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**Sharing is Caring: Effective Local Crisis Management  
through Practice Sharing**

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# Sharing is Caring: Effective Local Crisis Management through Practice Sharing

A case study from Germany

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Abstract

Local public administrations are often at the forefront of ad hoc crisis response. Recent crises such as the COVID-19 pandemic pose additional constraints on local crisis management through their trans-boundary and long-term character. While previous research stresses the importance of practice switching into crisis mode, this research sheds light on the long-term practice of crisis management. We base our discussion on the triangulation of a systematic large-scale agency-level survey data (n=232) from German municipalities and qualitative interviews (n=28) with local and regional public administrators and experts. Furthermore, we analyze data obtained from a series of participatory workshops involving representatives from direct local crisis management units in North Rhine-West-phalia, Germany. We find that in addition to practice switching, successful local public administration significantly depends on practice sharing: Not only do public administrations have to switch to modes that resemble fast-response organizations; they also have to work with and communicate to fast-re-sponse organizations. As local public crisis management focuses on short-term crises, crisis manage-ment structures also feature actors and knowledge of fast-response organizations. In long-term crises such as COVID-19, however, these rely heavily on the expert knowledge of local agencies. During the pandemic, this became especially apparent in the collaboration of health agencies and fire depart-ments in cross-agency crisis units. This paper identifies new mechanisms of successful long-term cri-sis management in local public administration, which at the same time point to needs for future multi-level governance reform.

I. Introduction

If crises are the 'new normal', then crisis management must evolve accordingly. The surge of trans-boundary crises such as the recent COVID-19 pandemic and climate change impacts demonstrate the need for public administrations to adjust their crisis management toward long-term resilient crisis re-sponse. Municipalities, commonly at the front line when adversity hits, have a crucial role in this pro-cess as they are closest to local needs and oftentimes directly responsible for immediate crisis re-sponse (Nilsson, 2010). The COVID-19 pandemic has underscored this importance as many local gov-ernments were in charge of distributing and administering vaccines, tracking infections as well as im-plementing and monitoring federal or state-level measures. Contrary to local and short-term crisis events such as accidents or fires, a transboundary crisis like COVID-19 requires the integration of fast-response capabilities usually found, for instance, in fire departments with long-term support structures by the broader public administration (Kuhlmann and Franzke, 2022). This crisis, however, has revealed both a lack of knowledge and experience regarding long-term crisis management at the local level and considerable challenges in existing municipal crisis management arrangements.

The former becomes apparent in two gaps in previous literature on crisis management. Firstly, as Graf et al. (2023) argue, existing literature on resilience and crisis management show a significant bias to-wards the federal level. These studies focus, for example, on coordination structures (Alexander, 2013; Hu and Liu, 2022) or health organizations in case of the COVID-19 pandemic (Kim et al., 2022). Recent studies, however, address this gap. Graf et al. (2023), for example, argue that effective local-level crisis management requires practice switching from routine bureaucracy to crisis modes that resemble practices of fast-response units. This insight is crucial to understand the organizational mechanisms behind local crisis management, but is limited to the initial onset of the pandemic. It therefore exposes a second gap in literature: While many studies focus on effective crisis management in the short-term, little research has dealt with the involvement of public administrations in the long-term management of transboundary crises. The latter constitute crises that transcend political, temporal, and functional

boundaries, thereby increasing the risk level, complexity and uncertainty of crisis management (Ansell *et al.*, 2010). COVID-19 demonstrated the need for preparedness for future transboundary crisis (Räsänen *et al.*, 2023), yet we still know little about the management of the recent pandemic.

This study addresses this gap in knowledge through the triangulation of large-scale agency-level survey data from, qualitative interviews, and a workshop series with German local public administrations. We argue that first, transboundary crises such as the COVID-19 pandemic uncover structural limits to existing crisis response practices through lack of preparedness and staff limitations; and second, that therefore effective long-term municipal crisis management requires practice sharing in addition to practice switching. Rather than imitating the work of fast-response organizations, local crisis teams (Krisenstäbe) require cultural learning and organizational innovation through the collaboration of public administration and fast-response units. Through a range of organizational adaptations, this practice sharing can foster effective long-term crisis management.

These findings show relevance for both literature and policy. Through insights from local-level data, this study contributes to knowledge on local and long-term crisis governance, which are especially relevant for future transboundary crises. Further, through uncovering the mechanism of practice sharing, it directly aids local policy for future crisis management.

The paper is structured as follows. First, a review of literature on both transboundary crisis and local crisis management is given. A second section details case selection, data, and methods, followed by the analysis of two central findings: the limitations of local crisis management in transboundary crisis, and practice sharing as an effective tool to address these shortcomings. These findings are discussed and concluded in sections five and six.

## II. Conceptualizing Local Crisis Management in Transboundary Crises

### 1. Transboundary crises and local governments

Transboundary crises pose considerable challenges to contemporary governance structures, transcending political, temporal, and functional boundaries. These crises demand urgent remedial action under conditions of deep uncertainty, often catching policymakers off-guard (Ansell *et al.*, 2010). Characterized by multiple domains and manifestations, transboundary crises defy easy categorization, stretching across various countries and policy areas. From financial crises to pandemics, these crises exhibit slow incubation periods followed by sudden escalations, challenging traditional response mechanisms and blurring organizational boundaries (Boin, 2019). The pandemic serves as a classic example for transboundary crisis due to its global character (geographical transboundedness), long-term nature (time transboundedness), and cross-sectional impacts (functional transboundedness) (Boin, 2005).

Scholars argue that while joint multi-level and multi-state response is often necessary, it is not automatically given – no matter the severity of the crisis (Blondin and Boin, 2020). In the case of the pandemic, the role of local governments was paramount as the implementation and often non-centralized coordination took place predominantly at the local level (Kim and Jeong, 2022). Nonetheless, given the recency of the pandemic, we know little about local governments' role and resilience in transboundary crisis management (Graf *et al.*, 2023). According to Boin (2005), governments face important challenges in handling such crises. They need to cope with the uncertainty making problem diagnosis difficult, they are responsible for providing surge capacity to mobilize resources rapidly, and they need to coordinate a response across multiple jurisdictions.

Previous literature on local level governments, however, suggests stark barriers to overcoming these challenges. Kuhlmann and Franzke (2022) argue that the German health sector has long shown resource deficits even in the absence of crises, which were not addressed in the past. The same holds for German public health authorities, set at the local level and described as having a “shadowy existence in public administration” (Kuhlmann and Franzke, 2022, p. 317). In the case of many local administrations this manifests in intervening powers for public health authorities if necessary, but with limited technical tasks (Kersten and Rixen, 2021). In addition, local public governments have long had to deal with austerity measures and investment backlogs, limiting their ability to provide surge capacities (Scheller *et al.*, 2021). In the context of transboundary crisis events such as the pandemic, we therefore expect little preparedness and considerable obstacles to address the tasks at hand. However, previous literature suggests mechanisms of effective crisis management and organizational innovation through and despite crises.

While there is growing acknowledgement for the role of local public administrations in crisis management, only few studies address the local level systematically. As Graf *et al* (2023) argue, existing literature typically focuses on federal-level responses with a low number of cases. Whilst there is general agreement that crises demand extraordinary efforts in implementing crisis measures on the local level, local public administrations are typically thought to lack the required flexibility and improvisation (Behnke and Eckhard, 2022; Webb and Chevreau, 2006). Numerous researchers have demonstrated challenges of local public administrations in Germany such as lack of redundant staff, financial distress, protracted digitalization, and decentralization (Behnke and Eckhard, 2022; Kersting and Graubner, 2020).

How then, does local public administration become effective in crisis management? Earlier studies focusing on the local level include research on the effective crisis management during the migration crisis 2015/16 (Eckhard *et al.*, 2021a). They argue that rather than previous crisis management plans (van Aken and van Fenema, 2014), administrations’ ability to adjust their organizational behavior matter for effective crisis management. This latent hybridity is characterized by informal and temporary shifts in practice commonly limited in public administrations and routine bureaucracy (Eckhard *et al.*, 2021b).

Building on this notion of latent hybridity, more recent research on the COVID-19 pandemic demonstrates that in order to achieve this flexibility, mechanisms of practice switching need to be in place in public administrations. Graf *et al.* (2023) conceptualize practice switching as the “transition between routine bureaucracy and crisis response in public administrations” (p.2). They argue that the present tension between routine bureaucracy and crisis response needs to be systematically understood for better crisis management. They find that a switch can be identified in the onset of crises that resemble the mode of fast-response organizations. Contrary to public administrations, much literature has dealt with crisis management ability of fast-response organizations: Schakel and Wolbers (2021) argue that fast-response organizations need to switch between coherent sets of practices regularly based on an organizational structure that allows for such practice switches by design. This mode is characterized by a hierarchical emergency response, allocation of resources such as surge capacities, and information sharing (Ansell *et al.*, 2010; Graf *et al.*, 2023; Doberstein, 2016). In addition, they find conditions such as organizational, technical, and individual preparedness to enable this initial switch.

Therefore, as much literature is dedicated to response-oriented crisis management, Graf *et al.* (2023) address the mechanism required to switch into this response mode in the public administrations. However, while such a switch might be very effective in the short-term, there is no research addressing the long-term effects of this practice switch in transboundary crises. Therefore, we do not know how exactly how effective crisis management looks longitudinally after practice switching takes place. Furthermore, fast-response organizations are characterized by a an adhoc set of actors quickly mobilized for handling temporary crises (Schakel and Wolbers, 2021). However, the intensity and breadth of such a surge capacity require ressources that are not easily scalable for longer durations. In other words, even the most well-staffed, well-trained, well-equipped and well-provisioned response organization cannot perform under crisis conditions indefinitely. This insight becomes especially relevant

against the background of transboundary crises that, due to their long-term and global nature pose challenges of efficiency in addition to effectiveness on long-term crisis management. The COVID-19 pandemic constitutes a classic transboundary crisis event to investigate the mechanisms of long-term crisis management.

### III. Case Selection and Methods

The empirical material for this research is derived through a variety of methods. We base our discussion on the triangulation of a systematic large-scale agency-level survey data ( $n=232$ ) from German municipalities and qualitative interviews ( $n=28$ ) with local and regional public administrators and experts. Furthermore, we analyze data obtained from a series of participatory workshops involving representatives from direct local crisis management units in North Rhine-Westphalia, Germany. The COVID-19 pandemic in Germany further serves as a fitting case study as it constitutes a classic case of a transboundary crisis event (Ansell *et al.*, 2010), and required extraordinary municipal crisis management (Kuhlmann and Franzke, 2022). Due to German federalism, municipalities were quickly in charge of tracking infections, vaccinations, and the implementation and adaptation of state-level policies such as social distancing. These non-routine tasks required unprecedented administrative resources resulting in large and interdisciplinary executive crisis teams (Krisenstäbe) at the local level (Klinger *et al.*, 2022). This unique conglomeration of very different administrative branches and fast-response organizations for a time-span of three years provides a unique case study to investigate inter-organizational crisis management in local public administrations, and cultural learning and innovation given the long time-span.

This research therefore started with semi-structured and narrative interviews with local administrative staff who were directly involved in their local crisis management teams (Anderson and Kirkpatrick, 2016). The interviews were conducted through a snowball-sampling approach, which later included both state-level and federal-level experts in crisis management. Lasting between 50 minutes and 2 hours, the first interviews were conducted in 2022, when many crisis teams were still active, while the last interviews were conducted in the second quarter of 2023, when many COVID-19 measures had just ended. In the coding process, these interviews could therefore be structured according to insights in direct involvement and hindsight reflection processes. The interviews were coded in MAXQDA by two researchers using a common coding scheme developed according to Lamnek and Krell (2016).

The survey builds on the themes uncovered in the qualitative interviews started in 2023. It addressed all German cities with at least 50.000 inhabitants, thereby covering both NUTS-3 level and LAU-level cities. The reasoning behind this threshold was a focus on where administrative responsibility could be clearly linked to local outcomes, which is typically only the case where public administrations are located in the same city such as the selected cities in Germany. Out of 191 cities, administrations from 101 cities answered with an overall  $n$  of 232. The data underwent descriptive analysis with non-responses certain question items leading to a smaller  $n$  in several cases. Lastly, three participatory workshops with local administrative staff and representatives of fast-response organizations were held, lasting 1-2 working days. The workshops took place in 2023 and were subsequently summarized in reports and coded according the same coding scheme as the interviews.

In total, the triangulation of the empirical material contained the collection of key results, which were confirmed in all three types of material and supported through a trend in the survey. Whilst the survey thereby demonstrated systematic evidence for a finding, the interviews and workshops were used to uncover the mechanisms behind this trend. To identify this mechanisms, we integrated the data at two different levels: First, qualitative and quantitative data were combined through joint display integration, where the insights from qualitative interviews were matched with the observations in the survey (Alele and Malau-Aduli, 2023). Second, from these matches, key results were based on the trends identified in the survey with qualitative interviews confirming, explaining, or questioning these results. This type



of narrative integration through a weaving approach is a common triangulation approach at the level interpretation and reporting (Alele and Malau-Aduli, 2023). The subsequent findings present these key results against the background of previous literature on transboundary crisis and practice switching.

#### IV. Findings

##### 1. Transboundary crisis management and lack of preparedness

Although the degree of crisis preparedness varied between different municipalities, arguably only few – if any – were prepared for handling the local consequences of a global pandemic. Beyond material and logistical constraints in supply chains and the provision of personal protective equipment, test kits and the like, and political constraints such as the implementation of higher-level regulations, a key challenge for municipalities during the pandemic emerged in human resources. The duration of the pandemic meant that municipalities had to perform intense crisis management activities over an extended time period, which soon led to a shortage of personnel.

In Germany, crisis management competence at the local level is generally concentrated among the fire brigades, the police (which, although a local actor, is itself not under the control of the municipality), and external organizations such as the Federal Agency for Technical Relief or the Armed Forces. With the possible exception of the heads of departments of public order or their functional equivalents, who frequently interact with the aforementioned groups and manage local crises themselves, municipal administrations tend neither to build nor maintain crisis management competences outside of emergencies (Int. 02., pos. 620ff.)<sup>1</sup>. In fact, since the majority of departments and their personnel usually do not consider crisis management their responsibility, they consequently are comparatively unfamiliar with, an unprepared for its specific demands (cf. Int. 10, pos. 37ff.).

