

Sharing is caring: effective local crisis management through practice sharing a case study from Germany

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Abstract

Purpose – Transboundary crises pose considerable constraints on crisis management. The duration and global character of COVID-19 serve as prime examples of such a crisis. This research aims to both explore the effect of COVID-19 on local crisis management, and how local actors adapted crisis management practices to the transboundary demands of the crisis. While previous research stresses the importance of practice switching into crisis mode, this research sheds light on the relevance of practice sharing for the management of long-term crises.

Design/methodology/approach – Our discussion is based on the integration of systematic large-scale agency-level survey data from German municipalities and qualitative interviews with local and regional public administrators and experts. Furthermore, we analyze data obtained from a series of workshops involving representatives from local crisis management units in North Rhine-Westphalia, Germany.

Findings – We find that in addition to practice switching, successful local crisis management depends on practice sharing: Not only do public administrations have to switch to modes that resemble fast-response organizations; they also work and communicate with 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. Practice sharing between these organizations constitutes cultural learning and organizational innovation, supporting potential preparedness efforts for future crises.

Originality/value – This paper identifies new mechanisms of successful long-term crisis management in local public administrations, which aids the governance of future transboundary crises.

Keywords Crisis management, Local government, Practice sharing, COVID-19, Crisis governance, Transboundary crisis

Paper type Research article

1. 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 a long-term resilient crisis response. Municipalities tend to have a crucial role as they are closest to local needs and oftentimes directly responsible for immediate crisis response (Nilsson, 2010). During the COVID-19 pandemic, local governments showed great variation in responsibilities across Europe. Where crisis management was decentralized, municipalities distributed and administered vaccines, tracked infections, and implemented and monitored federal or state-level measures

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(Kuhlmann *et al.*, 2024). Unlike local and short-term crisis events such as accidents or fires, a transboundary crisis like a pandemic requires the integration of both fast-response capabilities usually associated with first responders and 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 room for improvement in existing municipal crisis management arrangements.

The former becomes apparent in two gaps in previous literature on crisis management. Previous studies focus, for example, on coordination structures (Alexander, 2013; Hu and Liu, 2022) or health organizations in the case of the COVID-19 pandemic (Kim *et al.*, 2022). Recent studies, however, address this gap by arguing that *switching* from routine bureaucracy to a crisis mode that resembles practices of fast-response units enables effective local crisis management (Graf *et al.*, 2024). This mechanism is crucial to understanding the organizational mechanisms behind local crisis management at the onset of the pandemic. It also suggests a second gap in the 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. We still know relatively little about how the local level performs during such a crisis, and why. Transboundary crises transcend political, temporal, and functional boundaries, greatly increasing the risk level, complexity, and uncertainty of crisis management (Ansell *et al.*, 2010). COVID-19 clearly demonstrated the need to prepare for future transboundary crises (Räisänen *et al.*, 2023), and scholars have argued that public administrations play a key role in prevention, risk management, and regulation (Boin and Lodge, 2016). This study therefore asks whether existing crisis management structures and processes at the local level meet the demands of managing a transboundary crisis, and how local administrations adapt to these demands.

We address these questions in the context of the highly decentralized crisis management of Germany, where local actors had significant room to adapt and innovate over the course of the pandemic (Kuhlmann *et al.*, 2024). We make use of large-scale agency-level survey data, qualitative interviews, and workshops with German local public administrations. We argue that first, transboundary crises such as the COVID-19 pandemic reveal structural limitations of existing crisis response practices geared towards managing short-term events; and second, that in the long run, municipalities adopt practice sharing in addition to practice switching. Rather than merely imitating the work of fast-response organizations, local crisis teams (*Krisenstäbe*, see section III.) show cultural learning and organizational innovation. This occurs through the collaboration of public administrations and fast-response units. Through a range of organizational adaptations, practice sharing facilitates a more sustainable long-term crisis management. The difference between practice switching and practice sharing lies in the involved actors and in the directionality of the adaptations. Practice switching refers to administrations following fast-response organizations, whilst practice sharing refers to mutual influence and adaptation between fast-response organizations and public administrations. Such innovations are particularly useful for contexts of long-term crisis management with high decentralization at the local level. Where a switch to crisis mode proves unsustainable and exhaustive in the long run, such hybrid forms of management structures can provide better communication between departments, and relief to overworked staff. While this study does not directly translate to more centralized crisis management such as in France or the UK, we argue that the insights of inter-organizational exchange and adaptation to long-term crises can prove useful for future transboundary crises.

