas of the staff (E-13). Barracking and food to go was also available (E-13):

*“... on the factory premises barracks, meaning camp beds, sleeping beds, utility rooms all existed in our plans, which we thanks to God did not have to use.” (E-13)*

One interview partner described the companies' approach by the time the pandemic started (E-12). The crisis management team had been convened by the time first cases in Germany appeared (E-12). The team made decisions about measures for COVID-19 positive cases among the staff and responded to questions about contact persons, measures regarding the work space, and personal protective equipment (E-12). Especially challenging was dealing with contact persons in business-critical structures (E-12). The team also made decisions about the organization of the work on-site to reduce the risk of staff shortages due to quarantine (E-12):

*“... if there is a connection with COVID - not even the disease, but this contact person topic - what if there is a shortage of staff? And then you start to wonder, well: how do I organize the work on-site to maybe prevent this topic?” (E-12)*

Winter holidays were an exceptional situation for the company, as many of their staff spent their holidays in Austria and had to go into quarantine afterwards according to legal regulations (E-12).

Looking to the future, one interview partner said they believed that there would be further pandemics, and they were therefore in close contact with their intern virologists (E-13):

*“Whether it is pandemics or whatever it will be that we will have to face.” (E-13)*

### 3.2 Pandemic related changes of working conditions

The subcategory “operational measures taken” demonstrates the tasks and measures that came along with the COVID-19 pandemic and the situation in companies before the vaccination campaigns started. Furthermore, it demonstrates the resources upon which the vaccination campaign could build. Table 5 provides a definition of the subcategory.

Table 5 Subcategory of the main category "Pandemic related changes of working conditions"

Subcategory	Definition
<b>Operational measures taken</b>	Protective measures and regulations that were introduced and/or installed in the course of the pandemic.

#### 3.2.1 Operational measures taken

Protective measures and regulations that were introduced and/or installed in the course of the pandemic include on-site modifications and the use of mobile work.

All of the interview partners reported they already offered mobile work opportunities before the start of the pandemic. With the start of the pandemic, the use of mobile work was extended and obligated for non-production employees (E-12, G-11):

*“All employees that do not directly create value - meaning the ones who do not produce units - go home and use mobile work” (G-11)*

One interviewee mentioned that, after COVID-19 outbreaks in the open-plan office and entire floors being closed, most of the staff was sent home to use mobile work (G-11). Having to use mobile work was an opportunity to improve mobile work (G-09):

*“The topic of mobile work was just... it played a role, but of course now we were pressured to use it and with that obligation the technology grows.” (G-09)*

Working on-site in the office was allowed only for a limited number of employees (G-11). In one of the companies, a mobile phone application was introduced to organize the occupancy in the office (G-09):

*“When the topic of [social] distance is coming up again for example, the question was always: well, where I am allowed to sit, and so on, and in the future, we will have an app with a booking plan, where I can block seats.” (G-09)*

According to the interviewees, employees were glad to return back into the office due to isolation and lack of appropriate working space at home (G-11):

*“Employees were obviously happy finally entering the workplace, going into the canteen and to exchange information, because not all employees had a second room at home to set up as an office. That the computer screen was missing, that somehow a social isolation was recorded slowly.” (G-11)*

Regarding the experiences of an interviewee belonging to an international company, other countries' experiences of the pandemic could be used to devise useful safety measures when the pandemic reached Germany (G-09):

*“By now we are prepared in such a way that we can implement extremely extensive measures in a short period of time” (G-09).*

A variety of equipment was introduced on-site including air filters (E-13), gloves (E-12), special keyboards (E-12) and devices to open doors (G-09). Disinfection of surfaces was performed several times a day (E-12), distance was kept in offices by pulling apart tables and distance markings were introduced (G-11). Moreover, modified shift schedules aimed to prevent personal handovers (G-09). Preventive measures included distance regulations, hygiene measures and procurement of facial masks (G-11):

*“...with shivers down my spine I remember, how we organized facial masks in China. We also have a production site in China, where we have a global purchase hub, a global sourcing hub. Via them we purchased facial masks.” (G-11)*

One interview partner (E-12) noted that facial masks adversely affected labor, were associated with respiratory disturbances and panic by some employees. While one of the interviewees reported that they closed their canteen (E-13), another reported they left their canteen and restaurant open due to safe distance regulations (G-11):

*“Then we organized preventive measures for those areas, meaning arranging queues that separates personnel flows.” (G-11)*

A counselling center for the staff during the pandemic was implemented, as noted by one interview partner (E-13). Another interview partner mentioned a 24-hour hotline (G-09). A person working in a business-critical area had to wear a mask continuously on the factory premises, and contact with other employees had to be reduced to a minimum (E-12). In general, workflows were specified in such a way that only individual persons had to come on site (G-11).

### 3.3 In-company COVID-19 vaccinations

The main category “in-company COVID-19 vaccinations” includes the subcategories “access to the pilot COVID-19 workplace vaccination program”, “motivation behind participation”, “involved participants”, “information about the vaccination”, “organization of the vaccination process”, and “received feedback on the vaccination program”. This main category demonstrates the experiences from in-company COVID-19 vaccination campaigns. Table 6 provides a definition of each subcategory.

*Table 4 Subcategories of the main category "In-company COVID-19 vaccinations"*

Subcategory	Definition
<b>Access to the COVID-19 workplace vaccination program</b>	The subcategory includes text passages that refer to the phase, when negotiations about being part of the pilot project took place. Following topics can be included: How did the participants hear about it? How were political stakeholders contacted? How did they

	negotiate? What were important points of time during the decision-making process?
<b>Motivation behind participation</b>	<p>This subcategory includes topics that point out the motivation of the decision-makers to be part of the pilot project. It covers different subject areas:</p> <ul style="list-style-type: none"> <li>- Competition between companies</li> <li>- Operational contribution for the way out of the pandemic, e.g., by vaccinating as much employees as possible</li> <li>- Self-image and macrosocial commitment of the company (as the vaccination of family members and staff of other companies)</li> </ul>
<b>Involved participants</b>	<p>Actors who are directly involved in the organization and implementation of the vaccinations:</p> <ul style="list-style-type: none"> <li>- company doctors</li> <li>- Decision-makers and other relevant actors in the company</li> <li>- External actors such as aid organizations (e.g., Malteser)</li> </ul> <p>Actors who perform the vaccinations, such as aid organizations, were distinguished from decision-makers.</p>
<b>Information about the vaccination</b>	<p>This subcategory includes topics such as e.g., education of the staff, way of information (videos, flyers). Non-promotion as well as notice board and information about the vaccination center is included in this subcategory.</p>
<b>Organization of the vaccination process</b>	<p>Processes and organizational questions about the vaccination and the vaccination center from</p>

	the beginning and during the campaign is included in this category. Work processes, such as credit of working hours as well as vaccine supply (e.g., shortage) belong to the category as well.
<b>Received feedback on the vaccination program</b>	This subcategory includes statements regarding the acceptance, feedback by the employees and the coverage as an indicator for success of the vaccination campaign.

### **3.3.1 Access to the pilot COVID-19 workplace vaccination program**

The subcategory “access to the pilot COVID-19 workplace vaccination program” describes the efforts that were made to be chosen to be part of the pilot project.

The interview partners reported on the political support and contacts that were established in order to become part of the pilot project (E-10, E-13, G-11). One interview partner said that they used all potential possibilities and tried to contact scientific and economical stakeholders in every possible way (G-11). In the end, the company got the chance to speak to the minister of health of the corresponding federal state (G-11):

*“I pulled all political, economic, and scientific levers that came into my mind. And then we got in touch with - through political channels, we got that topic, pilot project ‘company doctors vaccinate’” (G-11)*

Another interviewee reported that they had learned about the pilot project from their occupational health physician, who was visiting a gathering organized by the federal state of Baden-Württemberg (E-10):

*“Our occupational health physician, he was attending some meeting of Baden-Württemberg... some... I don’t remember it exactly what kind of*

*meeting it was, but as I remember, [it was with] with Mr. Lucha<sup>2</sup>, and they said that some pilot projects will be called out, and he enthusiastically told us about it and if we would do it if we want or if we were asked? And we just said: Sure!” (E-10)*

Recalling the companies special state of being part of the critical infrastructure and being a municipal enterprise with a large number of employees, the company was promptly accepted for the pilot project (E-13).

The cooperation with the regional country commissioner was emphasized by the interview partner, who was a member of the same official committees as the commissioner and had therefore already established contact (E-13). As it was a renowned enterprise in the region, the commissioner supported the company in becoming part of the pilot project (E-13):

*“Well [laughs], We as [name of the company] are very well known in the location of [district] or in the city, in the district, in the federal state of Baden-Württemberg. And the commissioner of the district [of the location] supported us in becoming one of the pilot companies.” (E-13)*

### **3.3.2 Motivation behind participation**

The subcategory “motivation behind participation” focuses on the motives for participation by the stakeholders. These motives include societal responsibility and ensuring the production site and competition with other companies.

In general, the companies put great effort into organizing a broad vaccination campaign. The interview partners said that not only should their staff be entitled for vaccination by their service, but their family members, the regional population, and small-sized companies should be too (E-13, G-09, G-11).

In the beginning, however, there was not enough vaccine available to follow this plan. One interview partner described how they were only allowed to vaccinate their employees during the pilot project (G-09). When it was clear that the vaccination campaign would continue after the pilot project, the company

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<sup>2</sup> Minister for Social Affairs, Health and Integration in Baden-Württemberg during the time of data collection

communicated that family members soon would get the chance for vaccination as well (G-09):

*“There we were open and transparent and said that we want to support and vaccinate the staff and also the family members, the close family members, and beyond that, what is in our hands of course, ...” (G-09)*

Another interview partner expressed regret they could not offer vaccinations beyond their own staff (G-11). Even though the company spoke to the ministers of the corresponding federal state they only got 120 doses of vaccine (G-11):

*“Unfortunately, we only got vaccines for our employees. I would have really liked to - that would have been a huge signal - vaccinate our family members too.” (G-11)*

The representative of another company stated when they were able to offer vaccinations to family members (E-13). In the past, they supported the regional COVID-19 immunization center with personnel and materials and therefore should be chosen for the pilot project (E-13):

*“We support, or we supported, for example, the public vaccination center with materials and personnel. So, if you take this thought, it was obvious, if the district [of the company location] gets something, where it will be.” (E-13)*

As another interviewee (G-09) stated, it was to the credit of their company that its social commitment contributed to the general population and it had not acted for selfish purposes (G-09). The interviewee praised the organization of the in-company vaccinations (G-09). After visiting a regional immunization center, the company decided that they wanted to take part in the vaccination campaign and therefore met the social obligation (G-09):

*“... and that is, I think, without advertising [name of the company], what characterizes [name of the company] - that it is not about their own advantage, but in this case also about the advantage of the district, the region, the federal state, the society.” (G-09)*

Another company that offered smaller companies their vaccination service waived the expense allowance and instead asked to donate the money to a local charity (G-11).

One interview partner mentioned the need to protect their staff by means of vaccinations to keep the business going (E-12):

*„The company also has an interest in keeping the production and business-critical areas active. And that is for sure, the vaccination is the best tool to protect the employees, the staff from an infection and maintain the business.“ (E-12)*

### **3.3.3 Involved participants**

Involved participants include persons and institutions that were directly involved in the organization and implementation of the vaccination procedure.

The interviewees mentioned a wide variety of personnel who were involved in the vaccination procedure.

Medical doctors constituted one large group of actors. While the in-company vaccination centers were in operation, it was not only the internal company doctors who took part in the procedure; one interview partner said that retired doctors were a valuable resource, as they provided a high degree of efficiency (G-11):

*“We acquired retired doctors, yes. And they made a huge performance difference. Well, we had a doctor who is older than age 70 - he managed to handle three times as many people as our company doctor.“ (G-11)*

After the initial vaccination campaign, when the demand for vaccinations decreased, the immunizations were provided by the regular company’s medical service, as mentioned by two interview partners (E-13, G-11):

*“We have every Friday - we have every Thursday/Friday our company doctor on site, and Fridays are reserved for vaccinations. The occupational health physician vaccinates.“ (G-11)*

In the company’s immunization centers, vaccinations were given by paramedics, nurses, and members of the medical organization “Malteser” (G-

11). Other actors who were identified by the interview partners included secretaries (G-11), pharmacists (E-13), and internal helpers. In one company, even the chairman of the works committee took on some shifts in the organizational procedure, as a close integration of different stakeholders was aimed (G-11):

*“And even in the vaccination center, the chairman of the works committee took several shifts in the field of organization. So, we integrated everybody very intensively, which was very important for our company.” (G-11)*

### **3.3.4 Information about the vaccination**

The subcategory “information about the vaccination” includes the way employees were informed about the vaccination campaign, the provision of medical information, and the gathering of informed consent in the context of the vaccinations. Only one interview partner commented on how information was passed to the employees. In this case, the company informed its staff about the internal vaccination campaign in the general videos they published for information exchange with their employees (G-11):

*“We did not advertise, only, well, used videos... in the course of our regular employee information we promoted the vaccination. But we had a certain hype, yes.” (G-11)*

### **3.3.5 Organization of the vaccination process**

The subcategory “organization of the vaccination process” focuses on statements regarding the organization and communication of the in-company vaccination program. The interview partners had expectations about the start of their campaign and the infrastructure they planned to use and mentioned the prioritization procedure.

As the subcategory contains many text passages, subheadings are used to maintain the structure.

#### Prearrangements

In autumn 2020, when vaccinations finally became a public topic, one of the

companies tried to contact political stakeholders to secure potential vaccines, even if it had to make promises, it didn't know it could keep (G-09):

*"... we already had an appointment with our chairmen, and county commissioner, and minister, where we then said, if we get vaccine, we are the company that – we made promises we did not now we could keep – if you get us vaccines, we built a vaccination center within a week ..."* (G-09)

Another interview partner explained, that their crisis management team initially handled a potential in-company vaccination campaign (E-12). Furthermore, the company's medical service tried, together with other occupational health physicians, to argue that they had all the recourses needed to vaccinate a large number of people (E-12). Thus, the interview partner rated the large size of the company as beneficial (E-12):

*"From what I noticed, they tried, as medical service, also in a big company, together with other occupational health physicians and other big companies, to situate themselves as able to carry out vaccinations for a large number of people in a relatively short period, because now the spatial proximity is given as well as the medical expertise."* (E-12)

Another interview partner described a situation in February 2021, when they talked to their boss about the pandemic, and they got the idea to organize an in-company vaccination campaign, as vaccines were the only way out of the pandemic (G-11):

*"... and I was sitting with my boss inside the office, and we were talking: How do we get out of the pandemic? And I said: Only by vaccinations"* (G-11)

During organization of the procedure, internal resources had to be mobilized, as no external help was available was stated by one interview partner (E-10).

### Vaccines

To secure the vaccine, one interview partner explained that they contacted both

the manufacturer itself and the federal state of Baden-Württemberg responsible for the pilot project (E-13):

*“We used two ways. We ordered directly from the manufacturer. And we used the contingent that the federal state of Baden-Württemberg provided. The manufacturer didn’t deliver, but we just tried in this way; from pharmaceutical company to pharmaceutical company.” (E-13)*

The same person expressed annoyance regarding the promised number of vaccines (E-13). The information provided by the federal state was vague, and lists of substitutes had to be implemented during the vaccination campaign (E-13). Consequently, trust into politics was lost (E-13):

*“At the end it was... or, it is still like that nowadays - only when the vaccine vial is inside the building, then we believe it is here. Not any time earlier. I do not believe in any politician anymore.” (E-13)*

Another interview partner listed all the issues that had to be addressed in advance regarding vaccines and data, including delivery of vaccines, data protection and infrastructure (G-09).