The large-scale, long-term challenge of the COVID-19-pandemic displayed the structural problem of a quantitative and qualitative lack of trained crisis response personnel at the local level (figure 1). Local crisis management remains an inherently short-term-focused affair. The intense and complex work in a crisis team requires frequent rotation and rest to maintain the well-being and effectiveness of the team members (Int. 23, pos. 288ff.). However, municipal administrations differ from fire brigades and police forces in that they generally neither plan nor prepare for maintaining 24-hour-services in shift operations (Int. 19, pos. 81ff.), let alone build and maintain redundancy for doing so in longer-term crisis situations. Instead, there tends to be a relatively small and unchanging pool of “crisis management” individuals dealing with any occurring crisis scenarios on a municipal level. This pool is therefore as experienced and competend as it is easily exhausted (Int.5, pos. 272ff).

<sup>1</sup> Interviews are numbered according tot he date of the interview to anonymize the answers. For reasons of internal validation, quotes are referenced according to line (position) rather than page number.



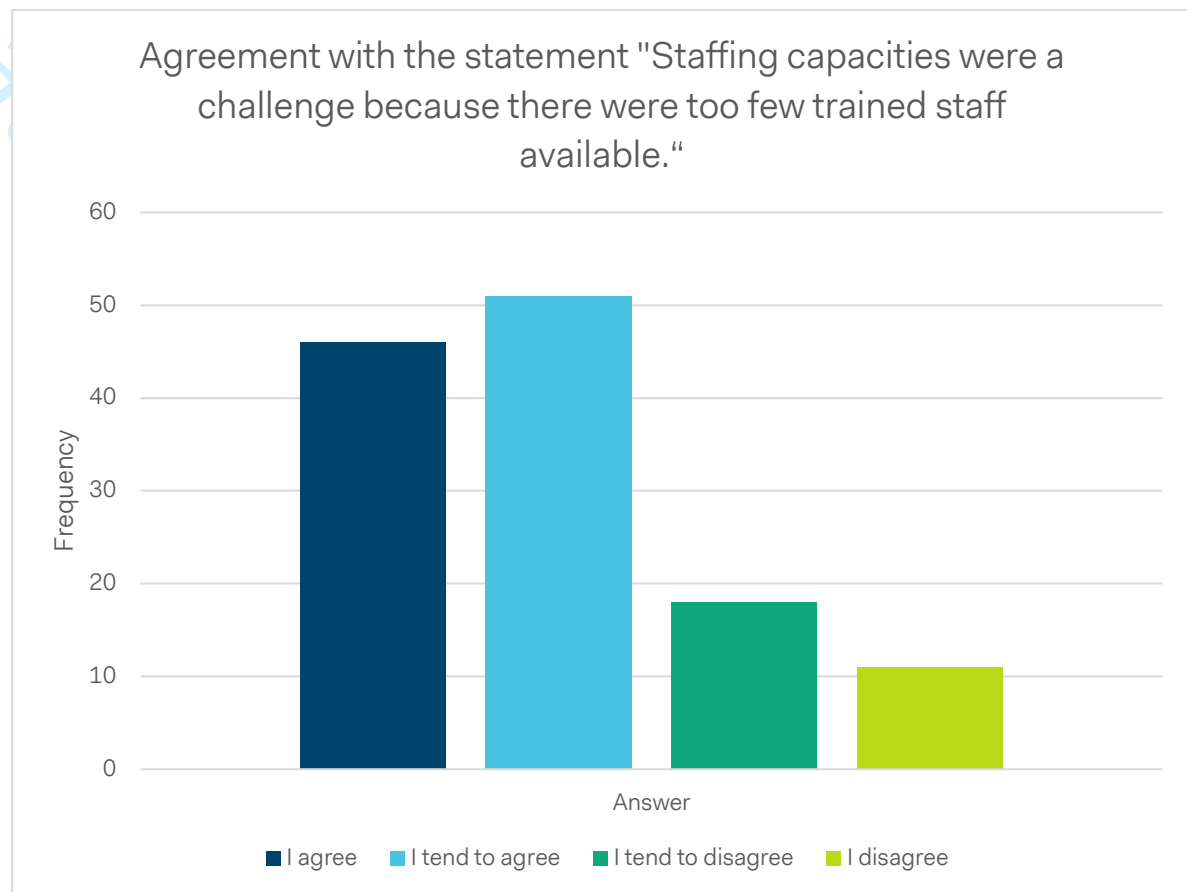


Figure 1: Lack of trained staff available in German municipalities. Source: Survey data as outlined in section 3, authors' own work.

As ceasing operations in a moment of crisis is neither a practically, ethically, nor legally viable course of action for a municipality, the continuation of work therefore mostly falls on the existing crisis team, putting ever more strain on the members over time. The survey participants strongly agree that the pandemic overburdened crisis management personnel. This combination of long-term, high-intensity strain on the same limited number of employees features prominently in the expert interviews as well (e.g., Int. 03, pos. 812). For instance, one expert explains how the lack of rotation options in the face of constant demands on the crisis team attrited even the highly motivated as well as the professionally trained and experienced team members (Int. 02, pos. 561ff.; *ibid.*, pos. 1702ff.). Another expert recounts sleeping at the crisis management center for months in the early phase of the pandemic due to the long hours, at the expense of their private and family life (Int. 05, pos. 292ff.). A third states to "never have worked as exceedingly much in my life as I did during the early months of the pandemic, meaning early 2020. I never added up the total hours, but that was an immense workload for me personally" (Int. 13, pos. 302ff.).

While such effects would likely have emerged in any crisis scenario over time, the pandemic presented an unusually taxing environment for the individuals of the crisis team. Its multidimensional nature meant that it spanned virtually all areas of society and therefore personally affected virtually anyone directly or indirectly to varying degrees. Usually, personal involvement in a crisis (e.g. having one's own home in a flood zone or family members in a hostage situation) is a criterion for removal and substitution from the crisis team. During the pandemic, however, this was simply impossible: Not only were there hardly any substitutes to draw on to begin with, but those substitutes themselves would have been similarly affected. In addition, the political tensions and polarization surrounding the pandemic management resulted in personalized attacks on members of the administration with an online pres-

ence in social media (Int. 21, pos. 404ff.) both as representatives of “the government” and as individuals. Other experts report personalized attacks in local newspapers, insults, threatening mail including death threats (Int. 02, pos. 1782ff.) and even physical attacks by frustrated citizens (Int 16., pos. 884ff.).

This downward spiral of attrition was further exacerbated by the fact that the intensity of crisis work made it very difficult to fix structural deficits during ongoing operations. Therefore, even if municipalities were able mobilize their limited available reserves or hire short-term support, the differences in experience and training risked rotating in staff not (yet) ready for the task. This affected both the team’s immediate performance and the quality of knowledge transfer between shifts and teams, which in turn impeded long-term decision-making processes and situational assessments (Int. 11, pos. 60ff.). Ideas such as the re-activation of retired crisis team members are suggested as a stopgap measure in times of need but not as a structural fix for this problem (Int. 3, pos. 1235).

However, the survey respondents were undecided if merely adding more personnel would have alleviated the situation (figure 2). The interviewees suggest that quantity alone might not be sufficient to solve the problem. The required personnel also need adequate skills, as individuals untrained in crisis management are difficult to integrate in existing crisis team structures (Int. 14, pos.301ff.). The interviewees therefore repeatedly stress the need for rooting crisis management competence in municipal administrations, possibly by including it directly in the curriculum of relevant professional degrees (Int. 18, pos. 306ff.). The experts argue for a pool of pre-trained crisis management personnel either within the administration or via easily accessible external pools, since adequately training or hiring new staff under crisis circumstances proved very difficult and bound the already scarce resources of experienced team members (cf. Int 20, pos. 416ff.; Int. 16, pos. 503ff.; Int. 20, pos. 384ff.). Furthermore, there was a noticeable disconnect between the work modes and operational logics of fast-response units and the municipal administrations involved in crisis management during the pandemic. Neither were intuitive for the other side and required a significant amount of communication and adaptation (Int. 5, pos. 748 ff).

Therefore, although crisis management structures existed, the length, breadth, and seemingly boundless nature of the crisis posed considerable challenges for local crisis management. Despite being personally affected, administrative staff continued to work in crisis teams throughout the course of the pandemic, oftentimes with little formal training or knowledge of crisis management structures and routines. These findings paint a grim picture of overwhelmed local crisis management. However, as will be argued, public administrations can react in flexible and resilient ways to these challenges, which did not only alleviate pressures during COVID-19 pandemic, but also reveals possible mechanisms for successful crisis management in future crises.

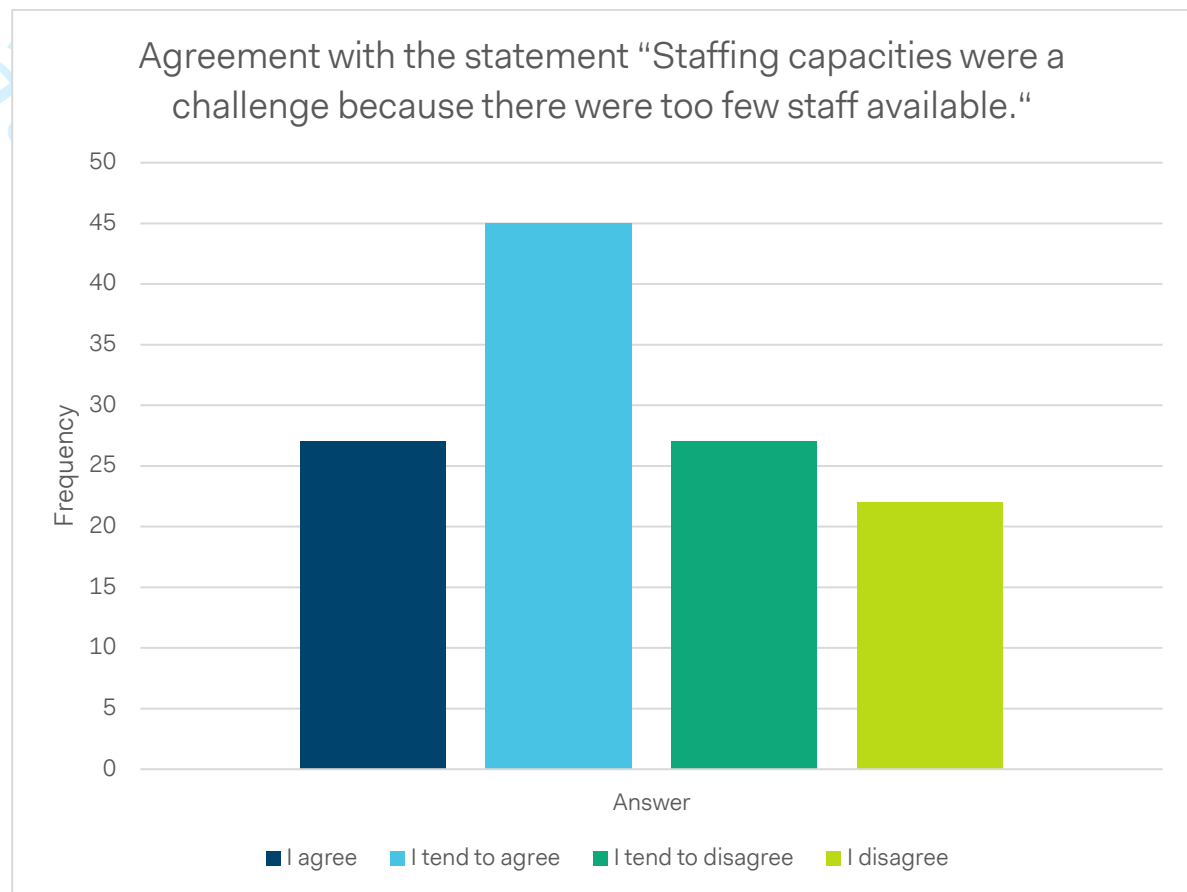


Figure 2: Lack of staff in German municipalities. Source: Survey data as outlined in section 3, authors' own work.

## 1. Practice switching, Practice sharing

Practice switching to crisis mode, working long hours in crisis teams until the threat or hazard is under control, are challenging in long-term transboundary crises such as the COVID-19 pandemic. If put in this situation administrative staff wears out at an unsustainable rate, so this common approach of applying maximum resources to a crisis significantly limits the crisis teams' durability. However, in the COVID-19 pandemic, local public administrations did not just imitate the work of fast-response organizations; they worked with these organizations in joint crisis teams. As local public crisis management focuses on short-term crises, crisis management structures routinely include representatives and expertise of fast-response organizations. In long-term crises such as COVID-19, however, these in turn rely heavily on the expert knowledge of local agencies. We argue that practice sharing of these organizations helped sustain long-term success in crisis management, which was fostered through cultural learning and organizational innovation, as we will show below.

Crises are exceptional but also highly contextual situations with little definitional clarity. German law (ZSKG) prefers to use the term disaster (Katastrophe), which – if officially declared – serves a dual purpose. First, by delineating a limited state of exception this „state of disaster“ enables administrations to structurally and procedurally adapt to meet the demands of the moment, e.g. by forming crisis teams (Krisenstäbe). Second, it upholds a distinction within the German national security architecture, with the federal states responsible for (natural) disaster protection, and the federal government (primarily tasked with national defence) only supporting upon request.

Therefore, crisis teams are very common state- and local-level tools for crisis management. Their precise forms and functioning differ but are commonly defined in state-level law, which prescribes organizational and executive hierarchies and decision-making power (Wissenschaftliche Dienste des

deutschen Bundestages, 2021). In case of COVID-19, 85% of the responding cities activated a crisis team as foreseen in law. However, contrary to previous crises, the breadth of involved administrative units was large. Involved units typically ranged from health departments to traffic departments with 50% of cities indicating 12 or more departments taking part in their crisis team.

As outlined in state-law, organizational leadership usually falls into the responsibility of the fire department: 75% of cities indicated fire departments as leading units within the crisis team. However, in addition, executive and technical expertise was sourced widely among the local offices of public order, health agencies as well as legal and social offices to address the multidimensional complexity of the pandemic. As one respondent puts it: "[T]he fire department was part of the leadership and supported [the crisis team] a lot. But it was [only] part of a network and part of general crisis management. [The fire department] was not crisis management itself" (Int 1, pos. 43 ff).