2. Conceptualizing local crisis management in transboundary crises

Transboundary crises pose considerable challenges to contemporary governance structures, transcending political, temporal, and functional boundaries. They demand urgent action under conditions of deep uncertainty (Ansell *et al.*, 2010). From financial crises and full-spectrum military conflicts, to climate change and collapsing ecosystems, transboundary crises typically demonstrate transboundedness in one or more dimensions. The COVID-19 pandemic fits this description due to its global character (geographical transboundedness), long-term nature

(time transboundedness), and complex cross-sectional impacts (functional transboundedness) (Boin, 2005). Those mutually reinforcing crisis dimensions tend to challenge traditional response mechanisms and blur organizational boundaries (Boin, 2019). Transboundary crises require that governments rapidly mobilize resources and coordinate responses across multiple jurisdictions (Boin, 2005). However, such joint multi-level and multi-state crisis response, though often necessary, does not occur automatically (Blondin and Boin, 2020).

Given the exceptional nature of transboundary crises, COVID-19 demonstrates an urgent need to research crisis management accordingly to improve future responses. Ringsmuth *et al.* (2022) argue that risk management practices during the pandemic can and should inform future management of climate change impacts. Among the most important insights, they list adaptive risk management, and awareness for cross-sectoral impacts. However, their work focuses primarily on transnational and global response to the pandemic, whilst often, direct crisis management took place at the local level (OECD, 2020). Likewise, local governments tended to play a key part in pandemic management and relief efforts, across different continents (Nunes and de Oliveira, 2023; Anttiroiko, 2021) and across different administrative traditions with varying degrees of centralization (Kuhlmann *et al.*, 2024). While there is growing acknowledgment of the role of local public administrations in crisis management, only a few studies address the local level systematically (Behnke and Eckhard, 2022; Graf *et al.*, 2024; Padovani and Iacuzzi, 2021).

Studies at the local level have demonstrated structural challenges of local public administrations across Europe and Asia such as limited staffing redundancies, financial constraints, slow digitalization, and decentralized structures (Kersting and Graubner, 2020; Green and Loualiche, 2021; Talabis *et al.*, 2021). Given these structural challenges, it is paramount to investigate local governments' crisis response to improve preparedness for future transboundary crisis. How, then, can local public administration ensure effective crisis management under these conditions (Behnke and Eckhard, 2022; Webb and Chevreau, 2006)?

Earlier studies focusing on the local level argue that rather than formalized crisis management plans, administrations' ability to flexibly adjust their organizational behavior matters for effective crisis management (van Aken and Fenema, 2014). These informal and temporary shifts in practice are otherwise uncommon in public administrations and routine bureaucracy (Eckhard *et al.*, 2021). However, other studies suggest that local governments relied heavily on improvisation and short-term adaptations rather than coordinated responses (Padovani and Iacuzzi, 2021). More recent research on the COVID-19 pandemic suggests that public administrations resort to "practice switching": Graf *et al.* (2024, p. 2) conceptualize practice switching as the "transition between routine bureaucracy and crisis response in public administrations". They identify procedural and organizational change at the onset of crises into an operational mode resembling that of fast-response organizations. Schakel and Wolbers (2021) argue that fast-response organizations need to alternate between sets of practices depending on the severity of the situation. Differently put, they balance permanent readiness for routine operations with surge capacities for exceptional circumstances (Ansell *et al.*, 2010; Graf *et al.*, 2024; Doberstein, 2016). While such a switch appears to be effective in the short term, we do not know exactly how crisis management continues after practice switching takes place. Many of the studies were published during the pandemic without a sufficient focus on long-term adaptation in crisis management. Furthermore, fast-response organizations are characterized by sets of actors quickly mobilized to handle temporary crises (Schakel and Wolbers, 2021). Such a high-readiness surge capacity is not easily transferable to administrative contexts. While the concept of a practice switch implies a separation between fast-response organizations and public administrations, in practice, they frequently collaborate closely in crisis settings. (Nachbagauer, 2022).