The same interviewee described initial difficulties with the use of the vaccine. Due to official regulations, only a certain number of doses could be taken from a vaccine bottle, and leftover doses could not be given to third parties. Within this context, the interviewee spoke about waste of vaccines (G-09):

*„What really hurt us, or me personally, was to watch the waste of the vaccine when there was shortage. That was extremely - when we can say: Yes, according to the regulations, I can get ten syringes from a bottle, but I know I could exactly get twelve.” (G-09)*

Another interview partner described how they had all the materials for proper storage of the vaccine and how, through careful draw up of the syringe, the available dosages could be increased (G-11).

#### Prioritization and appointments

Both interview partners that comment on prioritization (E-13, G-11) made it

clear that production line workers and staff who had to work on-site were given priority for the vaccinations:

*“And for that reason, we gave opportunity to the production line workers for the first vaccination, second vaccination, and booster vaccination, because those are the ones that have to come every day, who are exposed to the risk of infection.” (G-11)*

For the same reason, another interview partner described how only on-site workers could use the online tool for booking an appointment (E-13). The tool was unlocked, and 1,000 appointments could be booked by chance by the selected workers (E-13). The appointments were fully booked in three hours (E-13):

*“So, there were long discussions about how we should handle the topic: Who is important, who is not important? And then we decided to choose a way. We just used a principle of chance of the people that had to work on-site. Mobile work was excluded in this framework” (E-13)*

Another company developed an algorithm for the appointments (E-10). As the company was part of the critical infrastructure, it wanted to keep the default rate of its staff low, and so it applied certain calculations (E-10). Consequently, it assigned fixed periods to their employees to book an appointment (E-10). The same interviewee referred to the upcoming booster vaccinations, for which they discarded the algorithm and instead used an automatic system (E-10). The probability of a major breakdown of the staff was evaluated as very low (E-10):

*“In the meantime, you have an automated calendar, from which... depending on which combination of vaccines and age and so on you choose, you get a recommendation of appointments - you can choose one and get automated invitations and can confirm it.” (E-10)*

The appointments for booster vaccinations were also mentioned by another interview person (G-11). The appointments could be only booked by workers from the production line (G-11). The vaccinations were offered every Friday by the occupational health physician (G-11).

### Vaccination center

One interviewee who worked in a pharmaceutical company stated that all materials and personnel required were already available (E-13). The company's immunization center could therefore quickly put the vaccination process into operation. The company built up several vaccination lines in a vacant office building (E-13):

*„We built up a complete vaccination line, or several vaccination lines, in an internal vaccination center. It was built up in one of our office buildings that was empty by that time, because the staff was working from home, and so we had a complete infrastructure for everything.” (E-13)*

The vaccination lines were reopened for booster vaccinations (E-13).

Another interview partner described how their COVID-19 test center was followed by the planned immunization centers, and so they already tried to implement efficient working processes (G-11):

*“And then we have - well, we quickly built up a testing center. We partly orientated it on the public vaccination centers, because we already considered complementing it with a vaccination center.” (G-11)*

Due to concerns regarding availability, one interviewee explained that they bought syringes in advance of the vaccination campaign, although they did not need them later (E-10). The vaccination line was built up as a one-way street (E-10). The medical history sheets were proofed in advance by employees of the in-company vaccination center to ensure efficiency in the work of the medical doctor (E-10).

One interviewee criticized a delayed start to the vaccination procedure due to missing legitimization of the occupational health physicians (G-09):

*“We had to wait an extremely long time until the occupational health physicians were legitimized to do so. For us, that was the... I must say, the willingness was there for a very, very long time. The legitimization was the thing that took a longer time.” (G-09)*

The sequence of the procedure was explained by one of the interviewees (G-11): Their vaccination center composed of a waiting area and two medical cabins. After the employees spoke to the medical doctor, they went to the vaccination cabin, where they received their COVID-19 shot. Afterwards, they went into another waiting area. In total, it took around 30 minutes to be vaccinated.

The cost of the vaccination was subsidized by the federal government with 20 euro per vaccination, while the total expenses amounted 40 euro per vaccination according to one interview partner (G-11). External companies that used the vaccination lines were charged 27,50 euro to cover the costs of personnel and premises (G-11). Vaccination certificates could also be printed by the companies (G-11). Working time was credited by two hours per external vaccination on presentation of a vaccination certificate (G-11).

### **3.3.6 Received feedback on the vaccination program**

The subcategory “received feedback on the vaccination program” addresses the feedback of the employers and the vaccination coverage as an indicator of the acceptance.

One interview partner emphasized their company’s concern for its employees’ welfare (G-09). Providing a low-threshold offer to be vaccinated reflected the effort the company made to keep its staff healthy. This resulted in mutual appreciation (G-09):

*“What the company does for the employees, this is probably a big point, which may remain and it is totally great - independent from real values or organization... only mutual appreciation.” (G-09)*

Another interview partner identified the gratitude of the staff as motivation for the effort of the organization of the vaccination procedure (G-11). They focused on the high vaccination rate in their enterprise and an accompanying vaccination hype that evolved (G-11):

*“And we then we created such a hype... through the whole company. Some people got vaccinated that might not have become vaccinated in such a hype situation.” (G-11)*

Although the interviewee mentioned that the staff in the production line showed less acceptance towards the vaccination. According to the interview partner, this might have been due to the different educational backgrounds and social structures (G-11). The same staff, which accounted for about half of the total employees, found it unfair in the beginning of the pandemic not to be able to work from home (G-11):

*“And even in the beginning of the pandemic, when we made those massive mobile work outsourcings, we got the response of the production line workers: The white-collar workers, they are allowed to work from home protected, and we have to expose ourselves to danger, and so on.” (G-11)*

Positive feedback regarding the vaccination procedure itself included the sequence of events and the accompanying comprehensive service (G-11). Another aspect mentioned was the general atmosphere during the pandemic (G-11). Flyers against tests and vaccination that had once been seen were forbidden by the company (G-11).

### 3.4 3G rules applied in the workplace

The main category “3G rules applied in the workplace” demonstrates the situation after COVID-19 vaccines were introduced in the operational setting. For the research question, the relevant subcategories are “(non)adherence with the 3G rules,” “data protection,” and “vaccinated vs. non-vaccinated.” Table 7 provides a definition of each subcategory.

*Table 5 Subcategories of the main category “3G at work”*

Subcategory	Definition
<b>(Non)adherence to the 3G rules</b>	The subcategory summarizes illustrations of exemplary situations regarding adherence or non-adherence to the current 3G rules.
<b>Data protection</b>	The subcategory includes privacy contents in connection with the 3G rule, query of the 3G

	status and feedbacks to the respective involved actors.
<b>Vaccinated vs. non-vaccinated</b>	The subcategory includes the existing gap between vaccinated and non-vaccinated employees and the actions taken, such as continued pay in case of quarantine for all employees, in order to reduce the gap.

### **3.4.1 (Non) adherence to the 3G rule**

The subcategory “(non)adherence with the 3G rule” mainly summarizes exemplary situations of compliance or non-compliance of the 3G rules.

One interview partner explained that – after the respective law came into force - every non-vaccinated employee had to present their daily test result unsolicited to the responsible managers (G-11). In the case of non-compliance with that rule, warnings would have been given. After three warnings, the company could terminate the employment of the corresponding employee, although this provision was not used (G-11):

*„We are very, very sparing with warnings. Well, I cannot remember, that anybody has been thrown out because of warnings - that is a tool we do not use.” (G-11)*

Another stakeholder mentioned fake online COVID-19 test results and described them as unpredictable (E-10).

### **3.4.2 Data protection**

The subcategory “data protection” includes privacy contents in the context of the applied 3G rule and queries of the 3G status.

The situation before the legal regulation was introduced was generally characterized as challenging. Some of the employees were critical and questioning in terms of the 3G rule (G-11). One of the interview partners explained that, without knowing the 3G status of their staff, potential easing of restrictions was not possible (E-10):

*“Because principally one of a team of 25 members said they did not want to reveal their status, the whole team of 25 members did not introduce easing of measures.” (E-10)*

Another stakeholder described how they roughly knew the number of persons who were vaccinated due to their own campaign (G-11). Many employees were vaccinated externally in advance (G-11). Consequently, they did not know the exact number (G-11). Furthermore, an earlier legal regulation would have been helpful (G-11):

*“Yes, it would have been useful if we had been allowed to ask much earlier: are you vaccinated or not? Then we could have reacted much earlier.” (G-11)*

The work of the crisis management team was made difficult by not being allowed to ask for the 3G status, although the same interview participant mentioned potential difficulties such as growing discrepancies inside the company after the legal regulation applied (G-09). Nevertheless, the measures could be used in a targeted approach, meaning a better estimation of the in-company infection situation and thus specific persons could be protected (G-09):

*“Instead of asking where I have a problem or where I don’t have a problem, I ask: where do I have people that I need to protect - how can I evaluate the infection risk? And right now, I have no clue - I’m also not allowed to ask - I have to apply one measure for all, and maybe I’d like to do it more precisely, but I can’t, because legally my hands are tied.” (G-09)*

In general, the interview partners who mentioned the current implementation evaluated the regulation positively (E-10, G-09, G-11).

Building up a parallel digital infrastructure in order to contribute to the national monitoring of vaccination rates as well as handling the analog data was described as challenging by one participant (G-09).

### **3.4.3 Vaccinated vs. non-vaccinated**

The subcategory “vaccinated vs. non-vaccinated” describes the existing gap between vaccinated and non-vaccinated employees as well as measures adopted to counteract this gap.

The general atmosphere was described as a kind of pandemic fatigue (G-11) with short-term decision-making (E-10). As new variants emerged, the effectiveness of the vaccine was in question, and one interview partner feared a new lockdown after a lockdown for non-vaccinated persons had already been introduced (E-10):

*“Until Christmas, we will all be in lockdown.” (E-10)*

Two participants of an interview (G-09) addressed the upcoming gap between vaccinated and non-vaccinated persons. Those who were vaccinated due to their social responsibilities may become more annoyed with non-vaccinated persons in the context of social restrictions (G-09). The gap might have even become bigger when the 3G regulation came into force (G-09).

When state compensation for quarantine was stopped for non-vaccinated employees, a measure one of the companies applied in order to keep the gap as small as possible was continued pay in case of quarantine for all employees regardless of their field of work (G-09):

*“And in that way, we would have intensified the gap in some way that is really radical. And then we said: no, we don’t support that, and we’ll pay for all.” (G-09)*

Another interview partner mentioned they halt discussions of the staff about non-vaccinated persons on the workplace (G-11).

## **4 Discussion**

This qualitative study explored the experiences and attitudes of experts from crisis management teams regarding the organization of in-company COVID-19 vaccination campaigns as part of tackling the challenges related to the COVID-19 pandemic on the company level. Five interviews were conducted with seven key actors of large companies. The results showed that many resources were needed for the vaccination campaigns. The experts reported with pride on their successful vaccination campaigns, which was also demonstrated by high vaccination rates (Preiser et al., 2022a). Overall, the workplace proved to be an adequate setting for the implementation of vaccination programs and thus should be considered for general health services as well as for vaccination programs in future pandemics.

### **4.1 Discussion of findings**

In order to answer the research question on the experiences and attitudes reported by experts from crisis management teams about the in-company vaccination campaign in their companies, I first discuss the crisis management organization of the respective companies and compare it with recommendations given in literature. Then, I outline general measures in the companies that came along with the pandemic. Thus, I outline the situation on which the COVID-19 vaccination campaign was built by demonstrating the pandemic-related changes, in particular the operational measures taken. This is followed by a discussion of the experiences and attitudes of the interview partners during the in-company vaccination campaign.

#### ***4.1.1 Crisis management in companies during COVID-19 pandemic***

Vaccination campaigns were basically planned by the crisis management teams. With leaders of different departments, the composition of the teams resembled one another. As in the literature proposed, representatives of the core area of the company, of the concerned business domain, and the unit that immediately responds to the crisis, belong to the crisis management team (Hofinger & Heimann, 2022, p. 101). Hofinger and Heimann (2022, p. 101)

report on escalation units regarding the location, national and international level as mentioned by one interview partner. Overall, this resembles a federal structure, similar to the national organization (Bundesregierung, 2020c). Another interview partner mentioned that they had to reduce the number of members of the team and thus built a core and an extended crisis management team. This approach is recommended by German national institutions (Bundesamt für Verfassungsschutz & Bundesamt für Sicherheit in der Informationstechnik, 2016). Tay et al. (2021) recommend reconfiguring the leadership team to build a smaller leadership core group and specialized domain groups. In general, the structure of the crisis management teams worked well according to the interviewees.

Although the composition of the crisis management teams resembled one another, the different approaches described by the interview partners reflect that there is no regulation in regard to building a crisis management team. This finding matches with the results of a study of Klinger et al. (2022), who describe how “response teams in healthcare facilities and public administration differ primarily with regard to their competencies”. Furthermore, Klinger et al. (2022) state that in Germany there are no official predetermined regulations for crisis management teams.

In contrast to our findings regarding large companies, Fasth et al. (2021) found that in small-sized and medium-sized companies in Sweden during the COVID-19 pandemic, the “vast majority of companies did not use any form of crisis group”. Furthermore, a crisis plan was missing in 70% of the surveyed small and medium-sized companies, and in some companies, decision-making was a process of following “a gut feeling” (Fasth et al., 2021).

The preparedness of the companies in the present study varied. Most companies were prepared for a wide range of scenarios, depending on their field of operation and experience. Although one interview partner mentioned that they were prepared for a pandemic, none of the preexisting pandemic plans prepared the companies for an emergency of the extend of the COVID-19 pandemic. In general, the extend and duration of the pandemic were perceived as unpredictable and thus distinguishes the COVID-19 pandemic from past

scenarios (Thielsch et al., 2021).

During the swine flu pandemic, recommendations regarding occupational safety were rated by medical professions as overblown (Krause et al., 2010), but pandemic plans were in general rated as useful. These experiences do not correspond with the experiences of the interview partners in our study, as pandemic plans were partly lacking and occupational safety measures were implemented with great caution.

#### **4.1.2 General measures and initial position (Operational measures taken)**

Before the start of the vaccination campaign, the focus was on stopping the spread of infections by contact restrictions, following the legislation at that time (Corona-ArbSchV). The possibility of working from home was therefore enabled in a short period for every person who did not have to work on site. Production line workers had to use face masks and abide by the AHA<sup>3</sup> rules. Different equipment was installed on-site, such as air filters and special key boards, and even different shift models were introduced. For further information regarding the pandemic, the interviewees mentioned counselling centers and internal hotlines, resembling the efforts made by other institutions (Tolksdorf et al., 2021b). On the basis of the mentioned conditions, workplace vaccinations were organized by crisis management teams.

#### **4.1.3 COVID-19 vaccinations at work**

In order to cope with the pandemic, the companies wanted an active part in the vaccination campaign. It is notable that the interview partners described the participation in the pilot COVID-19 workplace vaccination program of the federal state of Baden-Württemberg with pride. Not only did the interviewees commend the effort of the companies to be part of the pilot project, but the interviewees also perceived the companies' willingness to support the families, the region, and small-sized companies as outstanding. It can be assumed that a good reputation was necessary to be chosen to be part of the pilot project. Moreover, conducting COVID-19 vaccinations and thus contributing to the national

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<sup>3</sup> Abbreviation for: Keep distance, follow hygiene regulations, wear masks (German: *Abstand halten, Hygieneregeln einhalten, Alltagsmasken tragen*)

approach in coping with the pandemic could be beneficial for their future reputation. The size and reputation of the companies in particular made it possible to be part of the pilot project. Eventually, all crisis management teams were dependent on contacts with political stakeholders. This dependency reflects not only the proximity between the economy and politics (Plasa, 2023), but also the dependence of political decisions on crisis management (Thielsch et al., 2021).