Regarding in the beginning of the crisis, staff of the fire department report frustrations over lack of capacity and crisis competence in the health agencies responsible for tracking infections, sometimes resulting in the urge to take over crisis management: "[...] We knew, the health department would not be able to handle [the situation] on their own. Not even with a thousand more people" (Int 1, pos 11 f). They further criticized lack of acute crisis awareness (int 1, pos 28 ff) and staffing capacities due to previous austerity measures (Int 23, pos. 11), while other organizations criticized the fire departments' lack of long-term planning and process management (Int 23 pos 507 f).

In the beginning, both these organizational differences as well as cultural differences led to stark conflicts in crisis management:

"[...] In the beginning, we said: Okay, we will create a joint vaccination team [in the city]. And on Friday 12pm, we could not reach anyone in the health department anymore. [We thought] 'you cannot be serious!', but it was completely normal. [At] the health department, you drop everything [...] and leave outside of office hours. [...] To tell them that we needed a standby-duty took a long, long time" (int. 23, pos 603).

Respondents described these challenges as "[...] the constant conflict between crisis management and the everyday bureaucracy, because both areas have a different understanding of processes and risks" (Int 11, pos. 249 ff). Moreover, both areas follow internally coherent logics in pursuit of different and at times diametrically opposed goals. This can lead to severe frictions and communication challenges when a situation like a long-term crisis requires the close cooperation and strategic congruency of both areas.

However, from these hurdles and the stark need for inter-organizational cooperation, our findings reveal a range of organizational solutions that we conceptualize as practice sharing. In contrast and addition to practice switching, this term refers to cultural learning between fast-response organizations and public administrations, and to organizational innovations that entail working practices of both fast-response organizations and public administrations. Notably, the same interviewee complaining about the lack of crisis awareness later describes distinct organizational solutions that brought together the quarreling units:

„[In the end, it was] social, interpersonal competences. We sent two people, [of which] one now permanently works at the health department. The other, I believe, [...] also still works there and is a liaison officer." (int 23, pos 613 ff).

This classic example of a broker demonstrates the capacity for organizational and cultural learning: brokers typically enable empathy and compromise in tense organizational settings, function as common contact persons, and enable cultural learning and practice sharing in organizations (Weber and Yanovitzky, 2021). Therefore, although an initial practice shift of health agencies was oftentimes difficult, practice sharing led to the establishment of common grounds.

Another example is a fire department supporting the restructuring of the crisis team by training administrative staff in crisis management (Int 12, pos. 141 ff). Further, some administrations used the 24-hour-shift system of police force and fire department as inspiration to ensure the presence of personnel throughout the crisis (Int 19, pos. 81 ff). Fast-response organizations learn crisis awareness (the mindset) and crisis management (the set of processes and methods) during their training. Their personnel tend to maintain and hone it over the course of their careers, whereas the administrative branch is usually forced to build it up from scratch in a crisis and has no easy way of preserving the acquired competence. In fact, one might say that precisely the return to routine bureaucracy for the administration marks the successful conclusion of the crisis. Such a view creates an almost gravitational pull towards routines and away from the exception for administrations. One interviewee suggests that much more flexibility in this point is needed to use practice sharing as a fast solution for the administration (Int 27, pos. 700 ff).

A different solution with a similar outcome was manifested in the long-term adaptations made to crisis teams. As discussed previously, long-term work in high-pace environments with a range of different stakeholders wore out staff quickly with few options to rotate and rest personnel. Crisis teams adapted over the course of the crisis and working modes shifted towards smaller units (workshop I, 2023). However, taking a closer look at the type of crisis management, it can be seen that compared to the beginning of the crisis, the overall structure of crisis teams did not change much. Moreover, for each type of crisis team chosen, the overwhelming majority of cities would choose the very same organization again (figure 3). Furthermore, participating cities indicate little change in the number of active departments in long-term crisis management (figure 4). Even though the mean number decreases to 10 participating departments, there is no significant difference between the initial and long-term crisis team size.

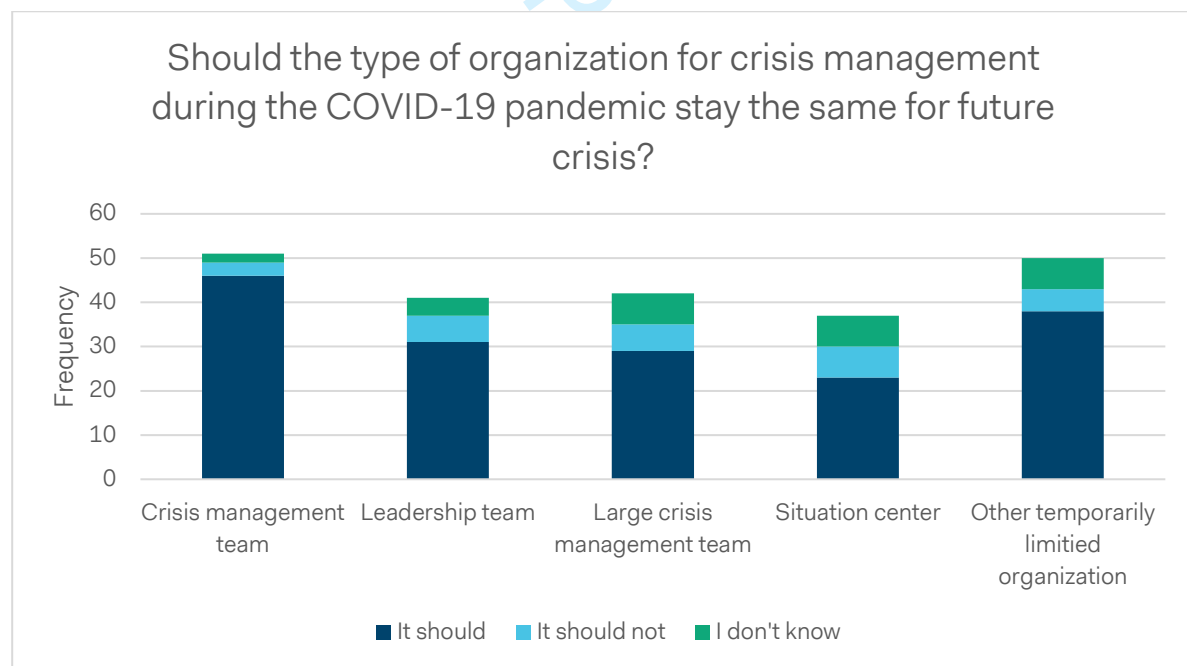


Figure 3: Agreement on future types of crisis management organizations. Source: Survey data as outlined in section 3, authors' own work.

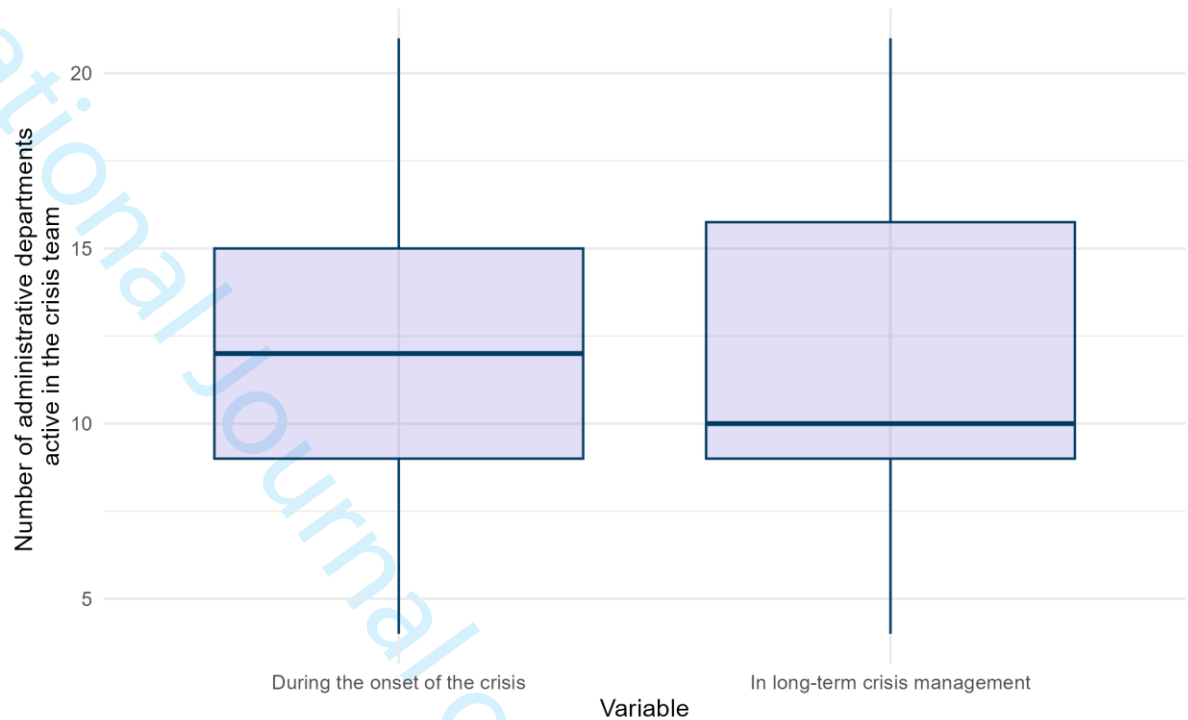


Figure 4: Differences in crisis team size in short-term and long-term crisis management.  
Source: Survey data as outlined in section 3, authors' own work.

This finding is in slight tension with the results from the workshops, in which participants report in great detail the necessity for organizational changes over the course of the pandemic. First, it was recognized that routine bureaucracy could not be put on hold for three years: unsolved issues accrue „administrative debt“ that built up over the course of the pandemic would have to be tackled afterwards (Int. 2, pos. 612ff). The revelation that police and fire departments could and should not simply “take over“ in case of crises (Int. 3, pos. 985ff) led to conceptualizing crisis management as a cross-sectional task. In the workshops, participants discussed a hybrid, scenario-based unit, which combined technical expertise from several administrative branches, but adjusted their meetings to the crisis teams: this way they could anticipate potential impacts of executive decisions made in the crisis team. This combination of technical expertise and working hours matching fast-response organizations proved valuable in the long-run: the participants report higher efficiency and faster roll-out of vaccination campaigns through scenario planning. Therefore, although public administrations do not question the general necessity for crisis teams as such, their set-up and purpose were significantly altered over the course of the pandemic.

This broad structure of crisis teams with downsized adhoc units meeting less regularly was also found in different instances: to relieve crisis teams of their executive pressure and work load, other cities used clustering approaches headed by fire departments, or coordinating preparation teams to reduce long working hours of the crisis teams themselves (workshop I, 2023). Rather than experimenting with random organizational forms, these solutions have two crucial premises in common: First, previous resource-intensive crisis management was not fit for the long-term, and second, that interdisciplinary crises still require extraordinary and flexible structures that resemble fast-response organizations. Public administrations and fast-response organizations need to share these practices. These qualitative insights further demonstrate the high satisfaction with crisis teams among cities: these hybrid adaptations to municipal crisis management do not require a fundamental reform of crisis teams; instead, cities may stick to foreseen organizations whilst changing their staffing and practice.

This finding marks a useful insight for tackling transboundary crises. Although the challenges of cross-agency and long-term crisis mode remain valid, practice sharing also points towards resilience of local governments: Through cultural learning by means of brokers or interdisciplinary adaptation to crisis



teams local administrations shared practices of technical expertise and crisis management. This allowed both for maintaining routines in spite of crises, and accelerated decision-making in spite of Weberian bureaucracy.

## V. Discussion

The empirical findings of this research result in two main arguments. First, established crisis management structures and processes at the local level showed significant shortcomings when faced with transboundary crises. And second, that practice sharing between fast-response organizations and public administrations can alleviate some of these shortcomings. Both results are crucial to discuss against previous insights from literature as they build on established theories of crisis management in transboundary crisis settings.

First, the COVID-19 pandemic exemplifies the transboundary nature of crises, affecting multiple jurisdictions, sectors, and time periods. This transboundary character posed significant challenges for local public administrations, including the rapid depletion of resources and the overextension of personnel capacities. The prolonged duration and dynamic nature of the crisis, coupled with the intensity of work and the need for continuous adaptation to changing circumstances, stretched the limits of individual and organizational resilience. The findings highlight various stressors experienced by public administration employees, including the lack of sufficient personnel reserves, unequal distribution of workload, and inadequate interdepartmental and interdisciplinary support.

These findings resonate with the anticipated challenges by Ansell *et al.* (2010) and previous literature on maladaptive responses to such crisis events (Ringsmuth *et al.*, 2022). German municipalities are no single case in these challenges: Räisänen *et al.* (2023) conclude in their study “Finnish crisis management had overlooked the extent of transboundaryness of present-day crises and is lacking consideration of how crises turn into chronic conditions that deplete capacities over time” (p.266). While our results therefore point towards necessary reforms in acute crisis management, international examples demonstrate the needs for future preparedness.

Furthermore, the findings underscore the importance of effective crisis management strategies, including the need for proactive measures to address personnel shortages, enhance interdepartmental cooperation, and incentivize collaborative efforts as outlined by Ansell *et al.* (2010). Establishing robust systems for knowledge management, personnel retention, and skill development is crucial for building organizational resilience and ensuring the continuity of essential services during crises.

Despite the myriad challenges, the pandemic also presented opportunities for innovation and long-term improvements in administrative practices. Graf *et al.* (2023) provide valuable insights into mechanisms of early-crisis response in local governments. Our findings and conceptual understanding heavily builds upon their work. Our results show that whilst practice switching may prove useful and necessary in the onset of crisis, it does not sustain local crisis management in long-term settings. Resource constraints allow neither for a continuous practice switch of public administrations nor for a cycle of iterative practice switches. Instead, practice sharing offers a hybrid solution in long-term crisis settings, where local administrations work together with fast-response organizations with differing work-logics and cultures.

This does not say, however, that resource-intensive practice switches might not be necessary in the beginning of a crisis. The COVID-19 pandemic showed considerable uncertainty for governments before transmission pathways, vulnerable groups, and potential vaccinations were known. Hence, our results cannot establish causal links between practice sharing and successful crisis management without doubt. It is possible that reduced uncertainty over the course of the pandemic also allowed for more hybrid crisis management. Despite the vast empirical material of this study, such clear links should be



subject to future research and hypothesis testing. Our findings, however, show clear differences between those municipalities stuck in resource-intense crisis teams and those that enabled forms of practice sharing. Hence, it stands to reason that even in transboundary crises with long periods of uncertainty, limits to current crisis management will become apparent. The advantages of practice sharing through institutional brokers and small task-driven teams in contrast can guide future municipal crisis management.