Based on this close cooperation of many affected sectors during the pandemic (Ringsmuth *et al.*, 2022), we expect knowledge sharing and collaboration to play a more central role in the management of long-term crises such as COVID-19. The complexity of a transboundary crisis requires the cooperation of a wide range of expertise. Its duration further requires this expertise to be available for extended periods. However, such cooperation increases in difficulty with the complexity of the crisis and the number of parties involved. This has both technical and

non-technical reasons: As [Ley et al. \(2014\)](#) argue, there are procedural and structural hurdles to sharing information, let alone expertise, in multi-stakeholder operations. A lack of structured cooperation mechanisms necessitates constant improvisation and makes the results more contingent on individual skill: “Due to the large number of heterogeneous systems, the exchange of information is limited to e-mail, phone calls or special trained liaison officers. The exchange of expertise is currently limited, for the most part, to contacts between long-standing employees. There is, in other words, a very unequal social distribution of expertise” ([Ley et al., 2014](#), p. 380). Moreover, [Uitdewilligen and Waller \(2018\)](#) argue that effective cooperation based on a common situational picture, i.e. acting on shared projections based on shared interpretations of shared facts, poses a significant challenge even for professionally trained personnel with several years of experience.

Building on existing research, we expect to find significant structural challenges to long-term crisis management at the local level. However, given previous insights on practice switching, we expect heterogeneity in both challenges and adaptation. Given the need for future preparedness ([Boin and Lodge, 2016](#)), we focus on successful adaptations in crisis response to inform future local crisis management. As we argue in the following section, the German case demonstrates local autonomy and significant structural challenges in crisis management, which makes local innovations for transboundary crises paramount.

3. Case selection: local crisis management in Germany

In cross-national comparisons of crisis governance, Germany features a traditionally strong yet highly decentralized administrative structure ([Kuhlmann et al., 2024](#)), which some scholars describe as an extreme case in terms of legalistic and decentralized approaches to crisis management ([Lenz, 2023](#)). A multitude of state and non-state actors on the federal, state and local level share resources and responsibilities ([Gabel and Schobert, 2024](#)). Generally, disaster protection and relief are the administrative and financial responsibility of the states (Länder) with the federal government merely in a supportive role. Local government, i.e. the municipal and county level, serves a key function in this system by responding to virtually all routine emergencies ([Deutscher Städtetag, 2024](#)). During the pandemic, it did so with significant autonomy in interpreting, applying, and enforcing national and state legislation ([Kuhlmann et al., 2024](#)). Only if major events exceed local capacity do state and federal assets deploy upon request – and withdraw again afterward ([Freudenberg and von Lewinski, 2024](#)). It is important to note that the local level remains engaged in the response efforts even in those cases, albeit in a subordinate role. This creates an agile response system to quickly contain limited challenges with resources and expertise as locally sourced as possible ([Geier, 2017](#)). Whereas this system builds strong crisis management competence at the local level, it also concentrates most of this competence among the fire departments, police, and emergency response services, who tend to employ their own operational staff structures, rather than among municipal administrations.

Administrative crisis teams are standard state- and local-level tools for crisis management. A crisis team is a civilian adaptation of military staff structures to manage complex situations with clear roles and processes for information gathering, situational assessments, decision-making, and communication. However, they differ in definitions, structures, and processes between states ([Wissenschaftliche Dienste des deutschen Bundestages, 2021](#)). Moreover, in most states, their implementation is obligatory only in case of an officially declared disaster (Katastrophenfall). The vast majority of incidents in Germany remain far below that threshold, within the purview of operational staffs, and do not require an administrative crisis team. This means that within municipal administrations, only a small number of departments and staff have regular exposure to crisis teams or crisis management. Consequently, they are unfamiliar with and unprepared for the demanding work in a crisis team ([Hofinger and Heimann, 2022](#)).

Municipal administrations tend to neither build nor maintain crisis management competencies and structures outside of emergencies; and professional crisis training and frequent exercises for administrative staff are uncommon at the local level ([Deutscher](#)

Städtetag, 2024). This is in part a feature of the system. Managing complex, long-term, or large-scale crises is not the primary obligation of local government. It therefore is neither expected nor equipped to manage them. Moreover, German local public governments have long had to deal with austerity measures and investment backlogs, limiting their ability to provide surge capacities in the face of competing demands on limited resources (Scheller *et al.*, 2021). For instance, Kuhlmann and Franzke (2022) argue that the German health sector has long shown unaddressed resource deficits even in the absence of crises. The same holds for the 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 legal intervening powers for public health authorities if necessary, but also in limited technical resources for doing so (Kersten and Rixen, 2021).

