Strengthening resilience and vigilance

War as a threat to primary care

Crises such as the COVID-19 pandemic, climate change or even a sudden power cut pose challenges for healthcare provision. Ongoing wars affect our infrastructure, for example through our dependence on oil and the associated rise in energy and living costs (Romanello et al. 2022), which in turn can have an impact on public health. Studies from war-torn regions such as Sudan, Ukraine and Gaza underscore the absolute necessity of strengthening the resilience of healthcare systems (Aqtam 2025; Dafallah et al. 2023; Dale et al. 2024; Vus et al. 2024). Against the backdrop of the security threats posed by the wars in the Middle East and Ukraine, Health Minister Nina Warken (CDU) also sees an urgent need for action (Warken 2026). She is calling for the resilience of the German healthcare system to be strengthened and for appropriate capacities to be established by 2029 in the event of war, so that healthcare provision can be maintained during such a crisis and increased demand for care can be met accordingly.

>> General practitioners, in particular, often serve as the main point of contact for vulnerable groups (Herrmann and Sauerborn 2018). They are usually the first point of contact for physical and mental health conditions and provide primary care as well as covering areas of prevention and rehabilitation. Even during the COVID-19 pandemic, these doctors had to meet and manage the increased demand for treatment that hospitals were no longer able to cope with at that time (Litke et al. 2024a). If, therefore, structural changes are required in the event of war, hospitals would reserve capacity for war casualties and the regular provision of care for the population must be maintained without restriction (Warken 2026), general practice practices in particular face challenges that make prior strengthening of resilience essential.

In Germany, few projects have so far been carried out with the aim of strengthening the resilience of primary care. The RESILARE project (grant reference 01VSF20029), funded by the Innovation Committee, provided materials for practices that can be used, for example, as part of quality management to strengthen resilience against the consequences of climate change (aQua Institute 2021; Innovation Committee. 2021–2024). These include, amongst other things, infrastructure disruptions such as power cuts and may therefore also overlap in substance with the consequences of war. RESILARE aimed to promote the resilience of German outpatient medical

care and, to this end, provides quality indicators and a checklist for assessing and supporting crisis resilience in medical practices in the areas of individual resilience, crisis prevention, practice organisation and climate resilience (Litke et al. 2025; Poß-Doering et al. 2024).

Whilst the consequences of a war – such as the failure of critical infrastructure and migration – can be addressed in part through strategies to promote resilience, the threat posed by and preparation for a potential war are still rarely discussed explicitly. This article therefore aims to investigate, on the basis of qualitative data collected as part of the RESILARE project, the extent to which war is viewed as a relevant threat to outpatient care in Germany and whether the resilience and vigilance of practice teams in this regard are already being discussed.

Methodology

The RESILARE project (Promoting crisis resilience: Development and validation of quality indicators to prepare outpatient medical practices for crisis situations (funding reference 01VSF20029)) was carried out by the aQua Institute for Applied Quality Promotion and Research in Healthcare in Göttingen and the Department of General Practice and Healthcare Research at Heidelberg University Hospital, in collaboration with the project partners Stiftung Praxissiegel e. V., the MVZ Dachau and the Arztnetz QuE eG Nuremberg from April 2021 to January 2024. Quality indicators to promote crisis resilience were developed and evaluated across three project phases: In Phase 1, the theoretical background was discussed, taking into account current evidence and input from n = 40 experts, and a set of quality indicators was proposed (Fehrer et al. 2023; Litke et al. 2022; Litke et al. 2024b). Phase 2 comprised a panel process involving n = 15 experts, during which the quality indicators were assessed and consensus was reached (Litke et al. 2025). In Phase 3, the set of indicators developed was piloted and evaluated in n = 34 general practice practices (Köppen et al. 2025; Poß-Doering et al. 2024a).

In study phases 1 and 3, qualitative studies were conducted using focus groups and individual interviews with experts and primary care practitioners, based on semi-structured guidelines. Detailed descriptions of the respective methodologies regarding data collection, interview guides, recruitment and data analysis are provided in the publications cited. In a secondary analysis, the qualitative data from both study phases were analysed inductively for this article, with an additional keyword search for 'war', 'migration', 'infrastructure' and 'resource scarcity'.