Importantly, this research did not concern itself with other crucial elements of good crisis management. While we focused on effectiveness through self-reported effectiveness in crisis management, and efficiency in terms of resource-efficiency, much research points out the relevance of public legitimacy and democracy in crisis management (Lenz, 2024). The perceived lack of such in long-term crises could be seen in the COVID-19 pandemic and many scholars have argued that crises as times of executive decision-making put legitimacy at stake (Bogner and Albiez, 2023; Martí, 2022). Hence, while our findings recommend certain organizational changes to crisis management, they are still situated in a narrow executive realm agnostic to democratic principles. Public polarization during COVID-19 shows (Eberwein *et al.*, 2023), however, that future research should take into account and address these tradeoffs of crisis management. This shift from crisis management to crisis governance would allow for a more holistic understanding for future transboundary crises that are bound to come.

VI. Conclusion

The empirical findings of this research contribute significantly to our understanding of crisis management in the context of transboundary crises. The study highlights two main arguments: first, the inadequacies of established crisis management practices at the local level when confronted with transboundary crises, and second, the potential benefits of practice sharing between fast-response organizations and public administrations in mitigating these shortcomings. These findings build upon established theories of crisis management in transboundary crisis settings, and can aid future policy makers in crisis management.

The COVID-19 pandemic serves as a poignant example of the transboundary nature of crises, presenting challenges that extend across multiple jurisdictions, sectors, and time periods. Local public administrations faced significant obstacles, including resource depletion, personnel overextension, and the need for continuous adaptation to evolving circumstances. Stressors experienced by public administration employees ranged from insufficient personnel reserves and unequal workload distribution to a lack of interdepartmental support. However, while the study acknowledges the necessity of resource-intensive practice switches in the initial stages of a crisis, it also underscores the limitations of such approaches in sustaining local crisis management over the long term. Practice sharing emerges as a viable solution, facilitating collaboration between local administrations and fast-response organizations with differing working logics and cultures.

Nevertheless, the study acknowledges the inherent uncertainty of crisis management dynamics, particularly in the early stages of a crisis like the COVID-19 pandemic. Causal links between practice sharing and successful crisis management remain subject to further research and hypothesis testing. These linkages as well strategies as to how practice sharing can be enabled in crisis preparedness in the future should guide future studies. This research focuses primarily on effectiveness and resource efficiency in crisis management, neglecting other crucial elements such as public legitimacy and democracy. Future research should consider these dimensions, particularly in light of the perceived lack of public legitimacy during prolonged crises like the COVID-19 pandemic. A shift towards crisis governance, incorporating democratic principles, would provide a more holistic framework for managing future transboundary crises.

In conclusion, if crises are the 'new normal', this study shows ways in which crisis management should not and does not have to stay the same. We emphasize the need for continuous learning and adaptation in crisis management practices. Integrating lessons from the COVID-19 pandemic into future crisis preparedness efforts can enhance organizational resilience, promote collaboration, and ensure effective crisis response in the face of transboundary challenges.

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# Sharing is Caring: Effective Local Crisis Management through Practice Sharing

A case study from Germany

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## Abstract

Local public administrations are often at the forefront of ad hoc crisis response. Recent crises such as the COVID-19 pandemic pose additional constraints on local crisis management through their transboundary and long-term character. While previous research stresses the importance of practice switching into crisis mode, this research sheds light on the long-term practice of crisis management. We base our discussion on the triangulation of a systematic large-scale agency-level survey data (n=232) from German municipalities and qualitative interviews (n=28) with local and regional public administrators and experts. Furthermore, we analyze data obtained from a series of participatory workshops involving representatives from direct local crisis management units in North Rhine-Westphalia, Germany. We find that in addition to practice switching, successful local public administration significantly depends on practice sharing: Not only do public administrations have to switch to modes that resemble fast-response organizations; they also have to work with and communicate to fast-response organizations. As local public crisis management focuses on short-term crises, crisis management structures also feature actors and knowledge of fast-response organizations. In long-term crises such as COVID-19, however, these rely heavily on the expert knowledge of local agencies. During the pandemic, this became especially apparent in the collaboration of health agencies and fire departments in cross-agency crisis units. This paper identifies new mechanisms of successful long-term crisis management in local public administration, which at the same time point to needs for future multi-level governance reform.

## I. Introduction

If crises are the 'new normal', then crisis management must evolve accordingly. The surge of transboundary crises such as the recent COVID-19 pandemic and climate change impacts demonstrate the need for public administrations to adjust their crisis management toward long-term resilient crisis response. Municipalities, commonly at the front line when adversity hits, have a crucial role in this process as they are closest to local needs and oftentimes directly responsible for immediate crisis response (Nilsson, 2010). The COVID-19 pandemic has underscored this importance as many local governments were in charge of distributing and administering vaccines, tracking infections as well as implementing and monitoring federal or state-level measures. Contrary to local and short-term crisis events such as accidents or fires, a transboundary crisis like COVID-19 requires the integration of fast-response capabilities usually found, for instance, in fire departments with long-term support structures by the broader public administration (Kuhlmann and Franzke, 2022). This crisis, however, has revealed both a lack of knowledge and experience regarding long-term crisis management at the local level and considerable challenges in existing municipal crisis management arrangements.

The former becomes apparent in two gaps in previous literature on crisis management. Firstly, as Graf et al. (2023) argue, existing literature on resilience and crisis management show a significant bias towards the federal level. These studies focus, for example, on coordination structures (Alexander, 2013; Hu and Liu, 2022) or health organizations in case of the COVID-19 pandemic (Kim *et al.*, 2022). Recent studies, however, address this gap. Graf *et al.* (2023), for example, argue that effective local-level crisis management requires practice switching from routine bureaucracy to crisis modes that resemble practices of fast-response units. This insight is crucial to understand the organizational mechanisms behind local crisis management, but is limited to the initial onset of the pandemic. It therefore exposes a second gap in literature: While many studies focus on effective

crisis management in the short-term, little research has dealt with the involvement of public administrations in the long-term management of transboundary crises. The latter constitute crises that transcend political, temporal, and functional boundaries, thereby increasing the risk level, complexity and uncertainty of crisis management (Ansell *et al.*, 2010). COVID-19 demonstrated the need for preparedness for future transboundary crisis (Räisänen *et al.*, 2023), yet we still know little about the management of the recent pandemic.

This study addresses this gap in knowledge through the triangulation of large-scale agency-level survey data from, qualitative interviews, and a workshop series with German local public administrations. We argue that first, transboundary crises such as the COVID-19 pandemic uncover structural limits to existing crisis response practices through lack of preparedness and staff limitations; and second, that therefore effective long-term municipal crisis management requires practice sharing in addition to practice switching. Rather than imitating the work of fast-response organizations, local crisis teams (Krisenstäbe) require cultural learning and organizational innovation through the collaboration of public administration and fast-response units. Through a range of organizational adaptations, this practice sharing can foster effective long-term crisis management.

These findings show relevance for both literature and policy. Through insights from local-level data, this study contributes to knowledge on local and long-term crisis governance, which are especially relevant for future transboundary crises. Further, through uncovering the mechanism of practice sharing, it directly aids local policy for future crisis management.

The paper is structured as follows. First, a review of literature on both transboundary crisis and local crisis management is given. A second section details case selection, data, and methods, followed by the analysis of two central findings: the limitations of local crisis management in transboundary crisis, and practice sharing as an effective tool to address these shortcomings. These findings are discussed and concluded in sections five and six.

## II. Conceptualizing Local Crisis Management in Transboundary Crises

### 1. Transboundary crises and local governments

Transboundary crises pose considerable challenges to contemporary governance structures, transcending political, temporal, and functional boundaries. These crises demand urgent remedial action under conditions of deep uncertainty, often catching policymakers off-guard (Ansell *et al.*, 2010). Characterized by multiple domains and manifestations, transboundary crises defy easy categorization, stretching across various countries and policy areas. From financial crises to pandemics, these crises exhibit slow incubation periods followed by sudden escalations, challenging traditional response mechanisms and blurring organizational boundaries (Boin, 2019). The pandemic serves as a classic example for transboundary crisis due to its global character (geographical transboundedness), long-term nature (time transboundedness), and cross-sectional impacts (functional transboundedness) (Boin, 2005).

Scholars argue that while joint multi-level and multi-state response is often necessary, it is not automatically given – no matter the severity of the crisis (Blondin and Boin, 2020). In the case of the pandemic, the role of local governments was paramount as the implementation and often non-centralized coordination took place predominantly at the local level (Kim and Jeong, 2022). Nonetheless, given the recency of the pandemic, we know little about local governments' role and resilience in transboundary crisis management (Graf *et al.*, 2023). According to Boin (2005),

governments face important challenges in handling such crises. They need to cope with the uncertainty making problem diagnosis difficult, they are responsible for providing surge capacity to mobilize resources rapidly, and they need to coordinate a response across multiple jurisdictions.

Previous literature on local level governments, however, suggests stark barriers to overcoming these challenges. Kuhlmann and Franzke (2022) argue that the German health sector has long shown resource deficits even in the absence of crises, which were not addressed in the past. The same holds for German public health authorities, set at the local level and described as having a “shadowy existence in public administration” (Kuhlmann and Franzke, 2022, p. 317). In the case of many local administration this manifests in intervening powers for public health authorities if necessary, but with limited technical tasks (Kersten and Rixen, 2021). In addition, local public governments have long had to deal with austerity measures and investment backlogs, limiting their ability to provide surge capacities (Scheller *et al.*, 2021). In the context of transboundary crisis events such as the pandemic, we therefore expect little preparedness and considerable obstacles to address the tasks at hand. However, previous literature suggests mechanisms of effective crisis management and organizational innovation through and despite crises.

While there is growing acknowledgement for the role of local public administrations in crisis management, only few studies address the local level systematically. As Graf *et al.* (2023) argue, existing literature typically focuses on federal-level responses with a low number of cases. Whilst there is general agreement that crises demand extraordinary efforts in implementing crisis measures on the local level, local public administrations are typically thought to lack the required flexibility and improvisation (Behnke and Eckhard, 2022; Webb and Chevreau, 2006). Numerous researchers have demonstrated challenges of local public administrations in Germany such as lack of redundant staff, financial distress, protracted digitalization, and decentralization (Behnke and Eckhard, 2022; Kersting and Graubner, 2020).

How then, does local public administration become effective in crisis management? Earlier studies focusing on the local level include research on the effective crisis management during the migration crisis 2015/16 (Eckhard *et al.*, 2021a). They argue that rather than previous crisis management plans (van Aken and van Fenema, 2014), administrations’ ability to adjust their organizational behavior matter for effective crisis management. This latent hybridity is characterized by informal and temporary shifts in practice commonly limited in public administrations and routine bureaucracy (Eckhard *et al.*, 2021b).

Building on this notion of latent hybridity, more recent research on the COVID-19 pandemic demonstrates that in order to achieve this flexibility, mechanisms of practice switching need to be in place in public administrations. Graf *et al.* (2023) conceptualize practice switching as the “transition between routine bureaucracy and crisis response in public administrations” (p.2). They argue that the present tension between routine bureaucracy and crisis response needs to be systematically understood for better crisis management. They find that a switch can be identified in the onset of crises that resemble the mode of fast-response organizations. Contrary to public administrations, much literature has dealt with crisis management ability of fast-response organizations: Schakel and Wolbers (2021) argue that fast-response organizations need to switch between coherent sets of practices regularly based on an organizational structure that allows for such practice switches by design. This mode is characterized by a hierarchical emergency response, allocation of resources such as surge capacities, and information sharing (Ansell *et al.*, 2010; Graf *et al.*, 2023; Doberstein, 2016). In addition, they find conditions such as organizational, technical, and individual preparedness to enable this initial switch.

Therefore, as much literature is dedicated to response-oriented crisis management, Graf *et al.* (2023) address the mechanism required to switch into this response mode in the public administrations. However, while such a switch might be very effective in the short-term, there is no research addressing the long-term effects of this practice switch in transboundary crises. Therefore, we do not know how exactly how effective crisis management looks longitudinally after practice

switching takes place. Furthermore, fast-response organizations are characterized by a an adhoc set of actors quickly mobilized for handling temporary crises (Schakel and Wolbers, 2021). However, the intensity and breadth of such a surge capacity require ressources that are not easily scalable for longer durations. In other words, even the most well-staffed, well-trained, well-equipped and well-provisioned response organization cannot perform under crisis conditions indefinitely. This insight becomes especially relevant against the background of transboundary crises that, due to their long-term and global nature pose challenges of efficiency in addition to effectiveness on long-term crisis management. The COVID-19 pandemic constitutes a classic transboundary crisis event to investigate the mechanisms of long-term crisis management.

III. Case Selection and Methods

The empirical material for this research is derived through a variety of methods. We base our discussion on the triangulation of a systematic large-scale agency-level survey data (n=232) from German municipalities and qualitative interviews (n=28) with local and regional public administrators and experts. Furthermore, we analyze data obtained from a series of participatory workshops involving representatives from direct local crisis management units in North Rhine-Westphalia, Germany. The COVID-19 pandemic in Germany further serves as a fitting case study as it constitutes a classic case of a transboundary crisis event (Ansell *et al.*, 2010), and required extraordinary municipal crisis management (Kuhlmann and Franzke, 2022). Due to German federalism, municipalities were quickly in charge of tracking infections, vaccinations, and the implementation and adaptation of state-level policies such as social distancing. These non-routine tasks required unprecedented administrative resources resulting in large and interdisciplinary executive crisis teams (Krisenstäbe) at the local level (Klinger *et al.*, 2022). This unique conglomeration of very different administrative branches and fast-response organizations for a time-span of three years provides a unique case study to investigate inter-organizational crisis management in local public administrations, and cultural learning and innovation given the long time-span.

This research therefore started with semi-structured and narrative interviews with local administrative staff who were directly involved in their local crisis management teams (Anderson and Kirkpatrick, 2016). The interviews were conducted through a snowball-sampling approach, which later included both state-level and federal-level experts in crisis management. Lasting between 50 minutes and 2 hours, the first interviews were conducted in 2022, when many crisis teams were still active, while the last interviews were conducted in the second quarter of 2023, when many COVID-19 measures had just ended. In the coding process, these interviews could therefore be structured according to insights in direct involvement and hindsight reflection processes. The interviews were coded in MAXQDA by two researchers using a common coding scheme developed according to Lamnek and Krell (2016).