In summary, therefore, the German case allows us to examine the impact of the pandemic on a strong and deeply embedded administrative culture with a traditionally high degree of local autonomy. The crisis management system, accordingly, tends to operate in a localized, short-term and administratively compartmentalized manner. The pandemic, however, required the intensive cooperation of various administrative branches and fast-response organizations over multiple years. It provides a unique opportunity to investigate cultural learning and innovation in the inter-organizational management of complex and long-term crises in local public administrations. These local effects are all the more relevant if, as Kuhlmann *et al.* (2024, p. 107f.) argue, learning and adaptation efforts on the federal and state levels remained largely uncoordinated, unsystematic, and locally isolated.

4. Methodology

This article examines administrative practices and innovations in German municipalities during the COVID-19 pandemic to derive practical, generalizable solutions for the local level. Previous insights on local crisis management have been largely based on both in-depth qualitative work on fast-response organizations (Schakel and Wolbers, 2021), and large-scale data collection through surveys (Graf *et al.*, 2024). In the complex and contingent environment of crisis governance, however, there are few clear metrics and objectively measurable performance indicators. Therefore, subjective interpretations and experiences of various actors matter, making qualitative methods such as interviews and workshops vital tools for analysis (Losoncz, 2017).

As such, a case study design is particularly suited for the research questions because it accounts for the distinct nature of German municipal crisis management and typically integrates multiple sources of evidence (Yin, 2009). Therefore, to assess whether municipalities could manage the crisis within existing structures, and how they adapted them in practice, this research aims at integrating qualitative and quantitative material.

The interviews took the form of 28 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 min and 2 h, the first interviews were conducted in 2022, when many crisis teams were still active, while the last round took place in mid-2023, shortly after most COVID-19 measures had ended. In the coding process, interviews were thus categorized based on insights drawn from real-time involvement and retrospective reflection. The interviews were coded in MAXQDA by two researchers using a common coding scheme developed according to Lamnek and Krell (2016).

The survey questions were developed based on the results of the first round of interviews and addressed all German cities with at least 50,000 inhabitants. The reasoning behind this threshold was a focus on where administrative responsibility could be linked to local outcomes, which is typically only the case where public administrations are located in the same city, as is the case in the selected cities in Germany. Furthermore, this level enabled greater

participation in Eastern Germany, where the sample size of large cities (100,000 inhabitants) would have been too small to validate results. Out of 191 cities, administrations from 101 cities answered with an overall n of 232. The workshops took place in 2023 and were subsequently summarized in reports and coded according to the same coding scheme as the interviews. While this research design produced a rich set of results across many domains of the pandemic in public administrations, only those regarding crisis management are explored here in depth.

The workshops were based on the insights from the survey and interviews, and made use of design thinking methods to distill reflection of crisis events as well as solutions (Tschimmel, 2012). In this way, the workshops served to cooperatively validate the authenticity of survey and interview results whilst deepening explanatory interpretations (Turner *et al.*, 2017). Participants came from a relatively homogeneous group of midsized to large cities (50,000–500,000 inhabitants), in which public agents experienced pandemic challenges in the same legislative contexts, allowing for differentiation between city-level innovation.

5. Findings

The literature shows that German municipalities faced significant hurdles in handling a transboundary crisis like a global pandemic. These were at least in part a result of the municipal role in the highly localized German civil security structures. However, while our findings suggest similar challenges, we also find that the same degree of local autonomy that created some of these problems permitted municipalities to experiment with ways of cooperation and organization to merge strengths and compensate weaknesses of fast-response organizations and administrations. This section addresses these two findings in turn.