While the companies requested to be allowed to vaccinate beyond their employees and thus include family members, the shortage of vaccines (Arbeitsgemeinschaft der Wissenschaftlichen Medizinischen Fachgesellschaften, 2021) affected their plans. The interview partners reported on disappointment towards and loss of trust in politics. Not only was the unreliable procurement of vaccines by the federal states and the subsequent vague communication perceived as a barrier, but the uncertainty of the pandemic in general and the organization of the internal vaccination procedure also made the implementation of the pilot project difficult.

These findings are consistent with experiences during the implementation of the national vaccination campaign. Meyer et al. (2022) reported on experiences and perspectives from the point of view of the Association of Statutory Health Insurance Physicians Westfalen-Lippe (KVWL). As some of the major problems during the vaccination campaign, they identified an “unsteady availability of vaccines” (Meyer et al., 2022) and a “frequent lack of transparency and comprehensible communication” (Meyer et al., 2022) in regard to the prioritization. Lack of vaccine doses was later criticized by various corporations, such as DGAUM (Deutsche Gesellschaft für Arbeitsmedizin und Umweltmedizin [German Society of Occupational and Environmental Medicine]) (Ärztezeitung, 2021b) and the chairperson of the BDI (Berufsverband Deutscher Internisten e.V. [Association of German medical doctors with specialization in internal medicine]) representative for resident doctors (Ärztezeitung, 2021a).

Our data furthermore shows that companies were left on their own with the organization of their internal vaccination campaign, and significant logistical challenges had to be overcome. This finding matches with the experiences

during the first phase of the pandemic, when crisis management teams had to organize, implement, and adjust pandemic measures according to the respective workplaces (Preiser et al., 2022b).

Although there was uncertainty about vaccine supply, the companies rapidly built vaccination lines. For further implementation of the vaccination procedure, they had to provide specialized personnel and consider an appropriate strategy for appointment allocation. The companies of the interviewees already had an established occupational health services structure. For the pilot COVID-19 workplace vaccination program, additional resources had to be mobilized, such as staff and syringes. Even before the pilot project, one of the main tasks of the crisis management teams was the procurement and distribution of resources. Our findings are therefore similar to those of Klinger et al. (2022), who mention the “provision of information and the procurement and distribution of resources” as main tasks of crisis management teams. While staff and syringes had to be acquired for the pilot project, personal protective equipment such as gloves, masks, and air filters were identified by the interviewees as equipment that had to be provided during the pandemic when vaccine was not yet available.

The interview partners mentioned internal actors, such as secretaries and assistants, but also mentioned the dependence on external supporters, such as nurses, retired medical doctors and aid organizations. The structure and procedure resembled national COVID-19 vaccination centers (Deutsches Ärzteblatt, 2021b). Prior experience gained during the pandemic was beneficial, as was existing structures such as in-company COVID-19 testing centers that could be used to build in-company COVID-19 vaccination centers.

From our data, we can derive that production-line workers were clearly prioritized during the start of the vaccinations. This was for economic reasons, but the interview partners also mentioned a justification in that employees of the production line had only a limited possibility to keep their distance, unlike employees working from home (Ertel et al., 2022; Faghri et al., 2021).

When crisis management teams were facing the difficulties of keeping their staff motivated to adhere to infection control measures during the first phase of the pandemic (Preiser et al., 2022b), a kind of “vaccination hype” erupted when

COVID-19 vaccines became available. The interview partners noted high vaccination rates and positive feedback for the vaccination procedure. In general, the interview partners showed pride and were content with their achievements, as measured by their in-company vaccination rates compared to the average vaccination rates in the German population (Preiser et al., 2022a). This finding corresponds with the findings of Diehl et al. (2021), who studied influenza vaccinations in an occupational setting. Their study showed that the implementation of specific vaccination programs can increase the motivation of the employees to be vaccinated and that organization, information, and education played an essential role in the vaccination (Diehl et al., 2021). Furthermore, Diehl et al. (2021) found that spatial proximity and compatibility with workplace are beneficial for the success of an occupational vaccination campaigns. As the vaccination lines of the companies in our study were built in office buildings and elsewhere on the companies' sites, it can be surmised that spatial proximity was also beneficial in the pilot project.

Similarly, the interview partners mentioned lower acceptance of the vaccinations by production-line workers. This corresponds with the findings of Beale et al. (2022), who found that vaccination uptake differed between the occupations. Staff with high vulnerability and high exposure had a lower vaccine uptake than staff with low exposure and low risk of infection (Beale et al., 2022). Beale et al. (2022) therefore warned about worsening occupational and socioeconomic inequalities in infection outcomes, which we also found in our data. As one of the interviewees related different educational backgrounds with a lower acceptance of vaccines, Bosle et al. (2022) found that people with a lower educational level report on lower levels of health literacy concerning the COVID-19 vaccinations.

Moreover, the general attitude toward occupational safety and health measures seemed to be more positive among "remotely working office employees in comparison to on-site working office employees and assembly line/manufacturing employees" (Soeder et al., 2022). Thus, Soeder et al. (2022) conclude that key parameters influencing a positive attitude toward occupational safety and health (OSH) measures with regard to COVID-19 include provision

of information about infection risks and affective risk perception. In our study, only one interview partner mentioned the provision of information about the vaccination campaign through their regular employee interviews. In contrast, consultation centers and 24-hour hotlines giving general information about the pandemic were mentioned beforehand.

In-company vaccination campaigns from the perspective of occupational health professionals was investigated by Wagner et al. (2023). Their findings were similar to our findings in that vaccinations were easily accessible and flexible and thus resulted in an increased willingness among the personnel to be vaccinated (Wagner et al., 2023). Furthermore, the researchers emphasize the relationship of the occupational medical personnel and the staff as beneficial to the campaign. Disadvantages identified by Wagner et al. (2023), such as high costs and an increased workload, are in line with our findings of companies being left alone with the organization of in-company vaccinations.

While La Vecchia et al. (2022) concluded that “occupational physicians played a relevant role in management of COVID-19” in overcoming vaccination hesitancy, we can add that proper organization in vaccination programs by crisis management teams strengthened occupational physicians’ role as the third pillar in the German national vaccination campaign.

From our study, it can be assumed that companies represent an appropriate setting for public immunization campaigns, as they can reach a wide range of population groups and offers an “quick an easy access to vaccinations.” (Preiser et al., 2022a).

In regard to booster vaccinations, our data show some adjustments with regard to the campaign ensuring first and second vaccinations. In general, organization was regarded as pragmatic. Production-line workers were still prioritized, but outage concepts in case of adverse effects due to the vaccinations were neglected. While some companies reopened their vaccination lines, other companies provided booster vaccinations during the standard consultation hours of their company doctors.

Points of criticism during the swine flu pandemic (Krause et al., 2010) were similar to those our interview partners mentioned. In particular, the shortage of

vaccines and supply of vaccines at the political level were regarded as negative. Furthermore, ineffective use of vials was rated as negative in both cases (Krause et al., 2010). Despite the critical reviews on the organization of vaccinations, the vaccination statistics differ significantly. While only 7,5% of the general population (Krause et al., 2010) were vaccinated against the swine flu, 75% (status as of 17 February 2022) (Bundesministerium für Gesundheit, 2023) of the general population received the COVID-19 vaccine, and even a higher number was reported by our interview partners. This difference might be due to the level of severity, as the swine flu pandemic was less severe than the COVID-19 pandemic. Moreover, the higher uptake within the workplace vaccination program reflects the workplace as an appropriate third pillar for implementation of a vaccination program, as it reaches different population groups and might even reach persons not initially willing to have the vaccination. Although this study has shown that the workplace is a suitable setting for carrying out vaccinations and thus promoting the public vaccination campaign, before the COVID-19 pandemic companies in Germany did not support the implementation of general health services in the company (Siegel et al., 2021).

#### **4.1.4 3G at the workplace**

From November 2021, it was obligatory for employers to capture the 3G status of their personnel (Gesetz zur Änderung des Infektionsschutzgesetzes und weiterer Gesetze anlässlich der Aufhebung der Feststellung der epidemischen Lage von nationaler Tragweite). In general, implementation of the 3G rule worked well, although the interviewees mentioned fake tests, which was also a topic in media reports (Tagesspiegel, 2021), and their possible consequences. The regulation was evaluated by the interviewees as positive, as it was easier to estimate the infection control of the staff. Some interviewees mention that applying the regulation earlier would have eased the crisis management work. In the general population, a gap between vaccinated and non-vaccinated persons began to emerge (Henkel et al., 2023), and the interviewees mention concerns about this inequality in their companies. As a consequence, they did not make use of strict penalties such as suspended payment during quarantine

for non-vaccinated to what they were entitled according to the respective legal regulation.

While recommendations for occupational safety were assessed as overblown by medical professionals during the swine flu pandemic (Krause et al., 2010), our data suggests that employers wanted to realize as much of the infection control measures as possible and maintain specific measures such the opportunity to work from home.

## **4.2 Strength and Limitations**

### **Sample**

Fifteen companies participated in the pilot COVID-19 workplace vaccination program, with the chance to receive a defined number of vaccination doses before occupational health physicians entered the national vaccination campaign. The number of potential participants in the present study was set by the number of companies participating in the pilot project. All fifteen companies were asked to participate in the present study, of which four companies agreed to be interviewed by the study team. Only a small number of employees held an operational position to survey the overall processes of the implementation of the pilot project in the respective company. Thus, the number of interviewees was only seven. With such a small sample, we did not achieve data saturation, and further aspects and variations probably would have been gathered with more interviews. Nevertheless, the main features of experiences made by members of company crisis management teams could be represented due to the specific key roles the interviewees held, including their comprehensive knowledge, experiences, and commitment. Thus, sufficient information power regarding the five variables that define information power according to Malterud et al. (2016) was achieved.

As the variables that define information power, the following aspects are evaluated: (a) the aim of the study, (b) sample specificity, (c) use of established theory, (d) quality of dialogue, and (e) analysis strategy (Malterud et al., 2016). Although the variable of the analysis strategy is not sufficiently represented, we

perceived the density of information given by the operational leaders as high and conclude that the key findings would not have fundamentally changed with a higher number of interviewees.

An established theory of the experiences gained during the public COVID-19 vaccination campaign enhances the information power, but there is no specific theory about in-company vaccination campaigns. As C.P., with her long-term experiences in occupational healthcare research, conducted the interviews and the interview partners held expert positions and therefore provided a depth of information, the quality of dialogue can in general be rated as high.

With its explorative approach, the aim of our study is to identify experiences and attitudes in the context of in-company COVID-19 vaccinations. To identify selected patterns that are relevant for our study aim, we used a cross-case analysis. In conclusion, information power according to Malterud et al. (2016) regarding the five variables is given, although the variable of analysis strategy is not sufficiently represented, but keeping in mind that the more specific a dimension is, the fewer cases are needed (Malterud et al., 2016).

As only large companies took part in the pilot COVID-19 workplace vaccination program, we were not able to directly collect data of the implementation of COVID-19 vaccinations in small or medium-sized companies. Moreover, the recruitment of the participants was on a voluntary basis. It might therefore be considered that companies with a relatively successful implementation were more likely to participate in our study, and survivorship bias may apply. As our sample consistently communicated high engagement and motivation, we can assume a positive sample bias.

In contrast, media reports described misadventures when company doctors were officially allowed to vaccinate. According to media reports, of the agreed 800 doses per company doctor, only 102 doses were received (Handelsblatt, 2021). One report about a resident company doctor attending multiple small companies complains about self-disposing of the doses and difficult public health monitoring due to lack of Wi-Fi possibilities (Ärztezeitung, 2021c). Furthermore, the COVID-19 vaccinations were handled as extra work in

addition to the time in her practice, which differed from the workload of employed company doctors (Ärztezeitung, 2021c).

### **Quality criteria**

The quality criteria named by Kuckartz (2016), are reliability, credibility, dependability, authenticity and intersubjective comprehensibility (Kuckartz, 2016, p. 203). During data collection we met the criteria by fixing the data in video or audio format, obtaining a complete transcription of the interviews, checking all of the transcripts by each researcher, pseudonymization of the data by CP, and writing a post-script of one of the interviews by VL. During the coding process, consensual coding (Kuckartz, 2016, p. 211) was used to address intersubjective comprehensibility. Working in a team is an essential methodological quality measure, and we met this criterion by working in our study team and the extended study team. The data was coded and paraphrased by the researchers, and unclear aspects were discussed in the team. The coding frame was discussed in the team. Feedback during the course of analysis was given regularly by the interdisciplinary study team of the main study and of the participants of the “Seminar Versorgungsforschung” at the Medical Faculty of the University of Tübingen.

### **Data generation**

Due to pandemic restrictions and hygiene measures, the interviews were held via video call and one interview via telephone. Although it allows communication while being in different places, telephone interviews lack social clues such as body language (Opdenakker, 2006). The lack of internet connection disturbed the fluency of the interviews and resulted in missing parts of the interviews. Moreover, neither method of communication guarantees a standardized interview ambience (Opdenakker, 2006).

The period in which we gathered the data gave us the opportunity to not only reflect on the initial COVID-19 vaccination campaign, but also to gain insights into booster vaccination campaigns and accompanying adjustments and improvements in the organization process. Thus, the study displays learning effects of the crisis management teams between the pandemic waves. Another strength is the diversity of sectors represented by the companies in the

study. Overall, the study showed that different ways of implementing the same goal resulted in a successful vaccination campaign for all participants.

I got a feeling for the motivation of the interviewees when they were asked about the in-company vaccination campaign not only by what they said, but also by the tone of their voice. It therefore made a difference for me whether I attended an interview or only read the transcripts, as the voice also reflected the interviewees' attitudes.

### ***Qualitative data analysis***

The aim of our explorative study was to gain an overview of and initial insight into the experiences of companies during the course of the pilot COVID-19 workplace vaccination program (Preiser et al., 2022a). The pandemic was a dynamic period and addressed multiple ranges of aspects. We therefore considered the qualitative content analysis method of Kuckartz (2016) as an appropriate method to analyze the data. With its open approach and focused view on the data (Schreier, 2014), we could continually adapt the category system to the interview round and phase of the pandemic. Moreover, with the help of expert interviews, we obtained information from our interview partners regarding their role in the respective companies.

### **General critics of the qualitative content analysis**

One criticism of the qualitative content analysis is that the method is not a qualitative method, as it does not use an entirely inductive approach (Flick, 2007). Furthermore, the data is separated into individual parts, and so the overall picture is lost (Flick, 2007). By its descriptive character (Froggatt, 2001) and low depth of interpretation, the qualitative content analysis is considered to be a superficial method, and it may be preferable to use it only for the reduction and summary of text data (Lamnek, 2005), not for interpretation. Regarding the present study, additional aspects such as the self-conception as stakeholder would have needed a more interpretative method.

### **4.3 Conclusion and Outlook**

The results of this study can be used to improve other in-company vaccination campaigns designed to reduce social disparities that hinder vaccination uptake within general or public vaccination programs. Our findings can be used to increase preparedness for future pandemics. In response to one criticism, namely the delay in authorizing company doctors to administer vaccines, we suggest recruiting occupational health physicians from the beginning in future vaccination campaigns. Furthermore, pandemic plans should be renewed or adapted following the experiences of the COVID-19 pandemic, including planning of an in-company vaccination campaign. Another criticism is the communication between politicians and companies, especially in regard to the promised vaccine doses. In the beginning of a vaccination campaign, resources are low. In a pandemic situation, vaccines can only be purchased by governments, and therefore the market economy is suspended. Thus, we cannot suggest how to obtain a higher number of vaccination doses, but we can point out the need for sufficient communication by politicians, as it preserves trust in politics and can therefore contribute to the course of the pandemic (Enste, 2021).