The survey builds on the themes uncovered in the qualitative interviews started in 2023. It addressed all German cities with at least 50.000 inhabitants, thereby covering both NUTS-3 level and LAU-level cities. The reasoning behind this threshold was a focus on where administrative responsibility could be clearly linked to local outcomes, which is typically only the case where public administrations are located in the same city such as the selected cities in Germany. Out of 191 cities, administrations from 101 cities answered with an overall n of 232. The data underwent descriptive analysis with non-responses certain question items leading to a smaller n in several cases. Lastly, three participatory workshops with local administrative staff and representatives of fast-response organizations were held, lasting 1-2 working days. The workshops took place in 2023 and were subsequently summarized in reports and coded according the same coding scheme as the interviews.



In total, the triangulation of the empirical material contained the collection of key results, which were confirmed in all three types of material and supported through a trend in the survey. Whilst the survey thereby demonstrated systematic evidence for a finding, the interviews and workshops were used to uncover the mechanisms behind this trend. To identify these mechanisms, we integrated the data at two different levels: First, qualitative and quantitative data were combined through joint display integration, where the insights from qualitative interviews were matched with the observations in the survey (Alele and Malau-Aduli, 2023). Second, from these matches, key results were based on the trends identified in the survey with qualitative interviews confirming, explaining, or questioning these results. This type of narrative integration through a weaving approach is a common triangulation approach at the level of interpretation and reporting (Alele and Malau-Aduli, 2023). The subsequent findings present these key results against the background of previous literature on transboundary crisis and practice switching.

## IV. Findings

### 1. Transboundary crisis management and lack of preparedness

Although the degree of crisis preparedness varied between different municipalities, arguably only few – if any – were prepared for handling the local consequences of a global pandemic. Beyond material and logistical constraints in supply chains and the provision of personal protective equipment, test kits and the like, and political constraints such as the implementation of higher-level regulations, a key challenge for municipalities during the pandemic emerged in human resources. The duration of the pandemic meant that municipalities had to perform intense crisis management activities over an extended time period, which soon led to a shortage of personnel.

In Germany, crisis management competence at the local level is generally concentrated among the fire brigades, the police (which, although a local actor, is itself not under the control of the municipality), and external organizations such as the Federal Agency for Technical Relief or the Armed Forces. With the possible exception of the heads of departments of public order or their functional equivalents, who frequently interact with the aforementioned groups and manage local crises themselves, municipal administrations tend neither to build nor maintain crisis management competences outside of emergencies (Int. 02., pos. 620ff.)<sup>1</sup>. In fact, since the majority of departments and their personnel usually do not consider crisis management their responsibility, they consequently are comparatively unfamiliar with, and unprepared for its specific demands (cf. Int. 10, pos. 37ff.).

The large-scale, long-term challenge of the COVID-19-pandemic displayed the structural problem of a quantitative and qualitative lack of trained crisis response personnel at the local level (figure 1). Local crisis management remains an inherently short-term-focused affair. The intense and complex work in a crisis team requires frequent rotation and rest to maintain the well-being and effectiveness of the team members (Int. 23, pos. 288ff.). However, municipal administrations differ from fire brigades and police forces in that they generally neither plan nor prepare for maintaining 24-hour-services in shift operations (Int. 19, pos. 81ff.), let alone build and maintain redundancy for doing so in longer-term crisis situations. Instead, there tends to be a relatively small and unchanging pool of

<sup>1</sup> Interviews are numbered according to the date of the interview to anonymize the answers. For reasons of internal validation, quotes are referenced according to line (position) rather than page number.

“crisis management” individuals dealing with any occurring crisis scenarios on a municipal level. This pool is therefore as experienced and competend as it is easily exhausted (Int.5, pos. 272ff).

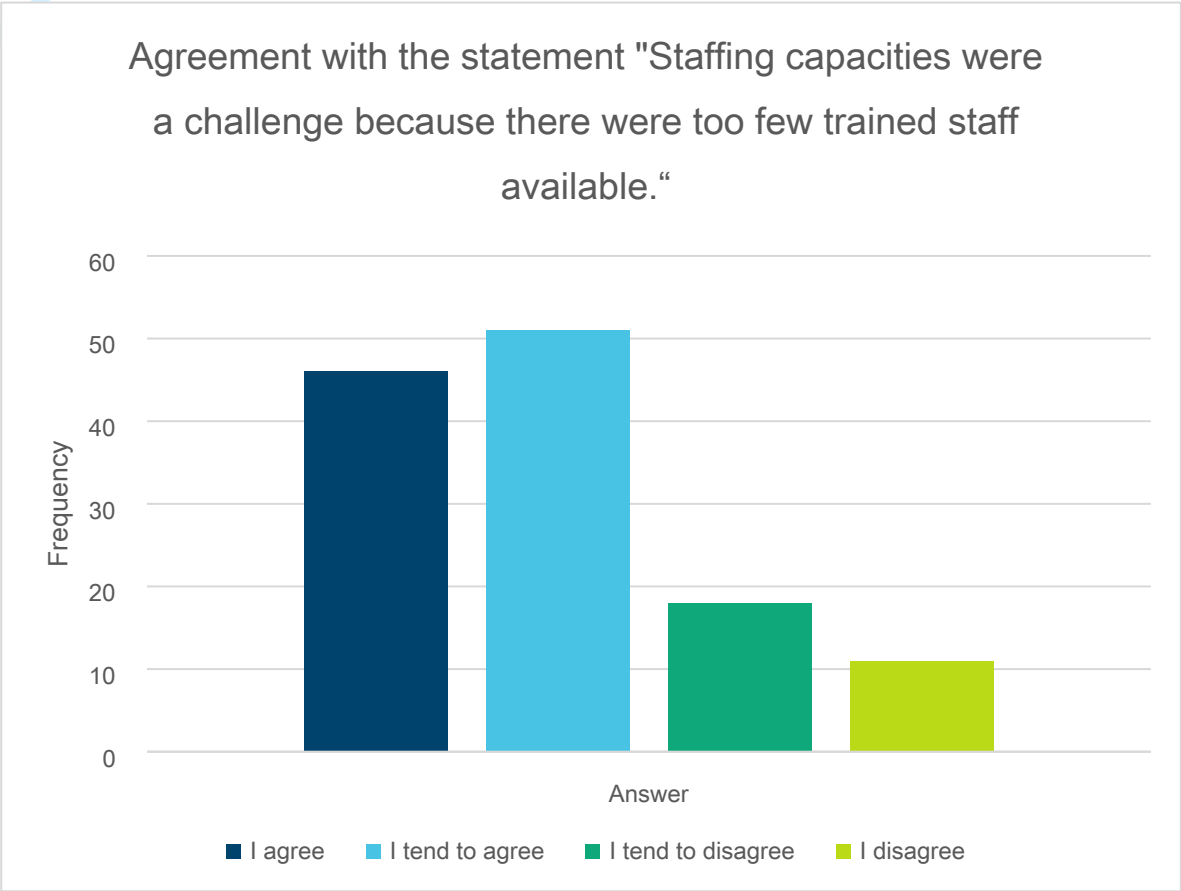


Figure 1: Lack of trained staff available in German municipalities. Source: Survey data as outlined in section 3, authors'own work.

As ceasing operations in a moment of crisis is neither a practically, ethically, nor legally viable course of action for a municipality, the continuation of work therefore mostly falls on the existing crisis team, putting ever more strain on the members over time. The survey participants strongly agree that the pandemic overburdened crisis management personnel. This combination of long-term, high-intensity strain on the same limited number of employees features prominently in the expert interviews as well (e.g., Int. 03, pos. 812). For instance, one expert explains how the lack of rotation options in the face of constant demands on the crisis team attrited even the highly motivated as well as the professionally trained and experienced team members (Int. 02, pos. 561ff.; ibid., pos. 1702ff.). Another expert recounts sleeping at the crisis management center for months in the early phase of the pandemic due to the long hours, at the expense of their private and family life (Int. 05, pos. 292ff.). A third states to “never have worked as exceedingly much in my life as I did during the early months of the pandemic, meaning early 2020. I never added up the total hours, but that was an immense workload for me personally” (Int. 13, pos. 302ff.).

While such effects would likely have emerged in any crisis scenario over time, the pandemic presented an unusually taxing environment for the individuals of the crisis team. Its multidimensional nature meant that it spanned virtually all areas of society and therefore personally affected virtually anyone directly or indirectly to varying degrees. Usually, personal involvement in a crisis (e.g. having one’s own home in a flood zone or family members in a hostage situation) is a criterion for removal and substitution from the crisis team. During the pandemic, however, this was simply impossible: Not only were there hardly any substitutes to draw on to begin with, but those

substitutes themselves would have been similarly affected. In addition, the political tensions and polarization surrounding the pandemic management resulted in personalized attacks on members of the administration with an online presence in social media (Int. 21, pos. 404ff.) both as representatives of “the government” and as individuals. Other experts report personalized attacks in local newspapers, insults, threatening mail including death threats (Int. 02, pos. 1782ff.) and even physical attacks by frustrated citizens (Int 16., pos. 884ff.).

This downward spiral of attrition was further exacerbated by the fact that the intensity of crisis work made it very difficult to fix structural deficits during ongoing operations. Therefore, even if municipalities were able mobilize their limited available reserves or hire short-term support, the differences in experience and training risked rotating in staff not (yet) ready for the task. This affected both the team’s immediate performance and the quality of knowledge transfer between shifts and teams, which in turn impeded long-term decision-making processes and situational assessments (Int. 11, pos. 60ff.). Ideas such as the re-activation of retired crisis team members are suggested as a stopgap measure in times of need but not as a structural fix for this problem (Int. 3, pos. 1235).

However, the survey respondents were undecided if merely adding more personnel would have alleviated the situation (figure 2). The interviewees suggest that quantity alone might not be sufficient to solve the problem. The required personnel also need adequate skills, as individuals untrained in crisis management are difficult to integrate in existing crisis team structures (Int. 14, pos. 301ff.). The interviewees therefore repeatedly stress the need for rooting crisis management competence in municipal administrations, possibly by including it directly in the curriculum of relevant professional degrees (Int. 18, pos. 306ff.). The experts argue for a pool of pre-trained crisis management personnel either within the administration or via easily accessible external pools, since adequately training or hiring new staff under crisis circumstances proved very difficult and bound the already scarce resources of experienced team members (cf. Int 20, pos. 416ff.; Int. 16, pos. 503ff.; Int. 20, pos. 384ff.). Furthermore, there was a noticeable disconnect between the work modes and operational logics of fast-response-units and the municipal administrations involved in crisis management during the pandemic. Neither were intuitive for the other side and required a significant amount of communication and adaptation (Int. 5, pos. 748 ff).

Therefore, although crisis management structures existed, the length, breadth, and seemingly boundless nature of the crisis posed considerable challenges for local crisis management. Despite being personally affected, administrative staff continued to work in crisis teams throughout the course of the pandemic, oftentimes with little formal training or knowledge of crisis management structures and routines. These findings paint a grim picture of overwhelmed local crisis management. However, as will be argued, public administrations can react in flexible and resilient ways to these challenges, which did not only alleviate pressures during COVID-19 pandemic, but also reveals possible mechanisms for successful crisis management in future crises.



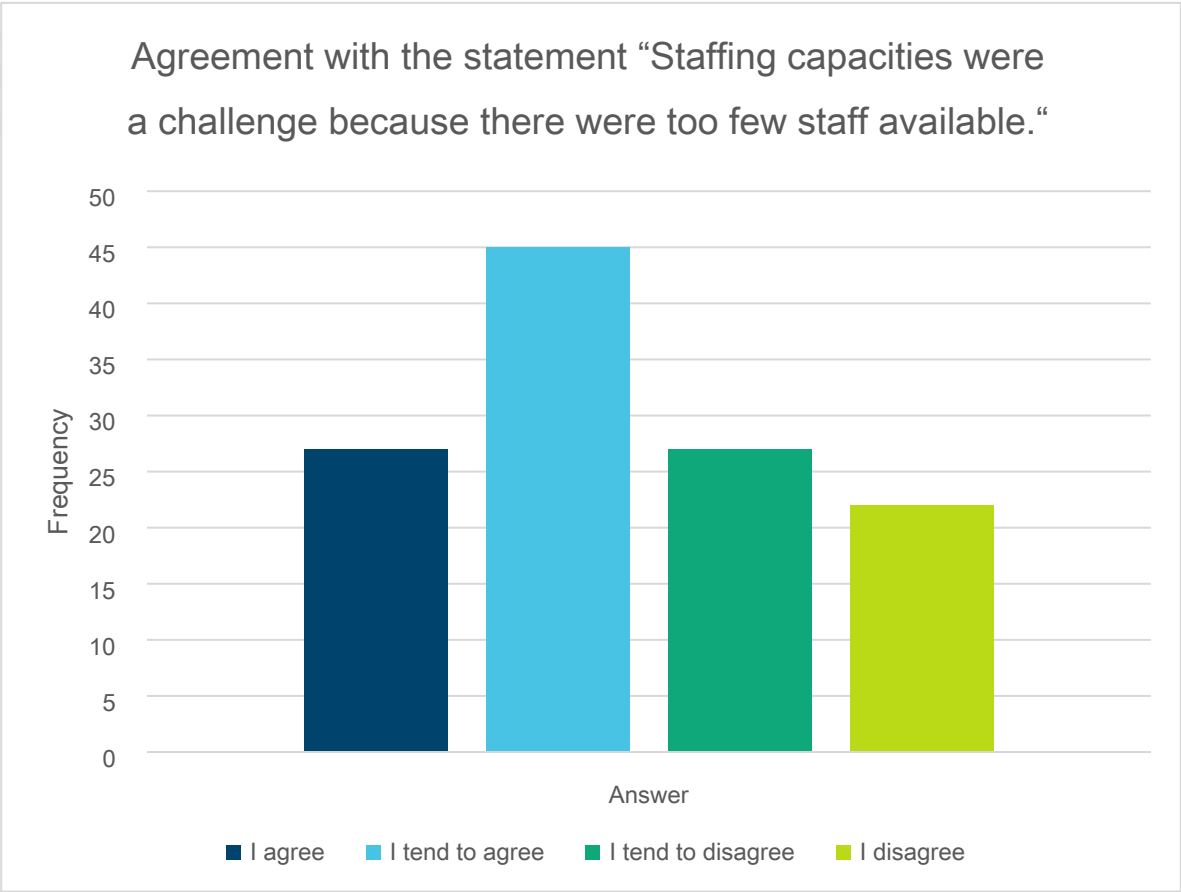


Figure 2: Lack of staff in German municipalities. Source: Survey data as outlined in section 3, authors'own work.