(1) Municipal administrative challenges in crisis management

Although the individual degree of preparedness for a transboundary crisis may vary between German municipalities, they generally were unprepared for the demands of a global pandemic. Workshop participants remark on a lack of available personal protective equipment, test kits, and IT-infrastructure, where situational demands far exceeded local capacities. Moreover, administrators could often not expand their limited initial stocks quickly due to a lack of supply and a regulatory preference for centralized and competitive procurement (Workshop 1). Participants note that these regulations did not always arrive timely or provide either the long-term strategic guidance or the in-depth harmonization of local rollouts. Differently put, local administrations were at once free to interpret regulations, but also required to do so (Workshop 1 and Workshop 2). Therefore, the detailed interpretation of pandemic restrictions' practical consequences could and did vary significantly on the local level, even in adjacent municipalities (Workshop 3). Beyond these material and procedural hurdles, municipalities also encountered structural challenges in managing a pandemic.

Administrations had to maintain intense management activities of a dynamic and thematically complex crisis scenario over an extended period of time. These three elements of a transboundary crisis did not map well onto existing crisis management structures. At the onset of the pandemic, most municipalities defaulted to administrative crisis teams. In our survey, 85% of the responding cities activated a crisis team. However, compared to previous crises, the number of involved administrative units was high, suggesting a high thematic range of the crisis. 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. 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 nature of the pandemic.

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). However, municipal administrations differ from fast-response organizations in that they generally neither plan nor

prepare for maintaining 24-h services in shift operations (Int. 19), let alone build and maintain redundancy for doing so in longer-term crises. 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 competent as it is easily exhausted (Int. 5). The survey participants strongly agree that the pandemic overburdened crisis management staff members. 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). For instance, one expert explains how the lack of rotation options given constant demands on the crisis management team exhausted even highly motivated as well as professionally trained and experienced team members (Int. 02). Another expert recounts sleeping at the crisis management center for several months in the early phase of the pandemic due to the long hours, at the expense of their private and family life (Int. 05). A third estimates that they had never worked as much in their life as they did during the pandemic (Int. 13).

The long-term intensity and thematic breadth of crisis work made it very difficult to fix structural deficits during ongoing operations. Therefore, even if municipalities were able to mobilize their limited available staff reserves or hire short-term support, the differences in experience and training risked rotating staff not (yet) ready for the task. This affected both the team’s immediate performance during shifts and the quality of knowledge transfer between shifts, which in turn impeded long-term decision-making processes and situational assessments (Int. 11). However, a majority of the survey respondents were undecided if merely adding more personnel would have alleviated the situation. The interviewees suggest that quantity alone might not solve the problem. The required personnel also need adequate skills, as integrating untrained individuals in crisis management structures is difficult (Int. 14). The interviewees therefore repeatedly stress the need for routinely integrating crisis management competence in municipal administrations, possibly by including it into the curricula of relevant professional degrees (Int. 18). During the workshops, participants argued for a pool of pre-trained crisis management personnel either within the administration or via easily accessible external pools, since adequate training or hiring new staff under crisis circumstances tied up already scarce resources of experienced team members (cf. Int. 20; Int. 16; Int. 20).

Therefore, although crisis management structures existed, the length and breadth of the crisis posed considerable challenges for local crisis management. Despite being personally affected, administrative staff continued to work in crisis teams throughout the pandemic, oftentimes with little formal training or knowledge of crisis management structures and routines. The municipalities valued crisis teams as essential instruments but struggled to maintain them over time. Nevertheless, as we will argue in the next section, local public administrations demonstrated flexibility and resilience—alleviating pressure during the pandemic and offering insights into future crisis preparedness.

(2) From practice switching to practice sharing

Practice switching to crisis mode is challenging in long-term transboundary crises such as the COVID-19 pandemic. Administrative staff wear out at an unsustainable rate, so the common approach of applying a maximum of resources to a crisis significantly limits the durability of crisis teams. However, as discussed previously, local public administrations did not just imitate the work of fast-response organizations; they worked with these organizations in joint crisis teams. This cross-sectoral feature of transboundary crisis management, however, proves difficult in the long-term:

Regarding the collaboration of fast-response organizations and public administrations, crisis team members reported frequent conflicts. One respondent from the fire brigades points to tensions between the responders’ formally supportive role in the crisis team vis-à-vis administrative personnel on the one hand, and their advanced experience in practical crisis

management and incident command systems on the other hand (Int. 1). Initially, responders expressed frustration over a perceived lack of capacity and crisis competence in the health agencies responsible for tracking infections. At times, this resulted in the urge to take over crisis management (Int. 1). They further criticized a lack of acute crisis awareness and the ability to prioritize among administrators (Int. 11). Administrators, in turn point to the negative impact of previous austerity measures on staffing capacities and criticized the fire departments' perceived lack of long-term planning capability and process management skills (Int. 23).