Results

As part of study phase 1, n = 40 experts from the outpatient healthcare sector and the field of resilience were interviewed in 26 individual interviews and 2 focus groups using semi-structured interview guides. In study phase 3, n = 65 individual interviews wereconducted with doctors and medicalstaff from the n = 34 participating GP practices. Table 1 provides a brief overview of the participants in phases 1 and 3.

Studienpopulation	
Teilnehmende Studienphase 1	**N = 40**
Expert:innen n (m/w)	40 (16/24)
• Ärzt:innen	14
• medizinische Fachangestellte • in Forschung tätig • im Gesundheitssystem tätig • in Versorgung tätig	16 3 4 3
Teilnehmende Studienphase 3	**N = 65**
Hausärzt:innen n (m/w)	33 (21/12)
medizinische Fachangestellte n (w)	32 (32)

Table 1: Study population. Source: Litke et al. 2022; Poß-Doering et al. 2024a.

The following section describes findings on resilience and vigilance with regard to 'war', 'migration', 'infrastructure' and 'resource scarcity'. Sample quotations from the data are identified by their respective pseudonym (SP1 = study phase 1, SP3 = study phase 3; Int = interview + number, FG = focus group + number, A = doctor) and their position in the transcript. For the

sake of clarity, some of the quotations have been edited and shortened. Figure 1 outlines key statements and identified strategies for promoting vigilance and resilience from both study phases.

Study Phase 1 – Resilience and Vigilance

In addition to the COVID-19 pandemic, other potential crisis situations for medical practices cited included further waves of disease and pandemics, climate change, a shortage of skilled staff, supply bottlenecks, resource shortages, an increase in mental health conditions and the associated rise in counselling demands. An increased patient load due to migration and a correspondingly higher demand for care – including, in some cases, less familiar conditions – as well as economic factors were also discussed. These issues were described as interrelated or resulting from one another within a global context. In isolated cases, war was also mentioned as a crisis situation that people hoped they would not have to experience.

"A global crisis – well, obviously, if the Goldmark were to be reintroduced now because of some terrible inflation, or if the European Union were to break up, or a war against China or something like that – I really don't want to think about that any further. These are things – well, political crises – that I hope I won't have to experience." (SP1_Int_05, item 94)

With regard to the resilience of outpatient practices, it was explained that new requirements could be met more easily if a well-functioning quality management system were in place and one's own work were optimised as much as possible. At the same time, it was noted that an initial investment is required in order to be able to capitalise on the resulting benefits even during crises and to remain capable of taking action. Resilience was also considered in relation to the size of the practice and the number of staff, with the suggestion that larger practices might be better equipped to handle crisis situations, as challenges are then shared amongst more people. It was pointed out that, even with good planning and preparation, flexibility is required and that it is necessary to determine as events unfold what works and what does not. It was mentioned on several occasions that outpatient care feels there is little appreciation or recognition for this preparatory work.

'... I think this is undervalued, even by politicians; they only ever talk about hospitals and nurses, but it's us who have the patients, we're the first point of contact; they ring us to ask how they should deal with the situation now, what they can do, [...] they come to us first; we're always the first point of contact, and I think that's always undervalued." (SP1_Int_19, item 51)

Extraordinary strains on the healthcare system as a whole were described in connection with refugees and migration to Germany, and during periods when large numbers of people arrived who were in poor health and had previously received no medical care. The view was expressed that migration would be a recurring issue, particularly as a result of climate change, and that, should civil wars break out in other countries, large numbers of people would arrive within a short space of time suffering from tuberculosis or hepatitis, as well as from unknown diseases, and facing language barriers. Appropriate preparations should therefore be made in advance.

"... various new problems that would then arise with such a wave of migration and a change in our patient profile." (SP1_FG2, item 150)



Fig. 1: Graphical overview of results and key findings from study phases 1 and 3. The word cloud (blue) covers the impacts of warfare on German outpatient healthcare. Solution strategies summarised as a mind map (green). Source: own illustration.