Our study can serve as an incentive to include specific public health measures in occupational medical services. As 54% of the German population belong to labor force (status as of 2019) (Bundeszentrale für politische Bildung, 2020), a sufficient medical service in the workplace is mandatory. With a medical service in close proximity that can be reached during working hours, company doctors offer a low-threshold medical service. Thus, we can conclude that occupational medical services could be one effective possibility to reach persons that usually avoid medical check-ups.

## 5 Summary

### 5.1 Summary

In December 2019, a novel coronavirus emerged and rapidly spread around the world. One year later, the first vaccine was developed, and vaccination campaigns were launched all over the world. In Germany, immunization centers were built, but the campaign started slowly due to a lack of COVID-19 vaccine doses. In April 2021, general practitioners were allowed to vaccinate against COVID-19, and from 7<sup>th</sup> June 2021, occupational health physicians were included in the vaccination campaign. Due to the ordinance on the entitlement to vaccination against the SARS-CoV-2 (CoronaImpfV), there was a legal obligation for companies to contribute to the nationwide vaccination campaign either by organizing in-company vaccinations or by releasing their employees to receive their vaccination.

This study is part of a large explorative mixed-method study consisting of different modules. The present study is part of a qualitative module exploring in-company COVID-19 vaccination campaigns carried up within a pilot project. Seven stakeholders of five companies that organized in-company vaccinations were interviewed. The aim of this study was to explore the experiences and attitudes of crisis management teams in large-sized companies on in-company vaccination in the context of the COVID-19 pandemic.

Five guided interviews with experts were held between November 2021 and January 2022 by an experienced research assistant. Due to pandemic restrictions, they were conducted via video calls, and one interview via telephone. After informed consent was given, the interviews were digitally recorded, transcribed, and pseudonymized. The analysis method was the qualitative content analysis according to Kuckartz (2016). In a deductive approach, first the category system developed in the analysis of interviews previously conducted in the explorative mixed-method study was applied to the transcripts. Second, in an inductive approach, new categories and subcategories were built.

In general, the participating companies evaluated their implementation as successful. By a low-threshold offer to the vaccination program, different

population groups could be reached.

Nevertheless, the criticisms mentioned were similar to those made during the swine flu pandemic in 2009/2010. Criticisms included lack of vaccines, lack of sufficient communication by politicians, and late authorization of occupational health physicians to vaccinate against COVID-19.

Based on the findings from the point of view of company crisis management teams on the pilot COVID-19 workplace vaccination program, the present study has shown that the workplace is a suitable setting for carrying out vaccinations and thus promoting the public vaccination campaign.

The findings of our study can be used for the preparation for future pandemics and to implement public health services in occupational health services for employees.

## **5.2 Summary in German**

Im Dezember des Jahres 2019 wurde ein neues Coronavirus entdeckt und verbreitete sich rasch weltweit. Bereits ein Jahr später konnte der erste Impfstoff entwickelt werden und weltweit starteten Impfkampagnen. Auch in Deutschland wurden Impfzentren errichtet, jedoch begann die Kampagne aufgrund eines Mangels an Impfdosen nur schleppend. Im April 2021 wurden Hausärzte in die nationale COVID-19 Impfkampagne einbezogen und ab dem 7. Juni 2021 sollten auch Arbeitsmediziner gegen COVID-19 impfen. Durch die Corona-Impfverordnung (CoronaImpfV) waren Unternehmen dazu verpflichtet, zur bundesweiten Impfkampagne beizutragen, entweder indem sie innerbetriebliche Impfungen anboten oder die Mitarbeitenden zur Impfung von der Arbeit freistellten.

Die vorliegende Studie ist Teil eines qualitativen Moduls, das betriebliche COVID-19 Impfkampagnen im Rahmen eines Pilotprojektes untersucht und wurde eingebettet in eine große explorative Mixed-Method-Studie, in der quantitative und qualitative Module bearbeitet wurden. Es wurden sieben Führungskräfte aus fünf verschiedenen Unternehmen, die Schutzimpfungen gegen COVID-19 organisierten, befragt. Ziel dieser Studie war es

herauszufinden, welche Erfahrungen Krisenstabsmitglieder in großen Unternehmen hinsichtlich der innerbetrieblichen Impfkampagne während der COVID-19 Pandemie machten.

Zwischen November 2021 und Januar 2022 wurden fünf leitfadengestützte Experteninterviews von einer erfahrenen Wissenschaftlerin durchgeführt. Aufgrund der pandemischen Lage wurden die Interviews per Videotelefonie und ein Interview per Telefon durchgeführt. Nach Einholen einer Einverständniserklärung wurde der Ton der Interviews digital aufgezeichnet, transkribiert und pseudonymisiert. Die Analyse erfolgte mittels qualitativer Inhaltsanalyse nach Kuckartz (2016). In einem deduktiven Ansatz wurde das Kategoriensystem der Interviews der Hauptstudie auf die Transkripte der Pilotstudie angewendet. In einem induktiven Ansatz wurden neue Kategorien und Subkategorien gebildet.

Insgesamt bewerteten die teilnehmenden Unternehmen ihre Umsetzung als größtenteils erfolgreich. Durch ein niederschwelliges Angebot konnten unterschiedliche Bevölkerungsgruppen erreicht werden. Die geäußerten Kritikpunkte ähnelten den Erfahrungen die während der H1N1-Pandemie in den Jahren 2009 und 2010 gemacht wurden. Kritikpunkte umfassten den Mangel an Impfstoffen, eine unzureichende Kommunikation seitens der Politik und die späte Einbeziehung der Betriebsärzte in die Impfkampagne.

Basierend auf den Erkenntnissen der teilnehmenden Krisenmanagement Teams hat die Pilotstudie gezeigt, dass der Arbeitsplatz ein geeigneter Ort für die Durchführung von Impfungen ist und somit die öffentliche Impfkampagne fördern kann. Die Ergebnisse unserer Studie können zur Vorbereitung auf zukünftige Pandemien genutzt werden und dazu beitragen, die Implementierung öffentlicher Gesundheitsdienste in die arbeitsmedizinische Betreuung von Beschäftigten zu fördern.

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## 7 Declaration of own contribution

Die vorliegende Arbeit wurde am Institut für Arbeitsmedizin, Sozialmedizin und Versorgungsforschung unter Betreuung von Frau Prof. Dr. med. Rieger durchgeführt. Weitere Ansprechpartnerinnen waren für mich Frau Dr. Esther Rind und Frau Dr. Christine Preiser, beide wissenschaftliche Mitarbeiterinnen am Institut für Arbeitsmedizin, Sozialmedizin und Versorgungsforschung, Universitätsklinikum Tübingen.

Das Studienprotokoll für das gesamte Forschungsprojekt und damit für die vorliegende Studie wurde durch Dr. Esther Rind, Klaus Kimpel, Dr. Christine Preiser, Dr. Falko Papenfuss, Dr. Anke Wagner, Karina Alsyte, Dr. Achim Siegel, Antje Klink, PD Dr. Benjamin Steinhilber, Johanna Kauderer und Frau Prof. Dr. med. Monika A. Rieger erstellt.

Die Rekrutierung der Teilnehmenden für die vorliegende Studie erfolgte durch Dr. Esther Rind, Studienleitung des gesamten Forschungsprojektes.

Die Interviews wurden geführt durch Dr. Christine Preiser, wobei ich an einem Interview teilnahm und zu diesem ein Gedächtnisprotokoll schrieb. Die Transkription der Interviews erfolgte durch die Firma amanu GmbH Stuttgart. Die Pseudonymisierung wurde durchgeführt von Dr. Christine Preiser.

Ausgehend von einem im Rahmen der Gesamtstudie von Frau Dr. Christine Preiser entwickelten Kategoriensystems wurde das Kategoriensystem der vorliegenden Studie durch Eylem Ög, Ourania Amperidou und mich in regelmäßiger Rücksprache mit Dr. Christine Preiser entwickelt. Zudem erfolgten Rücksprachen in regelmäßigen Treffen mit dem Team der gesamten Studie (Prof. Dr. med. Rieger, Dr. Esther Rind, Dr. Anke Wagner, Anna Ehmann, Jolanda Gibilaro, Kamil Keles, Michael Brosi, Jana Soeder).

Die Analyse der Transkripte der vorliegenden Studie erfolgte durch Ourania Amperidou und mich unter der Verwendung der Software MAXQDA10 (VERBI GmbH, Berlin). Rücksprache während der Analyse der Transkripte wurde mit Dr. Christine Preiser gehalten.

Die Analyse der auf diese Art und Weise kodierten Textstellen erfolgte durch mich. Letztlich erfolgte auch die Einbettung der Forschungsergebnisse hinsichtlich der Forschungsfrage und aktuellen wissenschaftlichen Literatur durch mich.

Es erfolgten Korrektur- und Änderungsvorschläge in Bezug auf die Erstellung des Manuskriptes der vorliegenden Dissertationsschrift durch Dr. Christine Preiser und Dr. Esther Rind und abschließend durch Frau Prof. Rieger.

Ich versichere, das Manuskript selbständig verfasst zu haben und keine weiteren als die von mir angegebenen Quellen verwendet zu haben.

Tübingen, den 01.02.2025

## 8 Publications from the present study

Preiser C, Ehmann A, Wagner A, Ög E, Amperidou O, **Linder V**, Söder J, Keles K, Gibilaro J, Brosi M, Rebholz B, Rieger MA, Rind E. Führung in der COVID-19 Pandemie. Erste Ergebnisse aus dem qualitativen Modul einer Mixed Methods Studie. Vortrag im Rahmen der Veranstaltung: Arbeitsmedizin und betriebliche Praxis im Dialog: Forschung und Projekte des Instituts für Arbeitsmedizin, Sozialmedizin und Versorgungsforschung am 06.07.2022. (ohne Abstract)

Preiser C, Ög E, Amperidou O, **Linder V**, Wagner A, Rieger M, Rind E (2022). Navigating challenges of the COVID-19 pandemic in leadership. First results from qualitative interviews with leaders in companies in Germany. GMS – 21. Deutscher Kongress für Versorgungsforschung, Potsdam 05.-07.10.2022, <https://dx.doi.org/10.3205/22dkvf216>

Preiser C, **Linder V**, Amperidou O, Ög E, Keles K, Wagner A, Rieger M, Rind E (2022). Experiences from organizing in-company COVID-19 vaccinations in Baden-Württemberg. A qualitative interview study with experts from crisis management teams. GMS – 21. Deutscher Kongress für Versorgungsforschung, Potsdam 05.-07.10.2022. <https://dx.doi.org/10.3205/22dkvf049>

## 9 Attachment

### 9.1 Interview guideline for interviews with members of companies taking part in the pilot COVID-19 vaccination program

# Leitfaden Pandemiebewältigung Modellbetriebe

Erstellt durch: Christine Preiser, Feedback: Projektteam

#### Einstieg

Begrüßung

Vorstellung der Interviewerin, des Instituts und der Studie

Darstellung des Interviewablaufs, der Datenverarbeitung und des Datenschutzkonzepts

Einholen der Einverständnis (mündlich)

Vorstellung Interviewer:innen

Bitte an die Interviewperson, den Bereich, sich und die eigene Tätigkeit kurz vorzustellen.

#### Gestaltung von Arbeitsbedingungen im Zuge der COVID-19 Pandemie

**Die Pandemie dauert ja nun schon 1,5 Jahre an, d.h. wir sprechen über einen relativ langen Zeitraum in dem viel passiert ist. Wenn wir mal ganz an den Anfang zurückgehen: Wie ging es denn bei Ihnen im Betrieb los?**

- Wann war für Sie der Stichtag?
- Wie wurde der Krisenstab etabliert?
- Gab es das Szenario „Pandemie“ bei Ihnen schon in der Schublade?
- Was war Ihre Rolle in dem Prozess?
- Was waren für Sie als die größte Herausforderung bei der Gestaltung von Arbeitsbedingungen im Rahmen der Pandemie?
- Welche Maßnahmen haben sich bewährt?
- Wie ging es dann weiter? Was waren wichtige Wendepunkte?
- Klar, das Forschungsprojekt beschäftigt sich mit Corona und entsprechend stelle ich ganz viele Fragen zu Corona...welchen Raum nimmt das Thema aber tatsächlich aktuell in Ihrer Arbeit ein?

#### Modellaktion „Impfen im Betrieb“

**Ich würde nun gerne auf die Modell-Aktion „Impfen im Betrieb“ zu sprechen kommen. Wie kam es dazu, dass Ihr Betrieb Teil der Modell-Aktion geworden ist?**

- Was gab es dann im Vorfeld der Modellaktion zu organisieren?
- Wie hat der Krisenstab das Ganze während der Modellaktion begleitet?
- Was musste alles bedacht werden?
- Auf welche Unterstützung konnten Sie zurückgreifen?
- Welche Lerneffekte gibt es aus der Modellaktion?

### **Arbeitsbedingte Belastungen in der COVID-19 Pandemie**

**Wie haben sich arbeitsbedingte Belastungen im Kontext der COVID-19-Pandemie verändert?**

- Was sind so die Themen, die von Ihren Mitarbeitenden an Sie herangetragen werden?
- Wie war und ist die Stimmung bei Ihren Leuten? (Neid, Entzauberung Home Office, ...)
- Und wo haben Sie so bei sich selbst die größten Arbeitsbelastungen gespürt?
- Mit welchen Veränderungen hatten Sie (nicht) gerechnet?

### **Erfahrungen mit COVID-19 Fällen im Arbeitskontext**

**Wie war das dann als es konkrete COVID-19 Fälle bei Ihnen im Betrieb gab?**

- Wie hat die Theorie dann in der Praxis geklappt?
- Was hat das auch nochmals für die Einhaltung der Maßnahmen am Arbeitsplatz bedeutet?
- Haben Sie Erfahrungen mit Wiedereingliederung oder Fällen von Long-COVID?
- Es zeichnet sich ab, dass die COVID-19 Pandemie sehr unterschiedlich erlebt wurde. Wo sehen Sie da bei sich im Betrieb besondere Herausforderungen, dieses unterschiedliche Erleben wieder zusammenzubringen? (Übergangsfrage zum Thema Führung)

### **Führung**

**Wir sprechen Sie auch als Führungskraft an: Es heißt immer wieder, dass sich durch die Pandemie auch das Thema Führung verändert. Wie haben Sie das bisher bei sich selbst erlebt?**

- Was hat sich in der Kommunikation verändert?
- Was waren so die schwierigsten Gespräche, die Sie in letzter Zeit bei der Arbeit geführt haben?
- Welchen Raum nimmt das Thema Führung tatsächlich im Moment in Ihrer Arbeit ein?
- Fühlen Sie sich selbst als Führungskraft gut durch Ihre eigene Führungskraft unterstützt?

- Sie hatten als Führungskraft ja vor der Pandemie sicher schon viel zu tun... was hat sich da durch die Pandemie verändert?
- Wie ist das eigentlich mit neuen Mitarbeitenden?

### Abschluss: Rückblick und Ausblick

- Wenn Sie jetzt zurückblicken, 1,5 Jahre Pandemie: Was ist das Wesentliche, was sich heute im Vergleich zum Beginn der Pandemie verändert hat?
- Was erwarten Sie, wie geht es die nächsten Monate weiter?
- Was sind so Dinge, die durch Corona entstanden sind, und die Sie auch gerne nach der Pandemie beibehalten möchten?

### Wie geht's weiter?

- Datenauswertung
- Transkript erwünscht?