1. Practice switching, Practice sharing

Practice switching to crisis mode, working long hours in crisis teams until the threat or hazard is under control, are challenging in long-term transboundary crises such as the COVID-19 pandemic. If put in this situation administrative staff wears out at an unsustainable rate, so this common approach of applying maximum resources to a crisis significantly limits the crisis teams' durability. However, in the COVID-19 pandemic, local public administrations did not just imitate the work of fast-response organizations; they worked with these organizations in joint crisis teams. As local public crisis management focuses on short-term crises, crisis management structures routinely include representatives and expertise of fast-response organizations. In long-term crises such as COVID-19, however, these in turn rely heavily on the expert knowledge of local agencies. We argue that practice sharing of these organizations helped sustain long-term success in crisis management, which was fostered through cultural learning and organizational innovation, as we will show below.

Crises are exceptional but also highly contextual situations with little definitional clarity. German law (ZSKG) prefers to use the term disaster (Katastrophe), which – if officially declared – serves a dual purpose. First, by delineating a limited state of exception this „state of disaster“ enables administrations to structurally and procedurally adapt to meet the demands of the moment, e.g. by forming crisis teams (Krisenstäbe). Second, it upholds a distinction within the German national security architecture, with the federal states responsible for (natural) disaster protection, and the federal government (primarily tasked with national defence) only supporting upon request.

Therefore, crisis teams are very common state- and local-level tools for crisis management. Their precise forms and functioning differ but are commonly defined in state-level law, which prescribes

organizational and executive hierarchies and decision-making power (Wissenschaftliche Dienste des deutschen Bundestages, 2021). In case of COVID-19, 85% of the responding cities activated a crisis team as foreseen in law. However, contrary to previous crises, the breadth of involved administrative units was large. Involved units typically ranged from health departments to traffic departments with 50% of cities indicating 12 or more departments taking part in their crisis team.

As outlined in state-law, organizational leadership usually falls into the responsibility of the fire department: 75% of cities indicated fire departments as leading units within the crisis team. However, in addition, executive and technical expertise was sourced widely among the local offices of public order, health agencies as well as legal and social offices to address the multidimensional complexity of the pandemic. As one respondent puts it: “[T]he fire department was part of the leadership and supported [the crisis team] a lot. But it was [only] part of a network and part of general crisis management. [The fire department] was not crisis management itself” (Int 1, pos. 43 ff).

Regarding in the beginning of the crisis, staff of the fire department report frustrations over lack of capacity and crisis competence in the health agencies responsible for tracking infections, sometimes resulting in the urge to take over crisis management: “[...] We knew, the health department would not be able to handle [the situation] on their own. Not even with a thousand more people” (Int 1, pos 11 f). They further criticized lack of acute crisis awareness (int 1, pos 28 ff) and staffing capacities due to previous austerity measures (Int 23, pos. 11), while other organizations criticized the fire departments’ lack of long-term planning and process management (Int 23 pos 507 f).

In the beginning, both these organizational differences as well as cultural differences led to stark conflicts in crisis management:

“[...] In the beginning, we said: Okay, we will create a joint vaccination team [in the city]. And on Friday 12pm, we could not reach anyone in the health department anymore. [We thought] ‘you cannot be serious!’, but it was completely normal. [At] the health department, you drop everything [...] and leave outside of office hours. [...] To tell them that we needed a standby-duty took a long, long time” (int. 23, pos 603).

Respondents described these challenges as “[...] the constant conflict between crisis management and the everyday bureaucracy, because both areas have a different understanding of processes and risks” (Int 11, pos. 249 ff). Moreover, both areas follow internally coherent logics in pursuit of different and at times diametrically opposed goals. This can lead to severe frictions and communication challenges when a situation like a long-term crisis requires the close cooperation and strategic congruency of both areas.

However, from these hurdles and the stark need for inter-organizational cooperation, our findings reveal a range of organizational solutions that we conceptualize as practice sharing. In contrast and addition to practice switching, this term refers to cultural learning between fast-response organizations and public administrations, and to organizational innovations that entail working practices of both fast-response organizations and public administrations. Notably, the same interviewee complaining about the lack of crisis awareness later describes distinct organizational solutions that brought together the quarreling units:

„[In the end, it was] social, interpersonal competences. We sent two people, [of which] one now permanently works at the health department. The other, I believe, [...] also still works there and is a liaison officer.” (int 23, pos 613 ff).

This classic example of a broker demonstrates the capacity for organizational and cultural learning: brokers typically enable empathy and compromise in tense organizational settings, function as common contact persons, and enable cultural learning and practice sharing in organizations (Weber

and Yanovitzky, 2021). Therefore, although an initial practice shift of health agencies was oftentimes difficult, practice sharing led to the establishment of common grounds.

Another example is a fire department supporting the restructuring of the crisis team by training administrative staff in crisis management (Int 12, pos. 141 ff). Further, some administrations used the 24-hour-shift system of police force and fire department as inspiration to ensure the presence of personnel throughout the crisis (Int 19, pos. 81 ff). Fast-response organizations learn crisis awareness (the mindset) and crisis management (the set of processes and methods) during their training. Their personnel tend to maintain and hone it over the course of their careers, whereas the administrative branch is usually forced to build it up from scratch in a crisis and has no easy way of preserving the acquired competence. In fact, one might say that precisely the return to routine bureaucracy for the administration marks the successful conclusion of the crisis. Such a view creates an almost gravitational pull towards routines and away from the exception for administrations. One interviewee suggests that much more flexibility in this point is needed to use practice sharing as a fast solution for the administration (Int 27, pos. 700 ff).

A different solution with a similar outcome was manifested in the long-term adaptations made to crisis teams. As discussed previously, long-term work in high-pace environments with a range of different stakeholders wore out staff quickly with few options to rotate and rest personnel. Crisis teams adapted over the course of the crisis and working modes shifted towards smaller units (workshop I, 2023). However, taking a closer look at the type of crisis management, it can be seen that compared to the beginning of the crisis, the overall structure of crisis teams did not change much. Moreover, for each type of crisis team chosen, the overwhelming majority of cities would choose the very same organization again (figure 3). Furthermore, participating cities indicate little change in the number of active departments in long-term crisis management (figure 4). Even though the mean number decreases to 10 participating departments, there is no significant difference between the initial and long-term crisis team size.

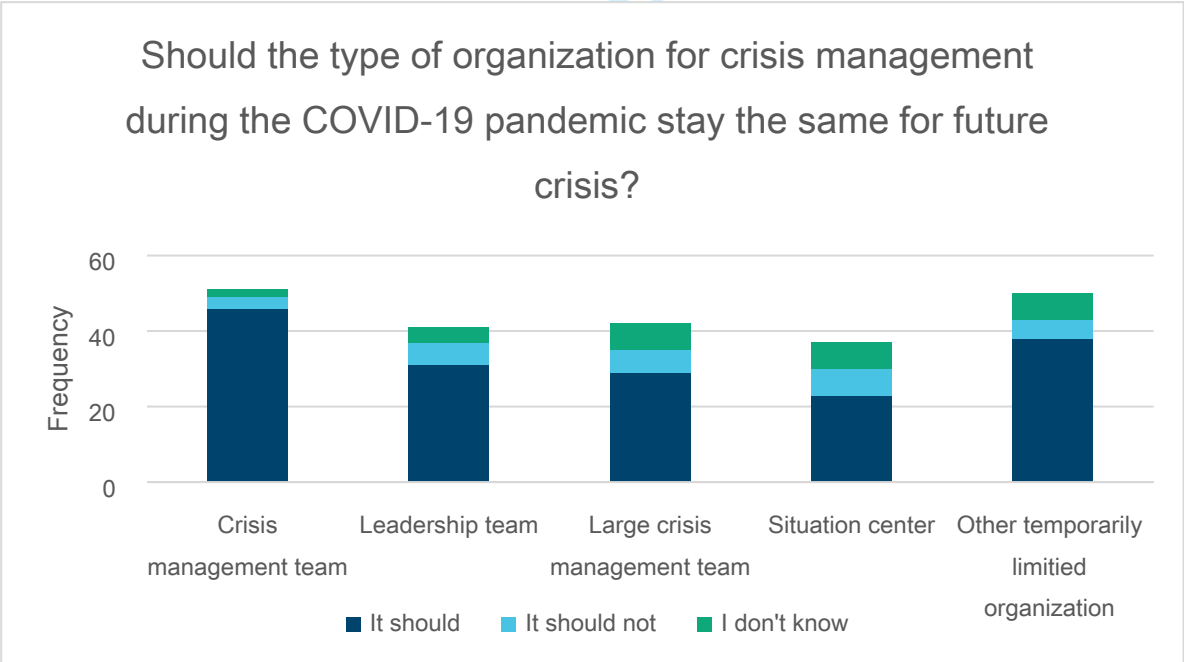


Figure 3: Agreement on future types of crisis manamement organizations. Source: Survey data as outlined in section 3, authors'own work.

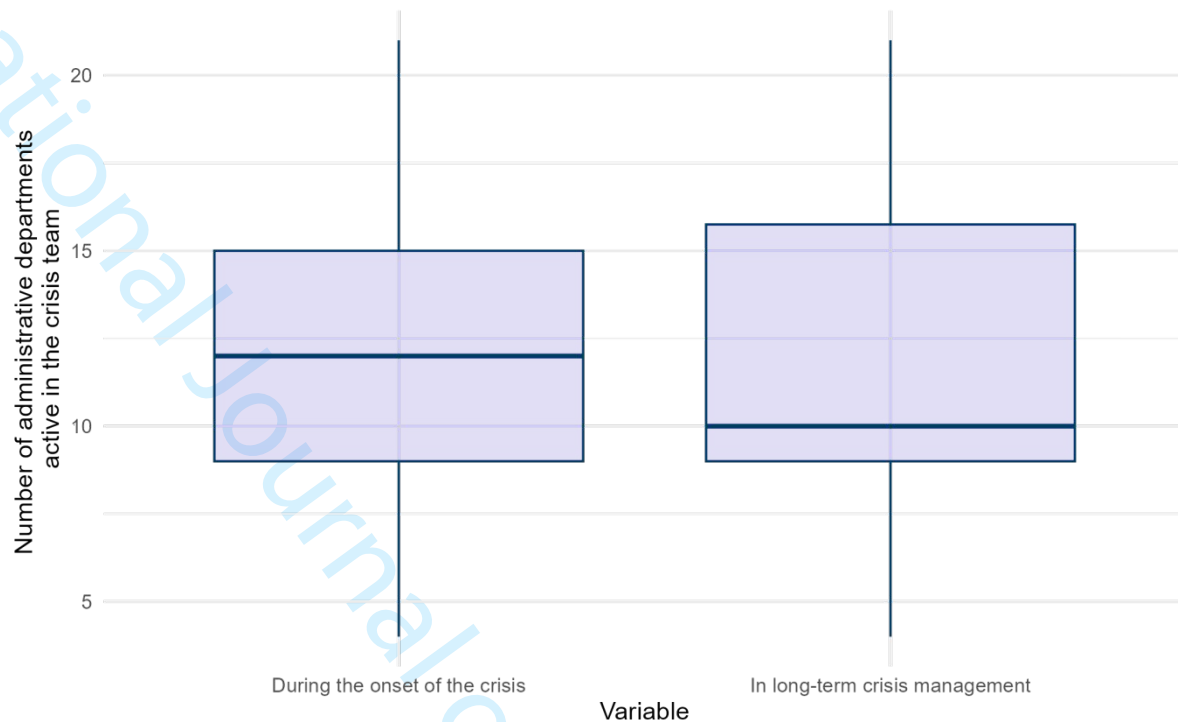


Figure 4: Differences in crisis team size in short-term and long-term crisis management.

Source: Survey data as outlined in section 3, authors' own work.

This finding is in slight tension with the results from the workshops, in which participants report in great detail the necessity for organizational changes over the course of the pandemic. First, it was recognized that routine bureaucracy could not be put on hold for three years: unsolved issues accrue „administrative debt“ that built up over the course of the pandemic would have to be tackled afterwards (Int. 2, pos. 612ff). The revelation that police and fire departments could and should not simply “take over” in case of crises (Int. 3, pos. 985ff) led to conceptualizing crisis management as a cross-sectional task. In the workshops, participants discussed a hybrid, scenario-based unit, which combined technical expertise from several administrative branches, but adjusted their meetings to the crisis teams: this way they could anticipate potential impacts of executive decisions made in the crisis team. This combination of technical expertise and working hours matching fast-response organizations proved valuable in the long-run: the participants report higher efficiency and faster roll-out of vaccination campaigns through scenario planning. Therefore, although public administrations do not question the general necessity for crisis teams as such, their set-up and purpose were significantly altered over the course of the pandemic.

This broad structure of crisis teams with downsized adhoc units meeting less regularly was also found in different instances: to relieve crisis teams of their executive pressure and work load, other cities used clustering approaches headed by fire departments, or coordinating preparation teams to reduce long working hours of the crisis teams themselves (workshop I, 2023). Rather than experimenting with random organizational forms, these solutions have two crucial premises in common: First, previous resource-intensive crisis management was not fit for the long-term, and second, that interdisciplinary crises still require extraordinary and flexible structures that resemble fast-response organizations. Public administrations and fast-response organizations need to share these practices. These qualitative insights further demonstrate the high satisfaction with crisis teams among cities: these hybrid adaptations to municipal crisis management do not require a fundamental reform of crisis teams; instead, cities may stick to foreseen organizations whilst changing their staffing and practice.

This finding marks a useful insight for tackling transboundary crises. Although the challenges of cross-agency and long-term crisis mode remain valid, practice sharing also points towards

resilience of local governments: Through cultural learning by means of brokers or interdisciplinary adaptation to crisis teams local administrations shared practices of technical expertise and crisis management. This allowed both for maintaining routines in spite of crises, and accelerated decision-making in spite of Weberian bureaucracy.

V. Discussion

The empirical findings of this research result in two main arguments. First, established crisis management structures and processes at the local level showed significant shortcomings when faced with transboundary crises. And second, that practice sharing between fast-response organizations and public administrations can alleviate some of these shortcomings. Both results are crucial to discuss against previous insights from literature as they build on established theories of crisis management in transboundary crisis settings.