The participating experts also reflected on the functionality and interdependencies of critical infrastructure in crisis situations, and on what the loss of electricity, water, heating and the internet might entail for outpatient care. It was also discussed that outages could be caused not only by natural disasters but also deliberately and maliciously, which would then raise the question: 'How functional is my system actually still?' (SP1_ FG2, item 131). Other aspects mentioned related to opportunities arising from short supply chains and local production, the availability and sharing of necessary information and materials in crisis situations – such as protective clothing and medicines – and the preservation of local expertise and services, such as pharmacies and medical care, in order to keep supply chains short in the event of a crisis and ensure the availability of essential medicines and disinfectants.

"There are certain things you simply must not do – as a sovereign state and as a society, you must not relinquish that authority." (SP1_Int_05, item 146)

Study Phase 3 – Resilience and Vigilance

Crisis situations affecting the provision of care in medical practices, as described in Study Phase 3, related to rising energy and food prices, inflation, the war in Ukraine, the care of refugees and associated difficulties such as language barriers or unclear remuneration for medical services. Two participants pointed out that there had been no inflation adjustment to doctors' remuneration for more than 20 years. Regulations that did not support practices in investing in renewable energy infrastructure were subject to critical scrutiny. An increase in anxiety, uncertainty and depression among both patients and practice teams was also perceived as a consequence of wars in other regions of the world and the strain on outpatient care. It was described that the experience of a peaceful, very safe world no longer existed; however, fears and concerns about a potential war in Germany were not immediately apparent. When asked how they would react if war were to break out in Germany, one participant replied, 'I've no idea' (SP3_A19, item 43),

Further challenges were described in relation to health issues faced by refugees, who were increasingly being treated in outpatient clinics – such as HIV, tuberculosis, physical war injuries and psychological trauma – and where treatment was made more difficult by a lack of medical records.

"Well, someone was just here; at first it wasn't clear whether they actually had HIV. It turned out they did, but their condition was quite poorly managed because they'd stopped taking their medication regularly – because they didn't have any anymore. These are the sort of things [...] that are, of course, becoming more common now." (SP3_A02, item 47)

All participants reported crisis situations relating to shortages or insufficient availability of medication, particularly fever-reducing syrups for children, antibiotics, insulin, statins and cytostatic drugs. Some described this as a recurring daily issue, which they attributed to the consequences of war or globalisation. To address this challenge, local networks with pharmacies were formed on their own initiative; medicines no longer needed by patients were collected for redistribution; and medicines were ordered from other European countries with longer delivery times.

Efforts aimed at promoting the production of medicines within the European Union, as well as plans to establish a national reserve, were identified as a strategy to enhance resilience, which could counteract supply bottlenecks and safeguard supply in the event of a crisis. Responsibility for solutions relating to security of supply was generally seen as lying with politicians and professional associations, as contracts with manufacturers would need to be concluded and legal issues clarified.

"...Then we can assume we have secure supply chains." (SP3_A14, item 53)

With regard to the resilience and vigilance of primary care practices, it was men-

tioned that perhaps the most important thing was to understand that one need not face a crisis helplessly and with resignation, but that it was worthwhile to consider how to anticipate potential crises and deal with them proactively. Tools were seen as helpful in this regard, as they could support the widespread implementation of scientifically developed recommendations into specific processes, rather than relying solely on individual initiative.

"What definitely helps us is that those who recognise the problem and are willing to act simply receive very practical tools. From a scientific perspective, the fact that an urgent recommendation is issued. That does have an impact. There's a network in place through which this is then disseminated, and naturally that has an effect and, of course, helps enormously." (SP3_A09, item 29)

It was also mentioned that it is a misconception to think that a crisis is irrelevant if it affects others in other places; rather, some crisis-like situations were already re-emerging and drawing nearer. One participant reflected on when a crisis actually constitutes a crisis, and stated that more thought needed to be given to potential crises before they occur, in order to ascertain where one stands and how vigilance can be fostered without external directives.

"When people say, 'We're in a crisis and that's why you have to do this now', I don't think that's understood. […] We need to emphasise more that this is about potential crises for which we can prepare." (SP3_A01, items 54 and 55)

Discussion

The insights into the findings presented from the RESILARE project show that, alongside crises related to climate change and social crises, the issue of war has also been a feature of outpatient care since 2021. Impacts on care – such as the failure of key infrastructure, resource shortages, migration, increased care needs among patients, as well as the strain on practice teams – were considered across different types of crisis, and ways of dealing with them were described. Local production and the associated short supply chains were identified as mitigation strategies.