## 9.2 Full category system derived from interviews with members of crisis management teams of companies taking part in the pilot COVID-19 workplace vaccination program

Table 8 Full category system derived from interviews with members of crisis management teams of companies taking part in the pilot COVID-19 workplace vaccination program

<b>Zuständigkeits- und Tätigkeitsbereiche der IP</b>		
<i>Mögliche Kategorien</i>	<i>Definitionen</i>	<i>Ankerbeispiele</i>
<b>Zuständigkeiten der Interviewpartner*innen</b>	Zuständigkeiten der Interviewpartner*innen umfassen alle Arbeitsinhalte und -aufgaben von IP. <ul style="list-style-type: none"> <li>- Welche Aufgaben haben die IP?</li> <li>- Für welche Bereiche sind die IP zuständig?</li> </ul>	<i>„Ich bin Fertigungsmeister in der Fertigung in [Standort 3] hier, am [Standort 3], und bin zuständig für zwei Werkstätten.“ (IP_8.1: 8)</i>  <i>„Oder die Pforten, wir betreiben auch die Pforten, da viele Informationen</i>

		<p><i>aufhängen, für Informationen bereitstehen, wenn es Fragen gibt. Das sind so die Aufgaben. Genau.“</i> (IP_1.1: 27)</p>
<p><b>Spezifika des jeweiligen Tätigkeitsbereichs</b></p> <ul style="list-style-type: none"> <li>- Entwickler</li> <li>- Sicherheit</li> <li>- Fertigung</li> </ul>	<p>Spezifika des jeweiligen Tätigkeitsbereichs beschreibt sowohl die Zuständigkeiten von Mitarbeitenden als auch die berufsspezifische Sicht auf die Pandemie/ Schutzmaßnahmen und die damit einhergehende Grundhaltung.</p>	<p><i>„Es ist natürlich auch, unsere [Mitarbeiter] sind systemrelevante Berufsgruppen, die nehmen es alle ein bisschen genauer. Nicht ein bisschen, wir nehmen es sehr viel genauer. Da sind wir schon sehr strikt unterwegs in der Arbeitswelt.“</i> (IP_1.1: 37)</p> <p><i>„Aber da ist man natürlich als Entwickler irgendwie wahrscheinlich auch mit ein bisschen geeignet, so was zu akzeptieren, dass mit Erkenntniszugewinn die Maßnahmen sich verändern, wegfallen können, verschärft werden und das muss immer an die Lage und an den neuen Kenntnisstand angepasst werden.“</i> (IP_4.1:26)</p>

<b>Beschreibung des jeweiligen Standortes</b>		<i>„Hier am Standort, wir haben [mehrere] Werke.“ (IP_1.1: 69)</i>
<b>Führung unter Pandemiebedingungen</b>		
<b>Mögliche Kategorien</b>	<b>Definitionen</b>	<b>Ankerbeispiele</b>
<b>Führungsverständnis</b>	Führungsverständnis umfasst die Führungsrolle/Führungsstil, Aufgaben, Kompetenzen und Verantwortungen der Führungskraft, sowie die Art und Weise, wie diese Aufgaben erfüllt werden (Führungsstil).	<p><i>„Also ich meine, ob ich jetzt ein Mediziner bin oder nicht, also ich meine, da muss man sich halt ständig auf dem Laufenden halten. Das ist natürlich die Aufgabe von mir als Vorgesetzter, das auch zu tun und diese Änderungen dann auch umzusetzen und den Mitarbeitern auch weiterzugeben.“ (IP_8.1: 40)</i></p> <p><i>„Mein Führungsstil persönlich ist auch, ich bin jemand, ich vertraue meinen Mitarbeitern, wenn ich sage so und so oder wenn wir miteinander sagen, das wollen wir so machen coronatechnisch, dann habe ich das größte Vertrauen in meine Mitarbeiter, dass das</i></p>

		<p><i>Verständnis da ist.“ (IP_1.1: 71)</i></p> <p><i>„Und das war eine Aufgabe, der man sich stellen muss. Und das haben wir als Führungskräfte noch mal sichergestellt, dass zumindest im Beobachtungsumfeld das einheitlich vorgegeben wird. Das wäre, was mir noch so einfällt.“ (IP_4.1: 86)</i></p>
<p><b>Führen auf Distanz</b></p>	<p>In der Kategorie werden Passagen gefasst, in denen die Interviewpartner*innen über die pandemiebedingten Veränderungen von Führung sprechen, vor allem in Bezug auf virtuelle oder reduzierte persönliche Kontakte zwischen und mit den Mitarbeitenden.</p>	<p><i>„Ich bin jetzt jemand, der Führung ... Ich habe ganze Zeitfenster gehabt, wo ich ... also ich habe ja verschiedene Standorte und verschiedene Schichten und muss mal schauen, dass ich mal früher da bin, mal später da bin, mal in einem Standort, mal am anderen Standort, das fällt ja jetzt aktuell alles weg, um einfach persönliche Treffen zu haben, um im Monat jeden Mitarbeiter mal gesehen zu haben. Das</i></p>

		<i>fällt weg. Also das fehlt mir auch [...].“ (E_1.2: 45)</i>
<b>Führungstools</b>	In der Kategorie werden die Bezugnahmen auf Führungswerkzeuge ebenso abgebildet wie die Einschätzung von deren Wirksamkeit.	<i>Wir haben ein Instrument, das nennt sich bei uns Führungswerkstatt. Das ist eigentlich einmal pro Jahr über alle Hierarchieebenen weg, so 150 Leute, die sich treffen, eigentlich in Präsenz immer zwei Tage, wo es darum geht: Wir tauschen uns aus über unsere Führungskultur. Das ist letztes Jahr komplett ausgefallen. Für dieses Jahr planen wir es jetzt im Juni, allerdings rein digital, aber wollen das unbedingt durchziehen, weil wir halt merken, dass dieses Thema, diese Bandbreite die Leute betroffen sind und das Verständnis dafür, dass auch die, die jetzt im Homeoffice mit kleinen Kindern oder auch die im Homeoffice ohne kleine Kinder auch ihre Arbeit machen und dass es alles in Ordnung ist und dass wir irgendwie anders damit umgehen müssen, dieses Verständnis halt in unsere Führungskultur auch hineinzubekommen und uns da weiterzuentwickeln. (E-5.2: 32)</i>
<b>Pandemiebedingte Veränderung von Arbeitsbedingungen</b>		
<i>Mögliche Kategorien</i>	<i>Definitionen</i>	<i>Ankerbeispiele</i>

<p><b>Stichtag</b></p>	<p>Stichtag beschreibt den von den IP erwähnten Tag, an dem „alles los ging“.</p>	<p>„so wenn ich richtig nachdenke, müsste das der 1. März gewesen sein. Da ging es bei uns hier im Werk und (Med?) (00:16:26) und [Sicherheit], also mein Bereich, so richtig los.“ (IP_1.1: 45)</p>
<p><b>Ergriffene betriebliche Maßnahmen</b></p> <ul style="list-style-type: none"> <li>- Zonierungsmaßnahme</li> <li>- Zutritts- und Kontaktbeschränkung</li> <li>- Home-Office</li> <li>- Abstand- und Hygieneregeln</li> <li>- Plexiglasplatten</li> <li>- Online Zusammenarbeit</li> <li>- Pausenorganisation</li> <li>- Bürorumstellung</li> <li>- Bildung von Kleingruppen</li> <li>- Schnelltests und Teststrategien</li> </ul>	<p>Schutzmaßnahmen und Regularien, die im Rahmen der Pandemie im Betrieb eingeführt und/oder installiert worden sind.</p>	<p>„Also für uns hat sich sehr stark verändert, dass die Bewegungsmöglichkeit am Produktionsstandort stark eingeschränkt wurde. Wir haben uns selbst praktisch Zonen auferlegt, in denen sich Mitarbeiter bewegen“ (IP 4.1: 24)</p> <p>„Ja, gut, der persönliche Kontakt ist da, aber es ist natürlich jetzt eine Plexiglasplatte dazwischen. Es gibt keine persönlichen Kontakte oder näheren Kontakte mehr.“ (IP_1.1: 31)</p> <p>„Wir haben Schichtübergaben, werden nur noch mit Einzelpersonen und mit großem Abstand, mit</p>

		<i>Mund-Nasen-Schutz oder online gemacht.“ (IP_1.1: 39)</i>
<b>Zusätzliche Maßnahmen der FK</b>	Selbst ergriffene Maßnahmen von der Führungskraft für den eigenen Zuständigkeitsbereich, die zusätzlich zu den betrieblichen Maßnahmen ergriffen werden.	<i>„Und dann natürlich mache ich Maßnahmen. Ich sage halt dann: O.k., wenn es gar nicht geht, dann muss ich halt eine organisatorische Lösung, dass er einen anderen Arbeitsplatz kriegt, wo er jetzt nicht im Team zusammenarbeiten muss. Oder ich habe auch den einen oder anderen dann halt Urlaub gegeben, weil sie dann praktisch gesagt haben: O.k., sie brauchen jetzt mal zwei, drei Tage frei.“ (IP_8.1: 56)</i>
<b>Herausforderungen</b> - Organisatorische Aufgaben der FK - Diskrepanzen - Fragen zur Bezahlung	Als herausfordernd wahrgenommene Inhalte im Rahmen von pandemiebedingten Veränderungen von Arbeitsbedingungen.	<i>„Aber es war wirklich schwierig, die Mannschaft da gerade am Anfang noch zu motivieren, und ... ich habe auch versucht, dann ...“ (IP_8.1_14)</i>  <i>„weil es ist bis heute nicht jedem klar, wenn ich in einem Risikogebiet war, muss ich in Quarantäne. Wenn mein Chef aber ruft:</i>

<p>- Regelungen für Krankheitspotenzial</p> <p>- Motivation MA</p> <p>- Folgen der ergriffenen Maßnahmen:</p> <ul style="list-style-type: none"> <li>- Missverständnis/Mehrfachwand</li> <li>- Arbeit mit Kopfhörer</li> </ul>		<p><i>Hey, ich brauche dich dringend bei der Arbeit. Und der Mitarbeiter sagt: Nein, ich kann jetzt nicht. Da finde ich, das ist schon die größte Problematik in der Arbeitswelt. Darf ich zur Arbeit kommen oder ist es besser für alle, wenn ich zu Hause bleibe. Und wenn ich zu Hause bleibe, wie ist es dann geregelt. Das ist es eigentlich, ja. Genau, genau.“</i></p> <p>(IP_1.1_71)</p> <p><i>„Wir sehen erste Anzeichen, dass ja die Qualität der Kommunikation ... die ist ja sehr stark abhängig auch von dem Medium. Und wenn man jetzt mal annimmt, bei persönlicher Kommunikation wird man 100 Prozent Verständnis haben, das ist ja auch nicht gegeben, dann hat man bei Skype mit Video vielleicht noch 50 Prozent, bei Skype ohne Video vielleicht noch 25 und bei</i></p>
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		<p><i>schriftlicher Kommunikation vielleicht zehn oder so was und das merken wir langsam, dass wenn das häufig stattfindet, dass wir ja sehr stark jetzt auf diesem reduzierten Verständnisniveau kommunizieren und es dann langfristig zu Missverständnissen kommt und daraus Mehraufwand. Interviewerin: Also dass dann doppelte Arbeit entsteht zum Beispiel? Befragter: Ja, genau. Missverständnis, irgendwie völlig falsch bearbeitet und es dauert lange, bis man das erkennt.“ (IP_4.1: 30-32)</i></p>
<p><b>Auswirkungen auf soziale Beziehungen</b></p>	<p>In der Kategorie werden Passagen gefasst, in denen die Interviewpartner*innen über die (Veränderungen der) sozialen Beziehungen am Arbeitsplatz sprechen, etwa fehlende persönliche Kontakte, angespannte Stimmung,...</p>	<p><i>„Und das ist ... ja, da geht es ganz viel um Missverständnisse, also man redet weniger, man schreibt mehr, man kriegt es in den falschen Hals, es schaukelt sich hoch, weil wieder kein Gespräch. Das sind so die Themen, und auf der anderen Seite</i></p>

		<p><i>passiert natürlich auch ganz häufig so Geschichten durch weniger Absprache im Homeoffice oder auch durch weniger Kollegenkontakt im Betrieb, gibt keine Abstimmung, daher gibt es Doppelarbeit, zwei, drei Menschen sind am Gleichen dran und bemerken das erst zwei Tage später. Das frustriert dann, wenn man eh schon zu viel hat, und dann kriegt man mit: Oh Scheiße, das macht der andere auch, und wir haben uns nicht abgestimmt. Das belastet, nervt und frustriert, und das spüren wir. Und, mei, das geht ja eben auch so.“ (E-3.2: 35)</i></p>
<p><b>Zeitliche Dimension</b></p> <ul style="list-style-type: none"> <li>- Schnelle Entscheidungsfindung vor der Pandemie</li> <li>- Zusammenarbeit</li> <li>- Erste ergriffene</li> </ul>	<p>Alle zeitlichen Aspekte der pandemiebedingten Veränderungen im Betrieb, die unterteilt werden in:</p> <ul style="list-style-type: none"> <li>- Vor der Pandemie</li> <li>- Am Anfang der Pandemie</li> <li>- Gegenwärtige Situation</li> </ul>	<p><i>„[...] vor der Pandemie war ein reger Austausch von Mitarbeitern und wenn es irgendwie ein Thema gibt, irgendeine Maschine läuft nicht, irgendwas hört sich komisch an, dann hat sich eine Gruppe von Leuten</i></p>

<p>Maßnahmen?</p> <ul style="list-style-type: none"> <li>- MA bleiben zu Hause</li> <li>- Psychische Belastung zu Beginn + aktuell wird nicht so ernst genommen</li> <li>- Psychische Belastung, Angst, Druck</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Erwartungen und Hoffnungen für die Zukunft</li> </ul> <p>→ wird parallel/doppelt kodiert</p>	<p><i>getroffen und hat vor Ort begutachtet und konnte dann ganz schnell Entscheidungen treffen.“</i> (IP_4.1: 26)</p>
<p><b>Effekte der Pandemie</b></p>	<p>In dieser Kategorie werden Textstellen gefasst, in denen Führungskräfte einen Blick auf die Veränderungen werfen, die die Pandemie (nicht) überdauern werden. Dabei geht es um Veränderungen, die (abgeschwächt) beibehalten werden sollen und Veränderungen, die rückgängig gemacht werden sollen.</p>	<p><i>„Ich finde das Thema mobiles oder im Homeoffice arbeiten durchaus etwas, was ich beibehalten würde in geringerem Umfang, aber die Flexibilität dann mehr schaffen. Das finde ich positiv. Und auch manche Sitzungen, die ich jetzt mit Stuttgart oder so per Video-Konferenz machen kann, dass es auch so bleibt, dass man nicht für alle möglichen Sitzungen irgendwo hinfahren muss. Das finde ich auch. Es hat sich verändert. Es funktioniert, und gerade, wenn es mehr Info-Themen sind, da ist es auch völlig in Ordnung, wenn das halt so angeboten wird, und dann kann jeder genauso gut daran teilnehmen. Dann muss man nicht alle Mann, alle Mann versammeln.“</i> (E-5.2, Pos. 42)</p>