In the beginning, both these organizational differences as well as cultural differences led to serious friction in crisis management. For instance, the very different working hours of administrators and responders, particularly regarding work at night and during the weekend, initially proved a significant challenge for cooperating on joint task forces or vaccination teams (Int. 23). Respondents described these conflicts as a constant balancing act between the competing goals of crisis management and routine bureaucracy (Int. 11). Both fields have different understandings of processes and risks and follow internally coherent logics in pursuit of different and at times opposed goals. This can create communicative challenges just when the crisis requires close cooperation and strategic congruency.

However, our findings reveal a range of organizational solutions that attempted to integrate practices of both fast-response organizations and public administrations. Notably, one interviewee describes that the exchange of liaison officers who could translate and mediate between organizations alleviated tensions among actors (Int. 23). This deployment of organizational brokers proved a fruitful solution across several municipalities (Workshop I). Similar cooperation between administrations and fast-response organizations constituted the installment of vaccination centers, where administrative staff worked under the instruction of firefighters. The initial cooperation was confrontational on both sides due to what seemed to be limited speed and crisis awareness on the side of administrative staff and condescending behavior on the side of the fire department (Int. 5). However, the cooperation also fostered awareness and understanding on both sides. On the one hand, the firefighters in charge learned that incentivizing self-organization among public servants was more effective than enforcing more direct command structures, and once familiarized with basic crisis communication principles, public servants quickly adapted to the fast-paced environment (Int. 5). On the other hand, administrators were much more familiar with managing large amounts of data, tracing processes, and navigating legalistic instructions than responders (Workshop 1). Therefore, although an initial practice shift of health agencies was oftentimes difficult, practice sharing led to the establishment of common ground.

As discussed previously, long-term work in high-paced environments with a range of different stakeholders and few options to rotate personnel wore out staff quickly. Crisis teams adapted throughout the crisis and working modes shifted towards smaller units with narrower topical foci and less frequent meetings (Workshop 1). However, the overall structure of crisis teams did not change much. For each type of crisis team chosen, the overwhelming majority of respondents in the survey would choose the same organizational structure again.

This finding is in slight tension with the results from the workshops, in which participants describe the necessity for organizational changes throughout the pandemic. The realization that police and fire departments could not simply "take over" in case of crises (Int. 3) led to conceptualizing crisis management as a cross-sectional task. In the workshops, participants discussed the example of a "scenario-based" support unit that combined technical expertise from several administrative branches and adjusted its meeting schedule to the crisis teams to anticipate potential impacts of executive decisions. The participants reported flat hierarchies, less communicative friction, greater efficiency and a faster rollout of vaccination campaigns through scenario planning as advantages of the format (Workshop 1). Therefore, although public administrations do not question the general necessity for crisis teams as such, the frequency and workload of those teams' meetings decreased over the course of the pandemic through such lower-level supporting formats.

The discussed solutions suggest two insights. First, established arrangements of resource-intensive crisis management were not fit for the long term. Second, transboundary crises require extraordinary and flexible structures that allow for collaboration between fast-response organizations and public administrations. These qualitative insights help explain the high satisfaction with crisis teams among survey respondents: hybrid adaptations to municipal crisis management do not require a fundamental reform of crisis teams; instead, administrations may design supporting formats to reflect the more long-term demands of a transboundary crisis. This finding further points towards the 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 despite crises and accelerated decision-making despite Weberian bureaucracy.

6. Discussion

Established crisis management structures and processes at the local level showed significant shortcomings in the face of transboundary crises. During the pandemic, previous arrangements of resource-intensive crisis management were a suboptimal fit for the long term. [Graf et al. \(2024\)](#) provide valuable insights into mechanisms of early-crisis response in local governments. Our findings and conceptual understanding build on their work. Our findings show that binary practice switching is effective at the onset of a crisis. However, it is also difficult to sustain for local crisis management in long-term settings due to resource constraints and the competing demands of routine bureaucracy and crisis management. Neither a permanent switch of public administrations into crisis mode, nor a cycle of iterative switches between crisis and standard operations appear as ideal solutions under these conditions. These results 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 exception in these challenges: [Räisänen et al. \(2023\)](#) conclude in their study that “Finnish crisis management had overlooked the extent of transboundariness of present-day crises and is lacking consideration of how crises turn into chronic conditions that deplete capacities over time” (p. 266).