Promoting the resilience of outpatient medical practices is regarded as absolutely essential, and a call has been made for action, together with support from political bodies. Health Minister Nina Warken's initiative addresses this call (Warken 2026). The report published in 2023 by the Expert Council for the Assessment of Developments in the Healthcare System on the resilience of the healthcare system (Expert Council for the Assessment of Developments in the Healthcare System 2023) highlights the need to strengthen the resilience of supply chains – for example, for medicines – in the context of the war in Ukraine. The report attributes responsibility for implementing measures primarily to industry and only partly to policymakers, and strategies for promoting resilience continue to be described independently of any specific crisis.

Within the RESILARE project, too, Study Phase 1 identified the impacts of crises on healthcare provision independently of specific crises (Litke et al. 2022), and strategies were formulated that can strengthen the overall resilience of healthcare facilities, such as securing supply chains and promoting local production.

In public discourse in times of 'multi-crisis', the focus in Germany is on increased investment in defence spending and dependence on fossil fuels, which are sourced internationally at rising prices. According to the 'Lancet Countdown on Health and Climate Change' Europe Report 2026 , the energy transition in Europe is moving in the right direction and bringing positive side effects for public health. The share of fossil fuels in Europe's energy system, for example, fell to 70.6 per cent in 2023 according to provisional data (83.7 per cent in 1990). For Germany, the report describes a double-digit decline compared with 2022. Furthermore, a remarkable increase in electricity generation from modern renewable energy sources has been reported since 2010, which is attributed primarily to a rise in solar and wind energy, as well as in CO_2-free energy sources in Europe (Kriit et al.). The report also notes that, in view of the sharp rise in food prices in Europe (Robayo et al. 2025), efforts are needed to ensure that people can afford a healthy diet. It is also pointed out that reducing greenhouse gas emissions could boost the local economy, promote innovation and productivity, and bring significant benefits for health, as well as for energy security and access to energy (OECD/UNDP 2025). These developments and their further expansion could also prove helpful in maintaining the overall supply infrastructure in the event of war, as dependencies would be reduced and more resources would be provided locally. Vigilance and resilience in outpatient care must therefore be prioritised and promoted more strongly than before.

The individual resilience and mental health of healthcare staff are also addressed (Litke et al. 2025). Staff stress levels have risen sharply, particularly in recent years due to the COVID-19 pandemic, and teams are already overburdened in their day-to-day work even in the absence of a crisis (Litke et al. 2022). It is therefore essential to prevent further severe psychological strain on healthcare staff caused by wartime events, as current findings from war zones demonstrate (Aqtam 2025; Kang et al. 2024; Vus et al. 2024).

Irrespective of specific crises, the strategy for promoting resilience (Expert Council for the Assessment of Developments in the Healthcare Sector 2023) advocates examining measures to promote resilience and the implementation of national strategies through monitoring within the quality assurance systems of healthcare facilities. In the RESILARE project, corresponding quality indicators were developed for this purpose, which medical practices can use to promote vigilance and overarching resilience within their organisation (Litke et al. 2025; Poß-Doering et al. 2024a). These include, amongst other things, safeguarding critical infrastructure, conducting individual risk analyses and establishing a network. Participants in the RESILARE project considered the application of these indicators to be highly relevant to them in the areas of 'individual resilience' and 'organisational resilience', and identified significant potential for improvement in the area of 'crisis prevention' (Poß-Doering et al. 2024a; Poß-Doering et al. 2024b). Based on these quality indicators and incorporating the tools provided by RESILARE, the 'Sustainable Practice' quality seal (Praxissiegel Foundation 2025) has already been developed, which certifies the demonstrable, systematic implementation of environmental, social and economic objectives in day-to-day practice. An adaptation and revision on this basis, supplemented by new insights gained in the meantime, could also be carried out with regard to vigilance concerning potential acts of war. In this way, specific tools can be provided that could assist practices of all sizes in maintaining outpatient care in the event of war.