<p><b>Einarbeitung von neuen Mitarbeiter*innen</b></p>	<p>In der Kategorie werden Textstellen gefasst, in denen die IP über die Anstellung und Einarbeitung von neuen Mitarbeitenden während der Pandemie erzählen.</p>	<p><i>„Versuchen, auf jeden Fall Präsenztage zu organisieren, das heißt, Präsenz ... Spätestens dann, wenn sie kommen, müssen sie ihren Rechner in Empfang nehmen. Da kommen wir nicht dran vorbei, das braucht es ja. Und ... Also ankommen, Rechner in Empfang nehmen, kurze Einweisung und dann hängt es von der Aufgabe ab. Also grundsätzlich kann man hier arbeiten, das kann man gucken. Und in Einzelfällen, wir hatten jetzt eine neue Praktikantin auch bei uns, haben die auch tatsächlich halt dann überwiegend bei uns vor Ort sitzen gehabt. Das geht wirklich ganz gut und ohne Gefährdung, aber mit der Anschlussmöglichkeit zu den erfahreneren Mitstreiterinnen, die dann auch direkt im Dialog erklären oder kurz mal anweisen oder was auch immer konnten. Das war, fand ich, relativ unkompliziert möglich.“ (E-6.2, Pos. 49)</i></p>
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<p><b>Gestaltungsprozess der Arbeitsbedingungen</b></p>		
<p><i>Mögliche Kategorien</i></p>	<p><i>Definitionen</i></p>	<p><i>Ankerbeispiele</i></p>
<p><b>Vorgehen und Planung</b></p>	<p>Vorgehen und Planung beschreiben die Prozesse, die im Vorfeld der Einführung von Maßnahmen und</p>	<p><i>„Oh, ein bisschen umgehört, best practise, ein bisschen ausgemessen und überlegt, was ist mit minimalem Aufwand umsetzbar.“ (IP_4.1: 54)</i></p>

	Regularien stattgefunden haben.	
<b>Entscheidungsträger*innen und involvierte Akteur*innen</b>	Diese Kategorie umfasst alle Akteur*innen, die in die Gestaltungsprozesse (Vorgehen und Planung) von pandemiebedingten Veränderungen von Arbeitsbedingungen involviert worden waren und diejenigen, die es immer noch sind.	<p><i>„Ja, das ist auch ein Thema, da war natürlich der Prozessingenieur mit dabei, der Planer. Und, das war mir sehr wichtig, ich habe natürlich die Mitarbeiter vor Ort mitgenommen, so ein Team, ein Workshop. Ich war mit dabei als Meister, dann ein Schichtführer von mir war mit dabei und fünf Mitarbeiter von den Linien und eben noch der Ingenieur. Und das haben wir dann gemeinsam ja so entworfen. [...]</i></p> <p><i>Es ist mir auch wichtig, gerade in der Situation die Mitarbeiter mit einzubinden, dass sie wirklich ihre Sorgen oder ihre Ängste und ihr Anliegen praktisch mit einbringen können. Ist natürlich auch so, wenn man es ausrollt, dann kommt es immer auch besser bei dem Mitarbeiter an, wenn es heißt: O.k., es</i></p>

		<i>waren Kollegen mit dabei. Und dann ist es nicht nur einfach von oben rüber runtergestülpt, sondern ist gleich ein anderes Standing. Das war mir wichtig.“ (IP_8.1: 32)</i>
<b>Informationsquellen</b>	Informationsquellen beschreiben die im Rahmen der Pandemie für die Informationsbeschaffung genutzten und nutzbaren Quellen, die sich in unternehmensinterne und unternehmensexterne Quellen unterscheiden können.	<i>„Wir konnten uns dann bezüglich der Vorgaben über die Zentralabteilung sehr gut informieren.“ (IP_8.1: 49)</i>  <i>„Das, was vom Robert Koch-Institut kam, war manchmal schärfer oder umfangreicher oder manchmal nicht und wir mussten dann immer so, was ist das Passende und das Richtige für unser Werk. Das war so die Aufgabe.“ (IP_1.1: 69)</i>
<b>Aushandlungsprozesse</b>	Aushandlungsprozesse umfassen diejenigen Prozesse, die während der Planung von Maßnahmen und Arbeitsbedingungen mit den jeweilig involvierten Akteur*innen stattgefunden haben. Es	<i>„Und ich habe ja gesagt, es sind [mehr als 150] Mitarbeiter in der Fertigung. Und der eine sagt halt: O.k., wenn wir so uns organisieren, sind wir effektiver wie anders, und das ist halt dann schon die größte Herausforderung,</i>

	<p>geht konkret um alle Aspekte der Information, Verständigung und Abstimmung mit anderen Kolleg*innen, die im Zusammenhang mit pandemiebedingten Veränderungen stehen, verstanden.</p> <p>→ Entscheidungsziel</p>	<p><i>das jedem Mitarbeiter beizubringen, dass wir das in dem Workshop herausgearbeitet haben und das für uns im ersten Augenblick die optimalste Lösung ist. Und das natürlich jedem, ja, so rüberzubringen, das ist die größte Herausforderung.“</i> (IP 8.1: 44)</p>
<p><b>Lernprozesse in einer dynamischen Situation</b></p> <ul style="list-style-type: none"> <li>- Wandel von Maßnahmen/ Risikogebieten</li> <li>- Kontinuierliche Anpassung</li> <li>- Lernprozesse</li> <li>- Fahren auf Sicht</li> <li>- Entscheidungsfindung bei divergierenden Vorgaben + Adaption/Übersetzung in den lokalen Kontext</li> </ul>	<p>Lernprozesse beschreiben diejenigen Prozesse, bei dem die Führungskräfte und Mitarbeitende durch Erfahrungen im Umgang mit der Pandemie im Betrieb weitere Einsichten und weiteres Verständnis gewinnen und darauf reagieren.</p> <p>Weiter beschreibt die Kategorie den individuellen/ kollektiven Erwerb von Kenntnissen und Fertigkeiten im Rahmen der pandemiebedingten Veränderungen.</p>	<p><i>„Ich glaube aber, dass die Kommunikation da auch vorteilhaft ist, wenn man sehr ehrlich damit umgeht, dass man a) nicht alles weiß und deswegen auch es sein kann, dass man morgen etwas widerruft, was heute für gut befunden wurde oder dass man das korrigiert, dass die Leute auch verstehen, es ist nicht alles absolut und das entwickelt sich.“</i> (IP_4.1: 62)</p> <p><i>„Also es war viel Learning by Doing, aber auch viel Recherche einfach dahinter, wo wir sagen,</i></p>

<ul style="list-style-type: none"> <li>- Anfängliche Unsicherheiten</li> <li>- Learning by Doing</li> <li>- Recherchearbeit</li> <li>- Entscheidungsbefugnis für Regelungen zur Bezahlung und "Quarantäne?" bei Personalabteilung</li> </ul>		<p><i>was passt für uns.“</i> (IP_1.1: 69)</p>
<p><b>Lockerung von Maßnahmen</b></p>	<p>In der Kategorie werden Textstellen gefasst, in denen die Interviewpartner*innen über geplante, angedachte, verworfene oder erfolgte Lockerungen von Maßnahmen sprechen.</p>	<p><i>„Und gelockert haben wir tatsächlich noch gar nichts. Wir halten im Moment alles hoch, gehen aber davon aus, dass wir demnächst in die Lockerungsdiskussion werden einsteigen <u>müssen</u>, auch vor diesem Hintergrund: Genesene und Geimpfte. Müsste es da nicht Themenbereiche geben, wo wir sagen: O.k. Die müssen es nicht mehr machen? Wobei die Kontrolle hier intern, wer nun genesen und geimpft ist, ja nun auch überhaupt nicht funktioniert (lacht). Also mal schauen. Aber das wird sicherlich jetzt demnächst kommen.“</i> (E-5.2, Pos. 16)</p>
<p><b>Resonanz auf die Maßnahmen</b></p>		
<p><i>Mögliche Kategorien</i></p>	<p><i>Definitionen</i></p>	<p><i>Ankerbeispiele</i></p>

<p><b>Einschätzung zu Maßnahmen seitens FK</b></p> <ul style="list-style-type: none"> <li>- Erfolgsversprechende Maßnahmen</li> <li>- Wunsch über weitere/strengere Maßnahmen</li> <li>- Wunsch vor Pandemie</li> <li>- Nicht-erwünschte Maßnahmen</li> <li>- Weiterführung nach Pandemie</li> <li>- Hierarchisierung</li> <li>- Verbesserungsbedarf</li> </ul>	<p>Diese Kategorie beschreibt, wie FK die Schutzmaßnahmen wahrnehmen und hinsichtlich ihrer „Wirkung“ einschätzen – welche Maßnahmen finden sie gut, welche besser/schlechte (hierarchisch), welche wollen sie weiterführen und wo gibt es Verbesserungsbedarf.</p>	<p><i>„Bei uns jetzt ist es so hier in unserem Werk, aktuell ist es so, dass wir noch keine generelle Mundschutzpflicht haben. Also wie gesagt, es gilt immer noch die Vorgabe: Wenn ich einen Abstand von 1,5 Meter nicht einhalten kann, dann Mundschutz tragen. Und ich würde mir wünschen, dass man sagt, o.k., dass wir einen dauerhaften Mundschutz haben, ... also solange ich auf der Arbeit bin. Das wäre noch so eine Maßnahme.“</i> (IP_8.1: 60)</p> <p><i>„Na ja, den meisten Erfolg ist natürlich Tragen des Mundschutzes und jetzt gerade für mich das Umstellen von Meetings auf Skype.“</i> (IP_8.1: 64)</p> <p><i>„Beispiel, an unseren Pforten werden auch Krankmeldungen abgegeben. Und da sind unsere Mitarbeiter ganz</i></p>
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		<p><i>positiv mit umgegangen oder haben das positiv aufgenommen. Endlich bekommen sie ihren Plexiglasschutz gegen alle Viren. Gar nicht so speziell auf Corona. Und die haben sich eigentlich eher gefreut.“ (IP_1.1: 33)</i></p>
<p><b>(Nicht)</b> <b>Einhaltung von</b> <b>Regelungen</b></p>	<p>Diese Kategorie fasst die Illustration von beispielhaften Situationen zur Einhaltung oder Nicht-Einhaltung von ergriffenen Schutzmaßnahmen zusammen.</p>	<p><i>„Zum Beispiel, wir haben ja die Kantine immer so, dass die Mitarbeiter verpflegt wurden, mit größten Sicherheits... oder größten Regularien versucht zu betreiben, und haben zwar die Sitzplätze blockiert, und nach Pausenzeiten auch separiert, die Werkstatt nur immer gemeinsam mit Abstand und dann die nächste. Da wurden dann diese Blockaden demontiert zum Beispiel. [...] Es gab dann schon Hinweise, dass es nicht verstanden wurde, warum wir es machen oder die Sinnhaftigkeit wurde schon infrage gestellt.“ (IP_1.1: 43)</i></p>

<p><b>Akzeptanz der Maßnahme seitens MA</b></p>	<p>Akzeptanz beschreibt, wie die Schutzmaßnahmen von den Mitarbeitenden und Führungskräften wahrgenommen und akzeptiert werden.</p> <p>Wichtig: Akzeptanz bezieht sich auf die Maßnahmen und Mitarbeitertyp bezieht sich auf die Pandemie allgemein</p>	<p><i>„Aber bei [mehreren Tausend] Mitarbeitern muss man keinen, wie soll ich sagen, war von vornherein klar, dass bei einigen Mitarbeitern das Verständnis einfach nicht da ist.“ (IP_1.1: 71)</i></p> <p><i>„Es gibt Vorkommnisse, wo absolutes Unverständnis da ist, aber habe ich jetzt nicht direkt und persönlich mitbekommen.“ (IP_8.1: 43)</i></p> <p><i>„Wir haben hier Hunderte Liter im ganzen Werk verteilt und überall Spender, und es wird den Menschen suggeriert: Ah, ich desinfiziere hier und das passt. Aber ohne Händewaschen nützt es nichts. Wenn man so ein Wissen aufbaut und sich dann die Realität anschaut, dann schüttele ich da ein bisschen den Kopf.“</i></p>
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<p><b>Mitarbeiter*innen typen</b></p> <p>Verschwörungstheoretiker Besorgte MA</p>	<p>Mitarbeitertyp bezieht sich auf die allgemeine Grundhaltung innerhalb der Pandemie und nicht nur in Bezug auf die Maßnahmen.</p> <p>Mögliche Mitarbeitertypen können sein:</p> <ul style="list-style-type: none"> <li>- Verweigerer*innen / Verschwörungstheoretiker*innen</li> <li>- Besorgte und angstvolle Mitarbeitende</li> </ul>	<p>„Ja, ja. ... Also ich sage mal so, die die Ängste haben, die Sensiblen, die sind dann einfach wieder einzuholen, ... denen die Angst zu nehmen, ist oft einfacher, weil da kann man ja irgendwas anbieten, eine Unterstützung, eine Hilfe, irgendeinen Tipp geben. Schwieriger sind die, die eher die Verschwörungstheoretiker sind bei dem Thema, die zu überzeugen: Warum muss ich das tun, warum muss ich die anderen schützen? Ist eher schwieriger, hier auf Akzeptanz zu kommen, wie einen, der Angst hat, zu beruhigen. Das habe ich jetzt auch gemerkt.“ (IP_8.1: 54)</p>
<p><b>Kultur des Vertrauens</b></p>		
<p><i>Mögliche Kategorien</i></p>	<p><i>Definition</i></p>	<p><i>Ankerbeispiele</i></p>
<p><b>Selbstverantwortung von MA</b></p>	<p>Die Kategorie beschreibt das Vertrauen und Hoffnungen der FK, dass MA im Zusammenhang</p>	<p>„Und ich habe ziemlich viele Regeln erklärt und auf die Eigenverantwortung der</p>

	<p>von Schutzmaßnahmen und Regelungen eigenverantwortlich Handeln und richtige Einschätzungen treffen. Darüber hinaus umfasst es auch Handlungsspielräume von Mitarbeitenden innerhalb den vorgegebenen betrieblichen Regelungen.</p>	<p><i>Mitarbeiter gehofft und die Hoffnung bestätigt sich auch, dass sie das schon selber managen können und auch flexibel sind. [...] Ich glaube, es ist besser, wenn man den Menschen dann doch noch eine gewisse Eigenverantwortung und damit aber auch ein bisschen Organisationsgeschick abverlangt.“ (IP_4.1: 58-60)</i></p> <p><i>„Und dann Fieber. Wie kann man Fieber messen? Kann man nicht. Dann haben wir ... und wie können wir den Mitarbeitern dieses vermitteln, dass sie selbst auf sich achten müssen.“ (IP_1.1: 47)</i></p>
<p><b>Umfangreiche Kommunikationskultur</b></p> <ul style="list-style-type: none"> <li>- Videobotschaft vom Betrieb</li> <li>-</li> </ul>	<p>Diese Kategorie beschreibt das Kommunikationsmerkmal des Betriebes gegenüber den MA – wie kommuniziert der Betrieb</p>	<p><i>„Ich glaube aber, dass die Kommunikation da auch vorteilhaft ist, wenn man sehr ehrlich damit umgeht, [...]“ (IP_4.1: 62)</i></p>

	mit den MA im Rahmen der Pandemie	
<b>Kultur der gegenseitigen Aufmerksamkeit</b>	Diese Kategorie beschreibt das gegenseitige Hinweisen auf Regelungen ebenso wie wechselseitiges Vertrauen und gemeinsames Zusammenstehen in der Pandemie.	<i>„Aber wir haben so eine Kultur der gegenseitigen Aufmerksamkeit und man beobachtet sich sozusagen, man kann den anderen auch Feedback geben. Auch wenn es nicht Mitarbeiter sind. Und das wird dann schon aufgenommen und wenn es zwei, drei Mal passiert ist spätestens, funktioniert das dann.[...] Ich habe persönlich zum Beispiel ein paar Auszubildende neulich während des Mittagessens beobachtet, die sehr, sehr eng in so einer Raucherkabine zusammenstanden und habe denen dann ein ... erstmal die Beobachtung weitergegeben und einen Vorschlag gemacht, wo es eine andere Möglichkeit gibt, wo sie mehr Platz haben, wenn das Zusammentreffen in der Pause für sie wichtig ist</i>