Transboundary crises require flexible structures that allow for extended collaboration between fast-response organizations and public administrations. Practice sharing offers a hybrid solution for long-term crisis settings. The example of brokers demonstrates precisely this 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 in organizations ([Weber and Yanovitzky, 2021](#)). This is congruent with the findings from [Ley et al. \(2014, p. 380\)](#), focusing on the importance of personal skill, communication and experience in complex and dynamic situations. This also shows that practice sharing and switching, however, are not vastly different or mutually exclusive procedures. Instead, one might even consider the two concepts as similar processes with different end goals. These qualitative insights further explain the high satisfaction with crisis teams among cities: hybrid adaptations to municipal crisis management do not require a fundamental reform of crisis teams; instead, cities may design supporting formats to reflect the more long-term demands of a transboundary crisis. This finding further points towards the resilience of local governments.

Establishing robust systems for knowledge management and skill transfer is important for building organizational resilience and ensuring continuity of essential services during crises ([Uitdewilligen and Waller, 2018](#)). However, most municipalities do not have the capacities or resources for a systematic and methodical evaluation of their own pandemic management. Therefore, while the literature and studies such as ours indicate the need for structural reforms, it remains largely unclear how universally applicable solutions are across municipalities.

On the one hand, despite limited previous interactions, fire departments and local governments have the capacity to manage long-term crisis events such as COVID-19 and show

extraordinary learning and adaptation abilities. On the other hand, the reported rates of burnout, friction, and staffing problems demonstrate the need for streamlining cooperation between fast-response organizations and public officials, and training for long-term crisis management. Whilst our findings do not cover systematic prevention and preparedness efforts, they identify possible entry points for training: rather than conceptualizing practice sharing as an inherent capacity of public administrations, we argue that it lies in the direct collaboration of fast-response organizations and public administrations. The design of crisis teams may be unique to Germany, but the general collaboration between both organizations is not: it is precisely this partnership in times of crisis where future preparedness efforts can enable flexibility and resilience. The California Wildfire and Forest Resilience Task Force serves as a poignant example of such an approach, where the growing prevalence of fires led to the establishment of an organization encompassing emergency-response services, local community stakeholders, and government agencies (Eitzel *et al.*, 2024). Best practices in practice sharing such as institutional brokers then can significantly help this hybrid crisis management.

This does not mean, however, that resource-intensive practice switches are not also necessary at the beginning of a crisis, especially since the duration of a crisis is nearly impossible to predict reliably. The early phase of the COVID-19 pandemic presented massive uncertainties for governments before scientific progress identified transmission pathways, vulnerable groups, and potential vaccinations. Hence, our results cannot establish causal links between practice sharing and successful crisis management without doubt. There is a possibility that reduced uncertainty throughout the pandemic also allowed for more hybrid crisis management. Research on such linkages should be subject to future research and hypothesis testing. Our findings, however, show clear differences between those municipalities remaining exclusively in resource-intensive crisis teams and those that enabled forms of practice sharing. Future research should expand to other case studies, address this process in more detail and depth, and ideally test our hypothesis systematically to determine whether practice sharing affects long-term crisis management to a statistically significant degree.

This research is subject to certain limitations inherent to the case study design. The choice to prioritize rich descriptions of the situation in Germany limits the generalizability to other administrative contexts (Yin, 2009). This lack of comparative insights should inform future research on local crisis management. However, we expect practice sharing in long-term crises to be useful where local autonomy is high and interdisciplinary coordination is needed. Furthermore, while we focused on self-reported effectiveness in crisis management, many research projects point 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 remain in a narrow executive realm agnostic to democratic principles. This matters because crisis management will likely increasingly turn into crisis governance. Non-state actors are already important parts of crisis management arrangements (cf. Ley *et al.*, 2014) and are likely to increase in relevance going forward. Public polarization during COVID-19 (Eberwein *et al.*, 2023) shows, however, that future research should take into account and address these tradeoffs of crisis management. A conceptual shift from crisis management to crisis governance might allow for a more holistic understanding of future transboundary crisis scenarios.