First, the COVID-19 pandemic exemplifies the transboundary nature of crises, affecting multiple jurisdictions, sectors, and time periods. This transboundary character posed significant challenges for local public administrations, including the rapid depletion of resources and the overextension of personnel capacities. The prolonged duration and dynamic nature of the crisis, coupled with the intensity of work and the need for continuous adaptation to changing circumstances, stretched the limits of individual and organizational resilience. The findings highlight various stressors experienced by public administration employees, including the lack of sufficient personnel reserves, unequal distribution of workload, and inadequate interdepartmental and interdisciplinary support.

These findings resonate with the anticipated challenges by Ansell *et al.* (2010) and previous literature on maladaptive responses to such crisis events (Ringsmuth *et al.*, 2022). German municipalities are no single case in these challenges: Räisänen *et al.* (2023) conclude in their study “Finnish crisis management had overlooked the extent of transboundaryness of present-day crises and is lacking consideration of how crises turn into chronic conditions that deplete capacities over time” (p.266). While our results therefore point towards necessary reforms in acute crisis management, international examples demonstrate the needs for future preparedness.

Furthermore, the findings underscore the importance of effective crisis management strategies, including the need for proactive measures to address personnel shortages, enhance interdepartmental cooperation, and incentivize collaborative efforts as outlined by Ansell *et al.* (2010). Establishing robust systems for knowledge management, personnel retention, and skill development is crucial for building organizational resilience and ensuring the continuity of essential services during crises.

Despite the myriad challenges, the pandemic also presented opportunities for innovation and long-term improvements in administrative practices. Graf *et al.* (2023) provide valuable insights into mechanisms of early-crisis response in local governments. Our findings and conceptual understanding heavily builds upon their work. Our results show that whilst practice switching may prove useful and necessary in the onset of crisis, it does not sustain local crisis management in long-term settings. Resource constraints allow neither for a continuous practice switch of public administrations nor for a cycle of iterative practice switches. Instead, practice sharing offers a hybrid solution in long-term crisis settings, where local administrations work together with fast-response organizations with differing working logics and cultures.

This does not say, however, that resource-intensive practice switches might not be necessary in the beginning of a crisis. The COVID-19 pandemic showed considerable uncertainty for governments before transmission pathways, vulnerable groups, and potential vaccinations were known. Hence, our results cannot establish causal links between practice sharing and successful crisis



management without doubt. It is possible that reduced uncertainty over the course of the pandemic also allowed for more hybrid crisis management. Despite the vast empirical material of this study, such clear links should be subject to future research and hypothesis testing. Our findings, however, show clear differences between those municipalities stuck in resource-intensive crisis teams and those that enabled forms of practice sharing. Hence, it stands to reason that even in transboundary crises with long periods of uncertainty, limits to current crisis management will become apparent. The advantages of practice sharing through institutional brokers and small task-driven teams in contrast can guide future municipal crisis management.

Importantly, this research did not concern itself with other crucial elements of good crisis management. While we focused on effectiveness through self-reported effectiveness in crisis management, and efficiency in terms of resource-efficiency, much research points out the relevance of public legitimacy and democracy in crisis management (Lenz, 2024). The perceived lack of such in long-term crises could be seen in the COVID-19 pandemic and many scholars have argued that crises as times of executive decision-making put legitimacy at stake (Bogner and Albiez, 2023; Martí, 2022). Hence, while our findings recommend certain organizational changes to crisis management, they are still situated in a narrow executive realm agnostic to democratic principles. Public polarization during COVID-19 shows (Eberwein *et al.*, 2023), however, that future research should take into account and address these tradeoffs of crisis management. This shift from crisis management to crisis governance would allow for a more holistic understanding for future transboundary crises that are bound to come.

## VI. Conclusion

The empirical findings of this research contribute significantly to our understanding of crisis management in the context of transboundary crises. The study highlights two main arguments: first, the inadequacies of established crisis management practices at the local level when confronted with transboundary crises, and second, the potential benefits of practice sharing between fast-response organizations and public administrations in mitigating these shortcomings. These findings build upon established theories of crisis management in transboundary crisis settings, and can aid future policy makers in crisis management.

The COVID-19 pandemic serves as a poignant example of the transboundary nature of crises, presenting challenges that extend across multiple jurisdictions, sectors, and time periods. Local public administrations faced significant obstacles, including resource depletion, personnel overextension, and the need for continuous adaptation to evolving circumstances. Stressors experienced by public administration employees ranged from insufficient personnel reserves and unequal workload distribution to a lack of interdepartmental support. However, while the study acknowledges the necessity of resource-intensive practice switches in the initial stages of a crisis, it also underscores the limitations of such approaches in sustaining local crisis management over the long term. Practice sharing emerges as a viable solution, facilitating collaboration between local administrations and fast-response organizations with differing working logics and cultures.

Nevertheless, the study acknowledges the inherent uncertainty of crisis management dynamics, particularly in the early stages of a crisis like the COVID-19 pandemic. Causal links between practice sharing and successful crisis management remain subject to further research and hypothesis testing. These linkages as well strategies as to how practice sharing can be enabled in crisis preparedness in the future should guide future studies. This research focuses primarily on effectiveness and resource efficiency in crisis management, neglecting other crucial elements such as public legitimacy and democracy. Future research should consider these dimensions, particularly in light of the perceived lack of public legitimacy during prolonged crises like the COVID-19

pandemic. A shift towards crisis governance, incorporating democratic principles, would provide a more holistic framework for managing future transboundary crises.

In conclusion, if crises are the ‘new normal’, this study shows ways in which crisis management should not and does not have to stay the same. We emphasize the need for continuous learning and adaptation in crisis management practices. Integrating lessons from the COVID-19 pandemic into future crisis preparedness efforts can enhance organizational resilience, promote collaboration, and ensure effective crisis response in the face of transboundary challenges.



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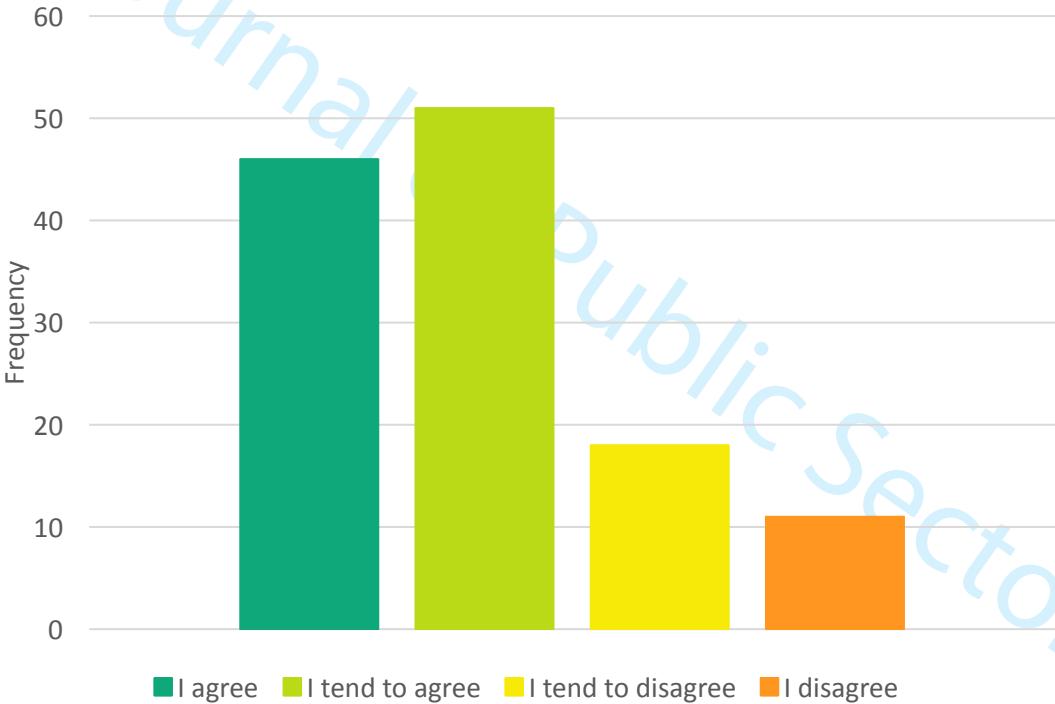
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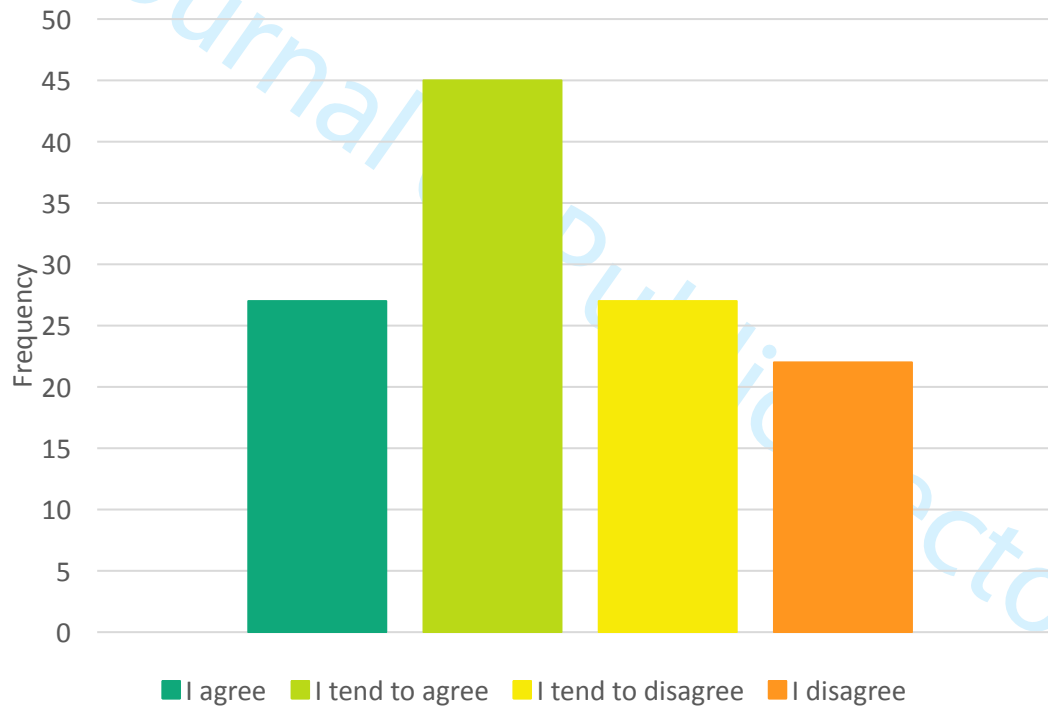
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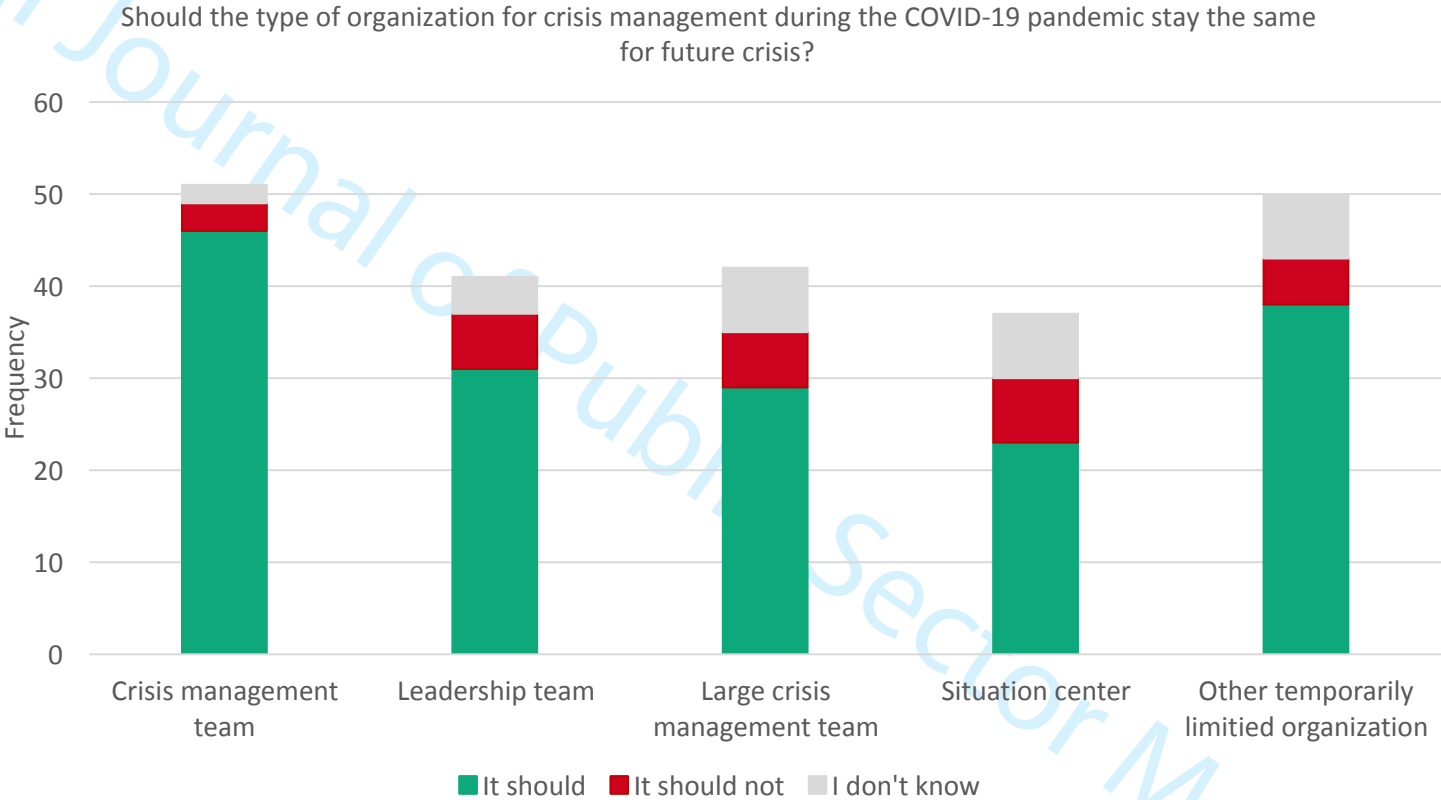
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Agreement with the statement “Staffing capacities were a challenge because there were too few trained staff available.”