		<i>und da auch geraucht werden darf.“ (IP_4.1: 44-50)</i>
<b>Pandemiebedingte Arbeitsbelastungen</b>		
<i>Mögliche Kategorien</i>	<i>Definitionen</i>	<i>Ankerbeispiele</i>
<b>Für FK</b>	<p>Pandemiebedingte Arbeitsbelastungen, die sich für die Führungskräfte ergeben.</p> <p>→ Auch positiv zu verstehen</p>	<p><i>„Also bei Führungskräften hat sich die Belastung gefühlt erhöht, weil es mehr zu organisieren gibt über das tägliche inhaltliche Arbeiten hinaus. In Dinge organisieren, wie welche Mitarbeiter dürfen anwesend sein, welche Regeln sind umzusetzen, welche zusätzlichen Maßnahmen sind zu steuern und zu kontrollieren.“ (IP_4.1: 30)</i></p>
<b>Für MA</b>	<p>Pandemiebedingte Arbeitsbelastungen, die sich für die Führungskräfte ergeben.</p> <p>→ Auch positiv zu verstehen</p>	<p><i>„Und natürlich sind auch ein paar, die sind halt dann auch einfach zu Hause geblieben, weil sie es einfach psychisch nicht mehr gepackt haben, die waren halt dann krank, ja.“ (IP_8.1: 14)</i></p>
<b>Entfallene Belastung</b>	<p>Arbeitsbelastungen, die im Zusammenhang mit der Pandemie entfallen sind.</p>	<p><i>„Ja, und gibt es auch Belastungen, die jetzt entfallen sind durch die Pandemie?“</i></p>

		<i>Befragter: Nein, würde mir jetzt nichts auffallen.“ (IP_4.1: 33-34)</i>
<b>Pandemieunabhängige Arbeitsbelastungen</b>	Arbeitsbelastungen, die unabhängig von der Pandemie erlebt werden.	
<b>Erfahrungen mit COVID-19</b>		
<i>Mögliche Kategorien</i>	<i>Definition</i>	<i>Ankerbeispiele</i>
<b>Infektionsrisiko am Arbeitsplatz</b>	Die Einschätzung des Infektionsrisikos am Arbeitsplatz und für den jeweiligen Tätigkeitsbereich.	<i>„Ja, ... das ist eine teamorientierte Fertigung, das heißt, immer an so einer Linie sind fünf Mitarbeiter. Da ist halt die größte Gefahr, wenn die Mitarbeiter, ja, einfach zusammenstehen. Oft ist es natürlich so, man muss Informationen austauschen. Wie gesagt, das funktioniert nur, wenn man Hand in Hand arbeitet. Und bei Informationsaustauschen, da kommt man sich näher. Und das ist wirklich die größte Gefahr, so ein Team, wenn man vor Ort ist, dass man sich da gegenseitig ansteckt. Darum ist es umso</i>

		<i>wichtiger, wenn man den Abstand nicht einhalten kann, einfach Mundschutz tragen.“ (IP_8.1: 28)</i>
<b>Infektionsrisiko im privaten Umfeld</b>	Die Einschätzung des Infektionsrisikos, das im Zusammenhang mit dem privaten Umfeld gesehen wird.	<i>„Im privaten Umfeld. Also alle Aktivitäten in geschlossenen Räumen mit vielen Personen. Ein persönliches Erlebnis vor 14 Tagen auf einer Beerdigung. Da sind die Mitarbeiter von [Firmenname], ja die waren eindeutig zu unterscheiden, weil sie die ersten waren, die eine Maske getragen haben [...]“ (IP_4.1: 40)</i>
<b>Erfahrungen mit COVID-19</b>	Hier geht es um die berichteten (eigenen) Erfahrungen mit COVID-19, beispielsweise ob es sich eher um Einzelfälle handelt.	<i>„Aber natürlich haben wir schon Fälle, im Werk auch, also wir haben jetzt mittlerweile siebzig positive Fälle, wo man dann schon mitbekommt, von milden bis sehr schweren Verläufen schon auch, also das kriegt man schon vor Augen. Da sieht man schon: O.k., den einen oder anderen kennst du dann auch persönlich dann schon mal und dann hat man da auch schon einen anderen Bezug dazu oder empfindet man es wieder anders, dass doch die Gefahr recht nah ist.“ (E-7.2, Pos. 18)</i>

<b>Relevanz von COVID-19</b>	<p>In der Kategorie werden Textstellen gefasst, in denen Interviewpartner*innen darüber sprechen, welche Relevanz COVID-19 tatsächlich in ihrem Arbeitsalltag (zum Beispiel im Sinne von Arbeitsinhalten) hat.</p>	<p><i>„Es ist schon permanent präsent, aber es ist ein kleiner Anteil. Es ist permanent präsent, weil alles irgendwie speziell ist, aber dass ich mich nun permanent mit Covid beschäftigen würde im Sinne von irgendetwas heranzuschaffen oder zu organisieren: Nein. Das nicht. Das ist auf die halbe Stunde jeden zweiten Tag, und wenn wir dann alle zwei Wochen noch eine Stunde Corona-Impfung machen oder so. Also so in der Größenordnung. Das ist nicht das Hauptgeschäft.“ (E-5.2, Pos. 38)</i></p>
<b>Veränderungen im Krankenstand</b>		
<i>Mögliche Kategorien</i>	<i>Definition</i>	<i>Ankerbeispiele</i>
<b>Keine Veränderung</b>	<p>Es gibt keine pandemiebedingten Veränderungen im Krankenstand.</p>	
<b>Verbesserung im Krankenstand</b>	<p>Es gibt eine Verbesserung im Krankenstand seit der Pandemie.</p>	<p><i>„Und da hat sich ... Also die hat sich eher leicht positiv verbessert. Aber ich würde das nicht als relevant bezeichnen. ... Kann natürlich sein, dass im Homeoffice es jemand leichter fällt, sich nicht krank zu melden und dann trotzdem zu Hause zu arbeiten.“ (IP_4.1: 36-38)</i></p>

<b>Verschlechterung im Krankenstand</b>	Es gibt eine Verschlechterung im Krankenstand seit der Pandemie.	
<b>Wiedereingliederung nach COVID-19</b>	Hierbei handelt es sich um Textstellen, in denen die Wiedereingliederung von COVID-19 Erkrankten thematisiert wird. Ebenfalls beinhaltet die Kategorie Textstellen, in denen darüber gesprochen wird, dass die Rückkehr an den Arbeitsplatz nicht anders als bei anderen Erkrankungen verlief.	<i>„Der Mitarbeiter war auch vier Wochen krank und hat dann die Wiedereingliederung im Homeoffice gemacht. Er ist auch seitdem bis jetzt noch nicht vor Ort gewesen. Also der ist momentan im Dauerhomeoffice. Ich meine, ich habe ein paar Gespräche mit ihm geführt, wie es ihm so geht, und am Anfang war er nicht so stark belastbar. Mittlerweile ist er wieder einigermaßen auf dem Damm.“ (E-8.2, Pos. 28)</i>
<b>Krisenmanagement</b>		
<i>Mögliche Kategorien</i>	<i>Definition</i>	<i>Ankerbeispiele</i>
<b>Zuständigkeits- und Tätigkeitsbereiche</b>	Die Kategorie fasst die Aufgabenbereiche und die Wendepunkte der Arbeit im Krisenmanagement zusammen. Es handelt sich dabei sowohl um Beschreibungen des allgemeinen COVID-19 Krisenmanagements als auch um Beschreibungen der Rolle der	Also gab es da wesentliche Wendepunkte auch dann in der Arbeit im Krisenstab, wenn Sie jetzt so zurückblicken, für Sie? Befragter: Also ein Großteil der Diskussionen, wie ich eben schon gesagt habe, war im Grunde damit verbunden, die business-kritischen Bereiche aufrechtzuerhalten. (...) (E-12)  Was heißt das, also dieses Krisenmanagement? Befragter: Ja, was macht man mit den ersten Fällen, die da detektiert werden, insbesondere, wenn das Personen sind, die da, wie üblich zu der Zeit, als es noch einen unbegrenzten Werkzugang gab, mit welchen Personen haben die Kontakt, bevor jetzt eine Infektion bei

	<p>Interviewpartner*innen im Krisenmanagement.</p> <p>In Abgrenzung zur Kategorie „Gestaltungsprozesse der Arbeitsbedingungen/Vorgängen und Planung“ bezieht sich diese Subkategorie auf alle Vorgänge im Krisenmanagement</p>	<p>ihnen festgestellt worden ist? Jetzt in der Eigenart dieser Infektionen, dass ohne Symptome, dass die über die Luft weitergegeben werden kann, und man sich dann halt überlegt hat: Was ist mit dem Kontaktumfeld der Personen, die jetzt da positiv getestet worden sind oder zuerst war es, glaube ich, eine Person? Was für Maßnahmen müssen wir da jetzt an diesem Arbeitsplatz und im Umfeld ausführen? (00:05:14) Sprich, Desinfektion des Arbeitsbereichs, da darf dann keiner mehr hinein. Wer waren jetzt Kontaktpersonen, die im engen Umfeld dieser Personen sich befunden haben? Wie waren da die Kontaktzeiten? Wie weit geht das? Also wer ist davon betroffen und wer nicht? Und wie stellt man sicher, dass auch zum Zeitpunkt einer Kontamination, was ja noch gar nicht klar war, das heißt, was für Maßnahmen muss ich jetzt ausführen in einem Raum oder einem Bereich, in dem sich eine infizierte Person aufgehalten hat? Was muss ich da genau machen? Also wir haben dann, glaube ich, zunächst Leute mit einfacher Schutzkleidung da hineingeschickt. (00:06:14) (...)</p> <p>(E-12)</p> <p>(...) Und dieser große Kreis ... und immer noch ist es so, dass dieser kleine Koordinationskreis Corona, so heißt der, der tagt dreimal die Woche. Montags, mittwochs, freitags und donnerstags wird der große Kreis informiert, was wir erlebt haben immer noch seit fast zwei Jahren, jede Woche ohne Ausnahme, Und was hat das für Ihre Arbeit im Krisenstab bedeutet? Also war die dann vor allem fokussiert auch auf diese Impfkation? Oder blieb die eher so in der Breite? Befragter: Nein, das war eher so das Organisieren und dann das</p>
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		<p>Übergeben in das Operative. Dann haben wir noch eine Rückmeldung nach dem ersten Tag bekommen, es hat geklappt und dann haben wir auch nichts mehr davon gehört. (E-10)</p>
<p><b>Struktur des Krisenmanagements</b></p>	<p>Die Kategorie fasst die verschiedenen Hierarchie-Ebenen des Krisenmanagements zusammen.</p>	<p>Und Sie haben ja gerade gesagt, Sie sind auch beim Krisenstab. Also wie wurde der etabliert?  Befragter: Also es gibt einen Krisenstab und da wurde halt auch, wie soll ich sagen, ein spezieller Krisenstab gebildet für das Thema.  Interviewerin: Und sind da auch die gleichen Personen drin, die auch im regulären Krisenstab sozusagen sind? Oder haben Sie da noch einmal so eine extra Taskforce sozusagen gebildet?  Befragter: Also der Covid-19-Teil ist eine Untergruppe. (E-12)</p> <p>(...)Wir haben ja eine enge Zusammenarbeit auch mit dem Konzernkrisenstab, (...) (G-09)</p> <p>Befragter: Also vielleicht ganz kurz: Wir haben an jedem von unseren vier Standorten in Deutschland bei [Unternehmen] einen Standortkrisenstab. Dieser Standortkrisenstab wird bei allen außergewöhnlichen Ereignissen zusammengerufen. Das sind lauter Führungskräfte des Standortes. In der Regel zwischen fünf und zehn Personen, die sich dann auch den Bereitschaftsdienst und so weiter teilen.</p>

		<p>(Transkript_pseudonymisiert_E_13, Pos. 28)</p> <p>Also kommt es zu einem Ereignis, das mehrere Standorte betrifft, dann wird ein deutschlandweiter Krisenstab gebildet. Dieser deutschlandweite Krisenstab koordiniert dann die Maßnahmen unter diesem oder des jeweiligen Standortes und dem obendrüber liegt dann der weltweite Krisenstab von [Unternehmen]. (Transkript_pseudonymisiert_E_13, Pos....)</p>
<b>Pandemieplan</b>	<p>Darunter fallen alle Textstellen, in denen thematisiert wird, wie das Krisenmanagement auf eine Pandemie (nicht) vorbereitet war, bspw. durch einen Pandemieplan. In Abgrenzung zur Kategorie „Gestaltungsprozesse der Arbeitsbedingungen/Vorgängen und Planung“ bezieht sich diese Subkategorie auf alle</p>	<p>Gab es denn sozusagen schon diesen ... das Szenario Pandemie? Hatten Sie das schon in der Schublade?</p> <p>Befragter: Nein, tatsächlich nicht. Wir hatten uns da, obwohl wir auf viele, viele Dinge eigentlich vorbereitet sind, also wir haben natürlich eine Krisenstabsfunktion und wir haben Krisen schon gemeistert und durchgemacht und üben auch viel usw., aber das ging alles vielmehr in die Richtung, irgendwelche terroristischen Angriffe, Cyberangriffe, Vandalismus oder eben ... also im Prinzip Sabotage so etwas</p>

	<p>Vorgänge im Krisenmanagement</p>	<p>alles. Oder eben ein technischer Ausfall, ein Unfall. Das haben wir alles geübt und in der Schublade, aber über eine Pandemie hatten wir bis zu dem Zeitpunkt tatsächlich noch nichts vorbereitet. (...) (E-10)</p> <p>Sollte es zu einer Pandemie kommen, welche Maßnahmen werden dann potenziell greifen können? Wie sieht es aus, wie können wir unsere interne kritische Infrastruktur aufrechterhalten und solche Themen sind hier vorbereitet worden. Also das heißt, wir waren zum Anfang (überlegt) COVID schon, sage ich mal, sehr gut vorbereitet auf dem Papier, um diese Lage dann auch zu beherrschen. (Transkript_pseudonymisiert_E_13, Pos. )</p>
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**Impfen im Betrieb**

<i>Mögliche Kategorien</i>	<i>Definition</i>	<i>Ankerbeispiele</i>
<p><b>Zugang zur Modellaktion</b></p>	<p>Darunter sind Textstellen gefasst, die sich mit der Phase beschäftigen, in der ausgehandelt wird, dass der Betrieb Teil der Modellaktion wird. Es können folgende Themen darunter fallen: Wie haben die Akteur*innen</p>	<p>Also ich habe mir es extra aufgeschrieben. Ich habe alle politischen, wirtschaftlichen und wissenschaftlichen Hebel gezogen, die mir in den Sinn kamen. Und dann kamen wir an dieses, über politische Kanäle kamen wir an das Thema, Modellprojekt „Betriebsärzte impfen“. Und das hatte noch so einen Zusammenhang mit den</p>