7. Conclusion

Through the case study of local crisis management in Germany during COVID-19, this article contributes to the growing body of research on transboundary crises in two key ways. Firstly,

this research asked whether existing crisis management structures and processes at the local level meet the demands of managing a transboundary crisis. In doing so, it sheds light on the challenges of local crisis management in decentralized and hybrid administrative settings. Secondly, it asked how local administrations adapt to these demands. This setting allowed us to study a wide range of adaptations, which we describe as *practice sharing*.

The first question contributes to the ongoing discourse in the existing literature, where practice switching has previously been found helpful during the onset of a crisis. However, in long-term crises, local public administrations face significant obstacles, including resource depletion, personnel overextension, and the need for continuous adaptation to evolving circumstances. 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. These challenges are partly due to the design of local crisis teams, where administrative staff and fast-response organizations work closely together in crisis teams. Among the former, training in crisis management is often limited to a few high-ranking individuals. Fast-response organizations, on the other hand, excel in short-term, resource-intensive crisis settings but have limited experience in upholding administrative routine operations as required in long-term crises such as COVID-19.

The findings corresponding to the second question highlight that practice sharing emerges as a viable solution, facilitating collaboration between local administrations and fast-response organizations with differing working logics and cultures. Crucially, public administrations do not entirely switch into modes that resemble fast-response organizations in the long term. Rather, the adaptations found aim directly at fostering cultural understanding between departments (e.g. through the use of brokers) and make use of practices of both organizations (e.g. flexible crisis teams). Importantly, while this collaboration of fire departments and public administration is unique to Germany, practice sharing can be useful for a wide range of long-term crisis settings—especially transboundary crises, where transdisciplinary collaboration must be sustained over extended periods.

This second finding aligns with previous literature on knowledge sharing and interdisciplinary collaboration during crisis events. 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. These linkages, along with strategies for how to enable practice sharing in crisis preparedness should guide future studies. This research focuses primarily on effectiveness and resource efficiency in crisis management, neglecting other relevant 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 such as 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 need not remain unchanged. We emphasize the need for continuous learning and adaptation in crisis management practices, especially in crisis preparedness efforts.

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Appendix
Table A1 and A2 show the list of interviewees as well as our list of workshops.
The interviews took place between August 2022 and August 2023.
Duration of interviewees ranges from 0:57 h to 02:30 h.

Table A1. List of interviewees

No.	Position in the context of the COVID-19 response [1]
01	Senior Firefighter in a major German city
02	Head of the Department for Safety and Order in a major German city
03	Mayor of a major German city
04	Head of the Department for Safety and Order in a major German city
05	Head of the COVID-19-Vaccination Unit in a major German city
06	Head of Operations Planning and Management in a major German city
07	Head of Department for Safety and Order in a major German city
08	Fire Chief in a major German city
09	Head of Press and Public Relations of a major German city
10	Staff member in the Department of Safety and Order of a major German city
11	Head of COVID-19 Crisis Management – state level
12	Head of Department of Public Health of a major German city
13	Member of a crisis team in a major German city
14	Fire Chief in a major German city
15	Head of Department of Public Health of a major German city
16	Deputy Head of the Crisis Team in a major German city
17	Staff member in a Department of Public Health of a major German city
18	Administrator for Civil Protection, State Vaccination Task Force – state level
19	Press Officer of a major German city
20	Head of Department for Social Affairs in a major German city
21	Head of Virology, University Hospital
22	Head of Department of Public Health of a major German city
23	Head of Staff for a Fire Department in a major German city
24	Freelance member in a crisis team of a major German city
25	Head of the Department for Safety and Order in a major German city
26	Freelance Expert and Consultant for Crisis Management
27	Head of Department for Social Affairs in a major German city
28	Senior Official in a German federal authority – federal level

Table A2. List of Workshops

No.	Topic of the workshop	Date	Participants
1	Municipal crisis management during the pandemic	March 23–24, 2023	15
2	Municipal crisis communication during the pandemic	May 25–26, 2023	17
3	Vulnerable groups during the pandemic	September 28, 2023	18
4	Innovations in municipal crisis management	April 18–19, 2024	21

Note

1. In Germany, the exact titles and department names for comparable positions can differ between municipalities, particularly between different federal states. This overview harmonizes these descriptions to guarantee anonymity and enhance readability.

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