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## Sharing is Caring: Effective Local Crisis Management through Practice Sharing

### List of Figures

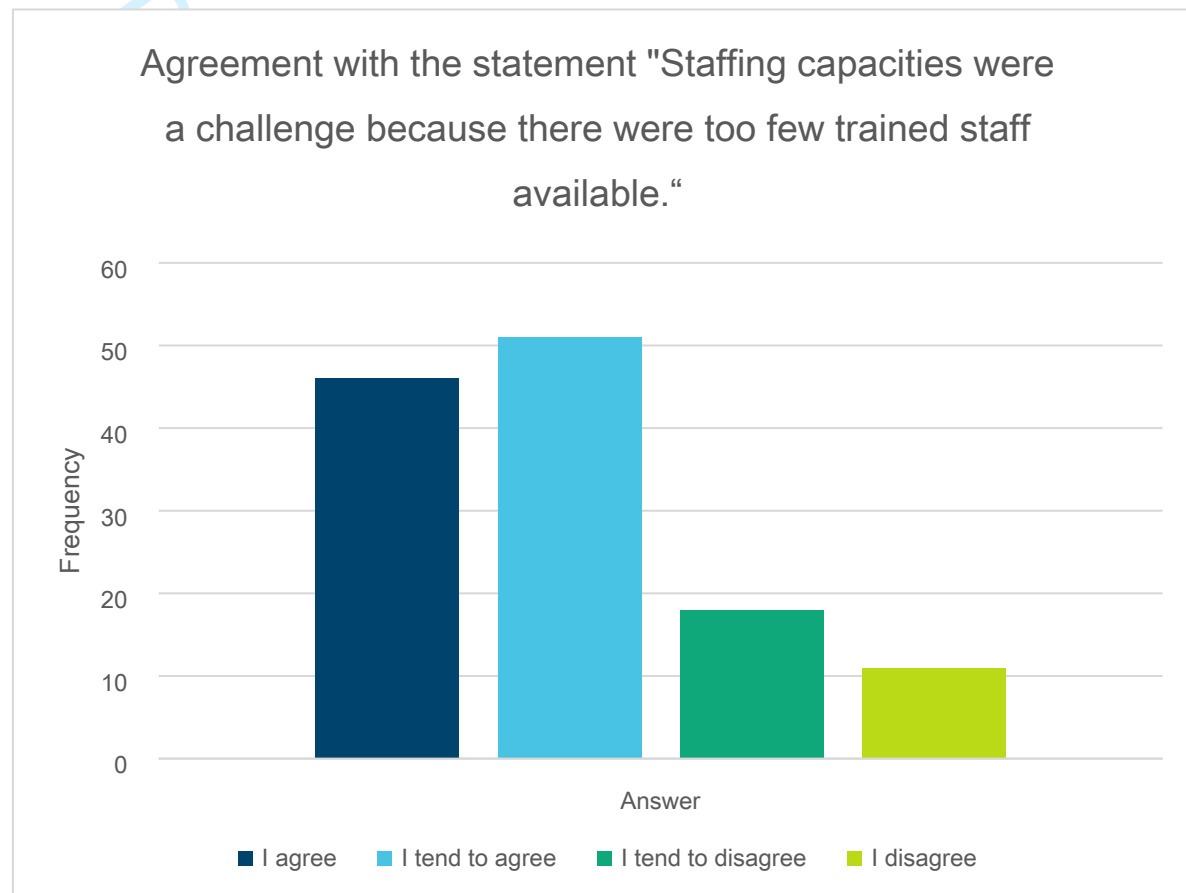


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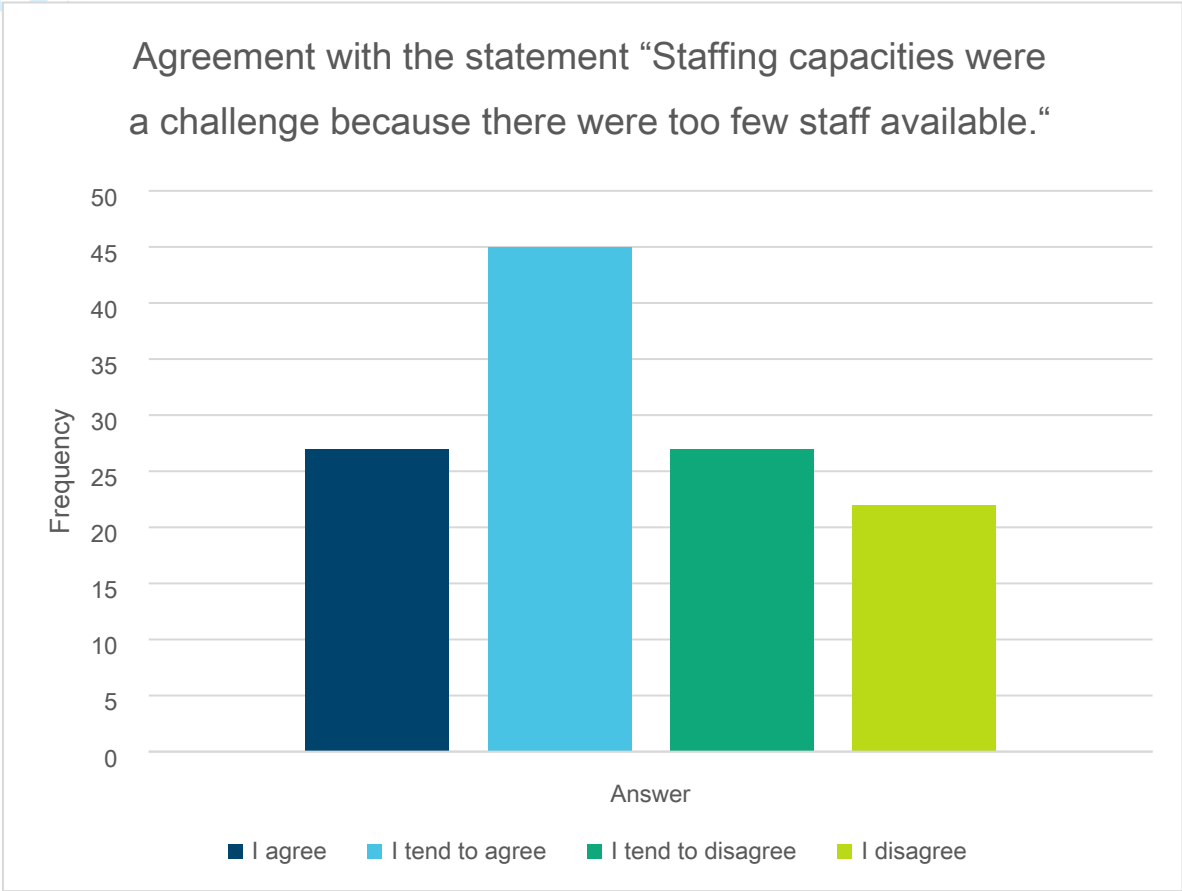


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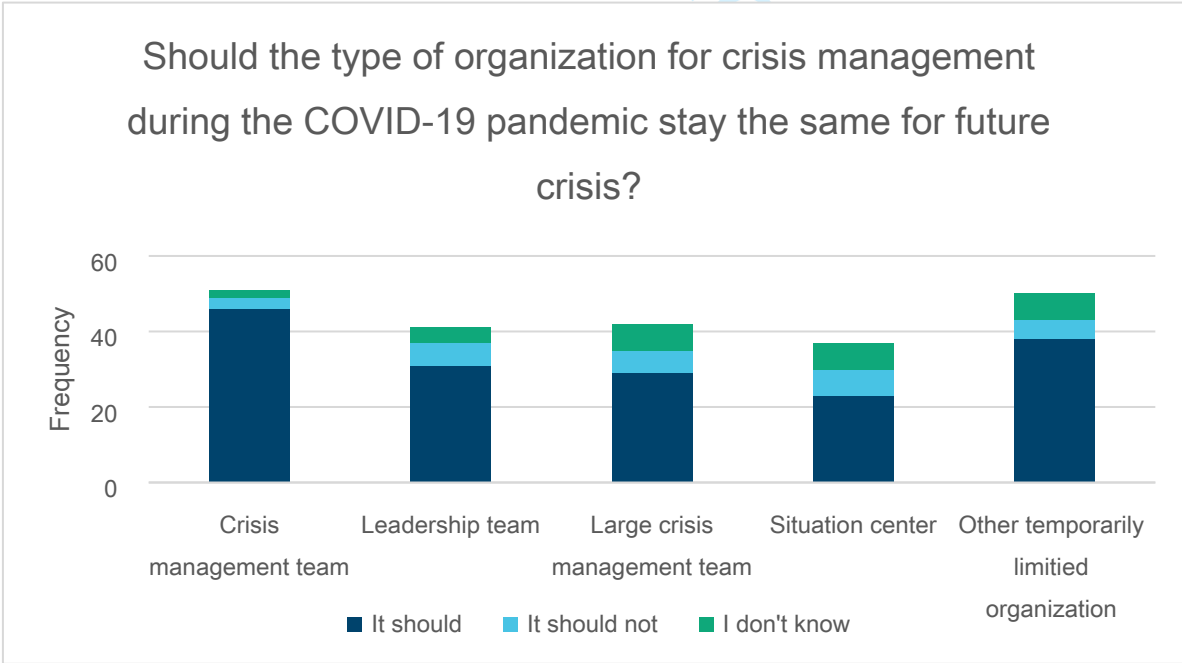


Figure 3: Agreement on future types of crisis manamement organizations. Source: Survey data as outlined in section 3.

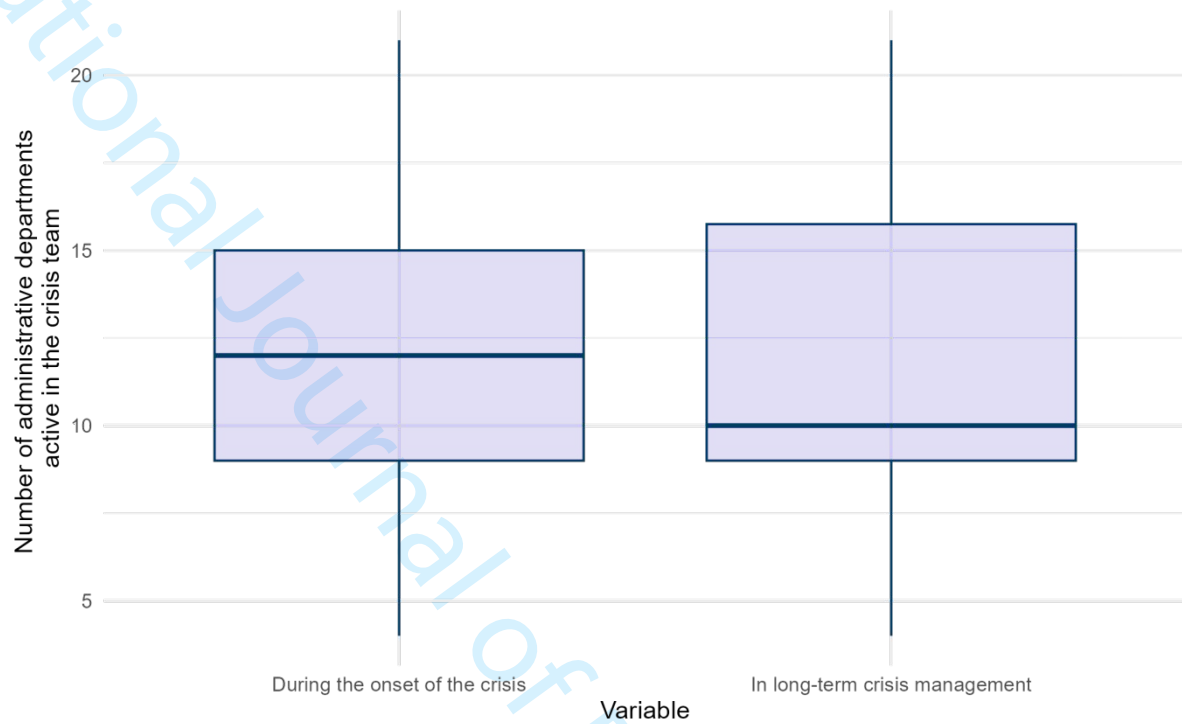
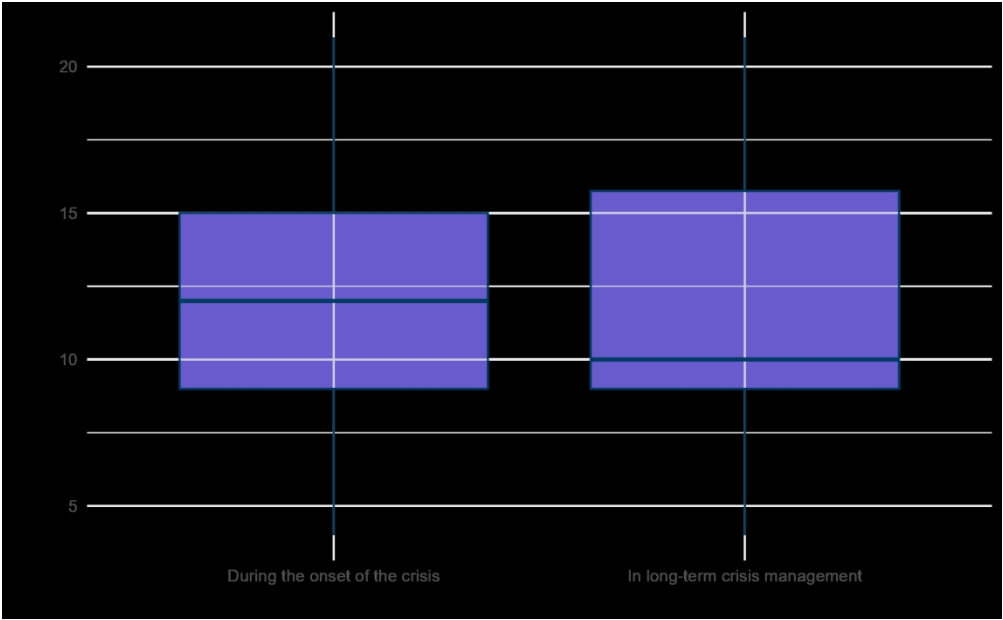


Figure 4: Differences in crisis team size in short-term and long-term crisis management.  
Source: Survey data as outlined in section 3.



470x290mm (118 x 118 DPI)