	<p>davon erfahren? Wie wurde Kontakt zur politischen Entscheidungsträger*innen aufgenommen? Wie wurde verhandelt? Was waren wichtige Zeitpunkte im Entscheidungsprozess?</p>	<p>IHKs. Und ich sage einmal so: Ich habe Tag und Nacht telefoniert, Mails geschrieben, gechattet, geemait, geskypet und was es alles gibt (seufzt). (...) Und ich habe da auch mit dem Herrn Lucha [damals zuständiger Minister für Soziales, Gesundheit und Integration des Bundeslandes], gesprochen dem Herrn Lahl [damals zuständiger Amtschef des Ministeriums für Soziales des Bundeslandes], glaube ich, heißt er, vom Gesundheitsministerium, habe gesagt: Hey, ich brauche 10.000 Dosen, ich schiebe euch eine Impfwelle das [Fluss]tal hoch. [Kartierung der Region]. Ich habe gesagt: Ich schiebe euch eine Impfwelle hoch und wieder herunter. Ich brauche 10.000 Dosen. Da hat der Herr Lahl [damals zuständiger Minister für Soziales, Gesundheit und Integration des Bundeslandes] gesagt: Herr [Name des Befragten], ich würde es Ihnen gerne geben (lacht), ich habe sie nicht. Auf jeden Fall haben wir 120 Ampullen Moderna gekriegt. (G-11)</p> <p>Befragter: Also (lacht) Wir als [Unternehmen] sind sehr bekannt am Standort in [Landkreis des Standorts] oder</p>
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		<p>in der Stadt, im Landkreis, im Land Baden-Württemberg. Und der Landrat des Landkreises [des Standorts] hat es sehr unterstützt, dass wir einer dieser Pilotbetriebe werden. So, wie zum Beispiel im Landkreis [in der Nähe] ja [anderer Modellbetrieb] ein Pilotbetrieb wurde oder [weiterer Modellbetrieb] in [Standort des betreffenden Modellbetriebes]. Also es sind einfach ... wir gehören zu den ganz Großen in dem südlichen Baden-Württemberg (Transkript_pseudonymisiert_E_13, Pos. 66)</p>
<p><b>Motivation für die Teilnahme</b></p>	<p>Darunter fallen Themen, in denen deutlich wird, was die Entscheidungsträger*innen für Teilnahme an der Modellaktion motiviert hat. Das deckt verschiedene Bereiche ab:</p> <ul style="list-style-type: none"> <li>• Wettbewerb zwischen Unternehmen</li> <li>• Betrieblicher Beitrag zum Weg aus der Pandemie, bspw. indem möglichst viele Mitarbeitende geimpft werden</li> </ul>	<p><b>Befragte:</b> (...) da ging es nicht nur drum, die [Name Unternehmen]-Belegschaft so schnell wie möglich zu impfen, sondern wirklich auch das über [Name Unternehmen] hinausgehende gesellschaftliche Engagement und die gesellschaftliche Verpflichtung ja nachzukommen. Und deswegen, wir waren im Impfzentrum, haben uns das angeguckt, haben gesagt, wir machen alles mit, wir wollen einfach unterstützen, wir wollen helfen, damit das Ganze möglichst schnell möglichst gut verläuft, und das ist, glaube ich, das, was, ohne jetzt Werbung</p>

	<p>Selbstverständnis und gesamtgesellschaftliches Engagement des Betriebes (wie das Impfen von Familienangehörigen und Mitarbeitende von weiteren Betrieben)</p>	<p>für [Name Unternehmen] machen zu wollen, aber was, glaube ich, echt [Name Unternehmen] in dem Falle auch auszeichnet, dass es nicht nur um den eigenen Vorteil geht, sondern in dem Fall natürlich auch um den Vorteil des Kreises, der Region, des Landes, der Gesellschaft (G-09)</p>
<p><b>Involvierte Akteur*innen</b></p>	<p>Akteur*innen, die unmittelbar in die Organisation und Umsetzung der Impfung involviert sind:</p> <ul style="list-style-type: none"> <li>• Betriebsärzt*innen</li> <li>• Entscheidungsträger*innen und andere relevante Akteur*innen im Betrieb</li> <li>• Externe Akteur*innen wie die Malteser</li> </ul> <p>Unterscheiden ist zwischen Akteur*innen, die die Impfung durchführen, wie die Malteser und Entscheidungsträger*innen.</p>	<p>Interviewerin: Und auf welche Unterstützung konnten Sie da auch zurückgreifen? (00:14:21)  Befragter: Also auf externe nicht. Das mussten wir dann sozusagen ausschwitzen. Irgendwo rausdrücken aus den eigenen Reihen.  Interviewerin: D. h. ...  Befragter: Und der betriebsärztliche Dienst musste natürlich auch auf viele Sachen dann verzichten, die zu dem Zeitpunkt dann eben nicht gingen. Durch die Pandemie ging ja sowieso nicht alles, also irgendwelche nicht notwendigen Untersuchungen waren ja eh alle gestrichen. Also da war schon auch noch Zeit, aber das hat sich schon jeder irgendwie da herausgeschnitten aus seinem eigenen ... (E-10)</p> <p>Wir haben dann auch noch durch das, dass die</p>

		<p>Werksfeuerwehr am Standort [des Interviewpartners] auch den Rettungsdienst fährt, haben wir dann auch noch einen RTW zur Notfallversorgung abgestellt für das Impfzentrum. Dann haben wir die Impfarzte aus der Belegschaft rekrutiert, weil wir haben viele Doktor Meds. (lacht) Und wir haben sehr, sehr viele Apotheker. Also auch da kein Problem, um mit den dementsprechenden Stoffen (Transkript_pseudonymisiert_E_13, Pos. 74)</p>
<p><b>Aufklärung über das Impfangebot</b></p>	<p>Darunter fallen Themen wie zum Beispiel Aufklärung der Mitarbeitenden, Informationswege (Videos, Flyer). Auch der Aspekt des Nicht-Bewerbens fällt darunter. Aushänge und Informationen über das allgemeine Impfzentrum gehören auch zur Unterkategorie.</p>	<p>Von daher haben wir eigentlich ... Wir haben keine größere Werbung gemacht, einfach nur, ja, über Videos <u>geworben</u> für ... im Rahmen unserer normalen Führungs... Mitarbeiterinformation geworben für das Impfen. Aber es war dann schon ein gewisser Hype da, ja. Wir sind, wir sind, (seufzt) ja wie nennt sich das jetzt, Test „Betriebsärzte impfen“, ein Testzentrum. (G-11)</p>

<p><b>Organisation der Impfungen</b></p>	<p>Darunter fallen Prozesse und organisatorische Fragen rund um die Impfung und des Impfzentrums vor dem Beginn und während der Impfkation. Die Einbettung in Arbeitsprozesse, etwa durch das Gutschreiben von Arbeitszeiten, sowie Aspekte der Versorgung mit Impfstoff (z.B. Knappheit) fallen auch darunter.</p> <p>In Abgrenzung zur Kategorie „Gestaltungsprozesse der Arbeitsbedingungen/Vorgängen und Planung“ bezieht sich diese Subkategorie auf alle Vorgänge hinsichtlich des Impfens.</p>	<p>Also wir haben gesagt: Das Impfen ist Arbeitszeit. Die haben gesagt: Ihr könnt zu [Name Unternehmen] fahren und euch dort impfen lassen, da kriegt ihr ein fast, also ganz schnell eine Impfung. Machen wir mit. Aber egal, wer wann wo sich geimpft hat, wer uns eine Impfung zeigt, kriegt vier Stunden, nein, zwei Stunden gutgeschrieben. Wer uns zwei Impfungen zeigt in seinem Impfbuch, kriegt vier Stunden gutgeschrieben. Und ich meine, für einen halben Arbeitstag ... Das war eigentlich jetzt auch noch eine, eine, eine Firma, die hier vor Ort nur Produktion hat. Für einen halben Arbeitstag Urlaub, da sind einige hingegangen und haben gesagt: Hier sind meine zwei Impfbuch. Haben dann ihre vier Stunden gekriegt. (G-11)</p> <p>Und am Ende haben wir dann noch ... haben wir dann natürlich gesagt: O.k., ihr müsst dafür bezahlen. Wir hatten da im Vorfeld auch die Quote gemacht. Wir hatten ungefähr kalkuliert und eine Impfung bei <u>uns</u>, im Gegensatz zu den Impfzentren mit 180 Euro, waren wir knapp unter 40 Euro. Wir konnten ja dann 20 Euro über den Betriebsarzt vom, vom, vom Bund oder von der</p>
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		<p>Kassenärztlichen Vereinigung abholen. Wir haben dann gesagt: Ihr zahlt 22 Euro pro Impfung. Das hat dann die [Name der Befragten] umgeändert, in Rücksprache mit <u>ihrem</u> Chef, nicht. (G-11)</p>
<p><b>Resonanz auf Impfungaktion</b></p>	<p>Darunter fallen Themen wie Aussagen zur Akzeptanz, Aussagen zum Feedback seitens der Mitarbeitenden aber auch die Impfquote als Indikator für den Erfolg der Impfkampagne.</p>	<p>Das war dann das Ergebnis des Impfzentrums und viel Zuspruch und viel Lob unserer Kolleginnen und Kollegen, die natürlich das Angebot genutzt haben, bei, bei uns sich gegen Covid-19 oder das Coronavirus impfen zu lassen und dass sie wirklich das Rundum-Sorglos-Paket bekommen hatten. Also von, von der Aufklärung über die saubere Terminvergabe über die Betreuung während der Impfung über Nachbetreuungen. (G-11)</p> <p>86,7 oder 87,6 Prozent, glaube ich, haben wir, als wir es dann vor ein paar Wochen fragen durften. Eigentlich überwältigend an Ergebnissen. Und das war auch so ... Wir nehmen an, wir waren so ... Wir waren sehr früh daran, wir waren früher daran als die anderen, weil wir quasi Ende Mai schon geimpft haben. Und da haben wir so einen Hype erzeugt, so einen, durch, durch das ganze Unternehmen. Da haben sich einige Leute impfen lassen, die sich vielleicht in so</p>

		einer, so einer Hype-Situation nicht hätten impfen lassen. Aber, <u>ja</u> , wir haben es gut gemacht, nicht. (G-11)
<b>3G am Arbeitsplatz</b>		
<b>Mögliche Kategorien</b>	<b>Definition</b>	<b>Ankerbeispiele</b>
<b>Testen am Arbeitsplatz</b>	Die Kategorie fasst die Institutionen und Akteur*innen, die im Testprozess involviert sind. Die Infrastruktur des Testens am Arbeitsplatz und die Einrichtung des Testzentrums. In Abgrenzung zur Kategorie „Gestaltungsprozesse der Arbeitsbedingungen/Vorgängen und Planung“ bezieht sich diese Subkategorie auf alle Vorgänge hinsichtlich des Testens.	Also wo, wo haben Sie dieses Testzentrum dann auch aufgebaut? <b>Befragter:</b> Wir haben bei uns > <b>Befragte:</b> Im Unternehmen. <b>Befragter:</b> < in einer Produktionshalle, die zu dem Zeitpunkt leer stand, haben wir dieses Testzentrum aufgebaut.(G-11)  <u>Und</u> halt dann auch noch den Deal gemacht mit den Maltesern, das hat auch wunderbar funktioniert. Da haben die Malteser einen Arzt geschickt von <u>ihnen</u> , der uns dann und unsere internen Helfer ausgebildet hat in einer Abendsession, dass wir dann auch Tests abnehmen durften und nach den Maltesern zertifiziert waren. Die Malteser haben uns gestafft, also uns unter die Leute gebracht und so. Also es war, war eigentlich eine berauschende Zeit, ja. In der, ich glaube, ich weiß nicht, ob man es in der Soziologie auch so nennt, aber so in der Wissenschaft nennt man das Flow. Wir waren da in einem Flow darin. <b>Interviewerin:</b> Und wie sind Sie an die Malteser herangekommen in der Zeit? <b>Befragte:</b> Offiziell angefragt.

		<p><b>Befragter:</b> Die Frau unseres Geschäftsführers. Nein, [Name der Befragten], die Frau unseres Geschäftsführers ist bei den Maltesern. Und unser, mein Chef hat mir gesagt: Du, die Malteser haben nichts zu tun. (...) (G-11)</p>
<p><b>(Nicht-) Einhaltung der 3G Regeln</b></p>	<p>Die Kategorie fasst die Illustration von beispielhaften Situationen zur Einhaltung oder Nichteinhaltung der geltenden 3G Regeln zusammen.</p>	<p>Und auf kurze Sicht ist spannend, gut wir haben jetzt, jetzt sehr rigide Maßnahmen für die Ungeimpften. Also es gilt 3G, jeder Ungeimpfte muss – und da musst du mich korrigieren, [Name der Befragten], wenn ich da falsch jetzt etwas sage – der muss <u>unaufgefordert jeden</u> Tag sein Testergebnis des Antigentests seinem Chef vorzeigen. Vernachlässigt er das oder schummelt er, nach zwei Mal kriegt er eine Abmahnung. Abmahnung heißt ja, zwei Ab... die dritte Abmahnung ist dann die automatische Entlassung. Wir sind sehr, sehr &gt;  <b>Befragte:</b> So ist es vorgesehen.  <b>Befragter:</b> &lt; sparsam mit Abmahnungen. Wir sind <u>sehr</u>, <u>sehr</u> sparsam mit Abmahnungen. Also ich kann mich nicht erinnern, dass einer einmal wegen, wegen Abmahnungen hinausgeflogen ist, da das, das Werkzeug, das nutzen wir nicht. Aber da sind dann, ja, ich sage einmal, vielleicht noch einmal, fällt mir gerade ein, rückwirkend, was auch unheimlich wichtig war: Unser Chef, Geschäftsführer hat sich hier seine Sicherheitsschuhe angezogen, ist durch die Produktion, hat die Leute angesprochen persönlich.</p>

		<p>Hat gesagt: Mundschutz hoch, Nase zudecken. Irgendwann hat er gesagt: So. Und jetzt ist es scharf, jetzt werde ich nicht mehr ermahnen, sondern jetzt werde ich abmahnen. Und das hat unheimlich, dieses <u>Nachhalten</u>, dieses Nachhalten der Führungskräfte hat zu einer unheimlichen Disziplin geführt. (G-11)</p>
<b>Datenschutz</b>	<p>Darunter fallen Datenschutzinhalte, die im Zusammenhang mit der 3G Regelung erwähnt werden und das Abfragen des 3G Status und die Rückmeldungen an die jeweiligen involvierten Akteur*innen.</p>	<p><b>Befragte:</b> Ja. Gut. Und wir haben es halt nicht abgefragt, weil wir es einfach nicht durften.  <b>Befragter:</b> Ja.  <b>Befragte:</b> Also wir haben zum Teil sehr kritische Mitarbeitende da, was ja auch wirklich gut ist und legitim, die hinterfragen auch viele Sachen. Sodass man sich selber dann überprüfen kann. Also, wie gesagt, wir haben es nicht überprüft. Der Gesetzgeber hat jetzt die, die Grundlage geschaffen durch 3G am Arbeitsplatz, dass, dass der Arbeitgeber auch verpflichtet ist, das abzufragen. In dem Zuge haben wir es dann jetzt gemacht, damit wir auch entsprechende Maßnahmen einleiten konnten, um 3G zu gewährleisten. (G-11)</p>
<b>Geimpfte vs. Ungeimpfte</b>	<p>Die Kategorie fasst sowohl die bestehende Kluft zwischen Geimpften und Ungeimpften auf als auch die ergriffenen</p>	<p>Vielleicht noch eine Ergänzung. Was wir schon probieren, ist eben, die Kluft nicht zu groß werden zu lassen. Also, wir versuchen es selber abzupuffern. Ein Beispiel: Das Thema Lohnfortzahlung für nicht</p>

	<p>Maßnahmen, wie die Lohnfortzahlung bei Quarantänefall für alle Mitarbeitenden um diese abzapuffern.</p>	<p>Geimpfte würde für uns ja de facto bedeuten, dass ein Mitarbeiter in der Produktion, der muss in Quarantäne und müsste dann unbezahlt quasi sich freistellen lassen, hätte also einen Lohnausfall für die Quarantänezeit, während ein Mitarbeiter aus einem administrativen Bereich, der kann natürlich im Homeoffice ja dann arbeiten und hätte keinen Lohnausfall. Und damit hätten wir diese Kluft ja extremst noch mal verstärkt auf eine Art und Weise, die wirklich einschneidend ist. Und wir haben dann gesagt, nein, das unterstützen wir nicht, und wir zahlen es halt für alle. (G-09)</p>
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