

 Heidelberg

**Gemeinsam
gegen Corona.**
Herzlichen Dank
für Ihren Einsatz!

Ihr

Eckart Würzner
Eckart Würzner



Figure 1. Recognition of service by the Mayor of Heidelberg: "Together against corona. Thank you for your service" (top) and the Baden-Württemberg State Command of the Federal Armed Forces (bottom)

Image source: Markus Ries

Executive summary

The extent and intensity of the COVID-19 crisis was significant worldwide. The corona disaster relief support was the largest subsidiary mission of the German Federal Armed Forces in their history. The shared challenges to the disaster management community were considerable worldwide as well as in the region of Heidelberg/Rhine-Neckar, Germany, due to the dynamics and complexity of situational developments. A structured scientific analysis of the operational experiences of the COVID-19 disaster relief in Heidelberg/Rhine-Neckar between 2020 and 2022, especially from a civil-military perspective, has not been done so far. This study aims to fill this gap.

The research question of the study was **“what lessons have been learned from the civil-military cooperation in Heidelberg/Rhine during the COVID-19 pandemic and what needs to be done to be better prepared for future disasters?”**

This overarching research question was iteratively approached in three steps:

Focus question 1: What was done in Heidelberg/Rhine-Neckar? The extent and nature of the civil-military disaster relief support to Heidelberg/Rhine-Neckar during the COVID-19 crisis was assessed by an autoethnographic qualitative, empirical-observational analysis.

Focus questions 2: What impact did the Heidelberg/Rhine-Neckar disaster relief mission have?

Focus questions 3: How well are we prepared for future catastrophes after lessons learned from corona and what must be done to close this gap?

The civil-military mission impact (focus questions 2) and the pathway from lessons learned towards better future disaster preparedness (focus questions 3) were analyzed by semi-structured interviews with key stakeholders of the local disaster relief community that were recorded, transcribed, coded for significant statement and then horizontalized into clusters of meaning.

Core elements of community resilience defined by Patel in 2017 provided a methodological analysis framework. Themes of the local disaster

Executive summary

relief mission were juxtaposed to findings from a scoping review of the scientific literature on civil-military cooperation during the COVID-19 pandemic. This study was approved by the Medical Faculty of the University of Heidelberg, Germany (reference S-534/2022) and registered in the Clinical-Trials.gov study registry (registration number NCT05552989).

Focus question 1: What was done in Heidelberg/Rhine-Neckar?

Seven core issues with civil-military relevance arose in Heidelberg/Rhine-Neckar during the pandemic: (1) Hospitals lacked PPE which exposed staff to infections. (2) There was risk of SARS-CoV-2 outbreak in a major regional refugee center. (3) Ongoing surges of COVID-19 patients overwhelmed ICU units. (4) The risk of uncontrolled spread of infections endangered the population. (5) SARS-CoV-2 infections spread into vulnerable populations in nursing homes leading to casualties. (6) SARS-CoV-2 infections spread into vulnerable populations in nursing homes leading to surges of symptomatic infections among staff. (7) The swift roll-out of the ambitious vaccine campaign in a short time was endangered by lack of staff. To strengthen perseverance in pandemic management, the military mainly provided workforce and, to a minor degree, equipment, overall, with good outcomes for the afflicted population. The embedded proximity of local medical staff officers within liaison commands on both sides—the military medical service as well as the civilian health care system—was very useful for eight community resilience elements out of nine, i.e., local knowledge, community networks and relationships, communication, health, governance and leadership, resources, preparedness, and mental outlook. The liaison role provided little influence on economic investment.

Focus question 2: What impact did the Heidelberg disaster relief mission have?

The pattern of answers provided by participants suggested that subsidiary civil-military support in Heidelberg during the pandemic overwhelmingly strengthened local resilience. Specifically, increased local resilience was reported in the domains (1) community networks and relationships, (2) health, (3) governance and leadership, (4) resources, (5) preparedness, and (6) mental outlook (Table 16). The overall positive impact was, however, limited in sub-segments, mainly due to the limited availability of medical military personnel (health), the fact that the availability of subsidiary support by the military impeded recruiting efforts and self-sufficiency in specific sectors on the civilian side (economic investment), and, finally, the appropriate use of skills was addressed as an issue (mental outlook).

Focus question 3: How well are we prepared for future catastrophes after lessons learned from the corona pandemic and what must be done to close this gap?

This work provides a deep insight into both strengths and weaknesses of the current local disaster management system. Moreover, lessons learned from participants' own areas of responsibilities are being identified, as well as experiences with civil-military cooperation, across a broad spectrum of community resilience core elements. This includes a reflection on what should be done in the future—either the same way or differently. Likewise, the present work identified as a main result 37 action items to be addressed in order to enhance community resilience for future catastrophes. These action items lie within the areas of (1) local knowledge, (2) community networks and relationships, (3) communication, (4) health, (5) governance and leadership, (6) resources, (7) economic investment, (8) preparedness, and (9) mental outlook. **Their 16 main themes included the necessity for local alignment, continuous open-minded community networking, transparent communication internally and externally aligned, coordinated approach towards healthcare complexity, creation of personnel reserves including the acceptance of free resources in routine times, timely switching into disaster mode, reduction of bureaucracy, clear understanding of leadership, roles, and responsibilities, inclusion of volunteers, funding of novel ideas, prioritized planning and acquisition of material adapted to likely risk scenarios, improved disaster education including at schools, inclusion of practitioners, conducting frequent all-hands exercises, functioning as an anticipatory and learning organization, and promoting self-sufficiency within the population.**

Corroborating and expanding the local experience in Heidelberg/Rhine-Neckar, worldwide themes of civil-military interaction during the pandemic published in the scientific literature covered a broad spectrum of pandemic disaster management subjects such as capacity and surge capacity building, medical and pharmaceutical logistics, patient care under austere circumstances, SARS-CoV-2 testing support, intelligent and innovative information management, vaccination support, disaster communication, and the military as a role model for crisis management. As such, significant local actors in Heidelberg/Rhine-Neckar showed exceptional strengths in terms of 1) leadership, 2) diplomacy, 3) communication, they contributed as 4) enablers, demonstrated 5) agility, and 6) showed a particularly positive and constructive mindset.

In the future, cutting red tape, breaking the “panic-the-forget” cycle through sustainable preparedness, achieving timely operational readiness, and overcoming the next “infodemic” in a world of social media will be important. In general, civil-military cooperation during the COVID-19 pandemic led to valuable contributions to societal resilience—probably at

Executive summary

a high cost—world-wide and in Heidelberg/Rhine-Neckar. The mitigation potential for any agent may be limited if the health-care system is already overstretched in routine operations. To prevent abuse, the awareness of military's potential of threat and intimidation is important. Better holistic, sustainable prevention for future disasters is imperative to break the "panic-then-forget" cycle. Future research could focus on better inclusion of vulnerable populations including children.