Strengthening vigilance and resilience requires effort and investment even before crisis situations arise and negative effects are felt. For outpatient care, which treats the majority of patients on a daily basis, promoting vigilance and resilience can be seen as essential in order to be prepared for and able to respond to potential future crises, such as acts of war. Primary care practices should therefore have access to specific measures to strengthen vigilance and resilience and to safeguard critical infrastructure. The implementation of these measures should be facilitated and promoted in a way that is easily accessible to all stakeholders, including through concrete political support and scientific evidence.

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hcb study: Significant investment required to build resilience

>> German hospitals are inadequately prepared for crises and defence scenarios. This is the conclusion reached in a report compiled by the Institute for Health Care Business (hcb) in collaboration with the German Hospital Institute (DKI) on behalf of the German Hospital Association. The study, which was presented in October 2025, analyses the current level of resilience within the German hospital sector and quantifies the investment required to make the healthcare infrastructure crisis-proof.

The starting point for the study is the changed security situation in Europe. Hybrid threats, such as cyber-attacks on hospitals and acts of sabotage against critical infrastructure, have increased significantly. The authors distinguish between three scenarios: the scenario of cyber-attacks and acts of sabotage, which is already relevant today; a NATO collective defence scenario involving up to a thousand casualties per day; and a national defence scenario in the event of a military attack on German territory. For each of these scenarios, packages of measures were developed and their costs estimated. A flash survey of 165 hospitals revealed significant weaknesses. Particularly serious shortcomings are evident in five areas.

Staff shortages are considered the key vulnerability: even under normal operating conditions, many hospitals are already reaching their capacity limits. Training in disaster and war medicine is largely lacking, and more than eighty per cent of hospitals do not provide their staff with any specific training for extreme scenarios. Added to this is the problem of overlapping commitments: doctors and nursing staff who volunteer in civil protection are not available for hospital duties at the same time as they are on call for emergencies.

Cybersecurity also remains a problem area, despite previous investments. In the event of a successful attack, many facilities would be forced to rely on paper-based processes, which would cost valuable time. In terms of physical security, there is a lack of access controls, CCTV and automated warning systems. Over half of the hospitals surveyed do not have a central public address system. Stock levels are usually sufficient for only a few days, and the hospitals themselves rate their preparedness for chemical, biological, radiological and nuclear incidents as completely inadequate.

The investment required is substantial. For the first scenario – namely, protection against cyber-attacks and sabotage – investments of around 2.7 billion euros are estimated, plus annual operating costs of 670 million euros. In the event of an alliance crisis, the investment costs rise to around five billion euros, with running costs of almost 900 million euros per year. In the event of a defence crisis, investments of around 15 billion euros and annual operating costs of 1.1 billion euros are calculated.

The hcb authors, led by project manager Prof. Dr Boris Augurzky, recommend immediately tackling measures that can be implemented in the short term. As a model for swift government action, the authors point to the LNG Acceleration Act of 2022. The authors also consider a comparable instrument to be necessary for the hospital sector. <<

1: https://t1p.de/q8q5n

Strategic partners IDG and RLP

>> The IDG Institute for Digital Health Data RLP gGmbH (IDG) and IT-Choice Software GmbH (IT-Choice) have officially formalised their collaboration, which has been in place for several years, as a strategic partnership. The aim is to establish a long-term, structured and binding framework for the joint development, support and future marketing of digital solutions in the healthcare sector. The partnership builds on numerous successfully implemented projects in which IDG and IT-Choice have developed digital applications for the healthcare sector and public administration – particularly in the field of register-based documentation and data-driven specialist procedures. "Digitalisation in the healthcare sector requires reliable partners who not only supply technology but also work together to enable sustainable solutions," explains IDG Managing Director Philipp Kachel. "We have a long-standing working relationship with IT-Choice, which we are now deliberately placing on a strategic footing." <<

References

1. Aqtam, I. (2025). A narrative review of mental health and psychosocial impact of the war in Gaza. East Mediterr Health J 31, 89–96, doi: 10.26719/2025.31.2.89.

2. aQua Institute (2021). Promoting crisis resilience. URL: https://www.aqua-institut.de/resilare [Accessed 15 May 2026].

3. Dafallah, A., Elmahi, O. K. O., Ibrahim, M. E., Elsheikh, R. E. and Blanchet, K. (2023). Destruction, disruption and disaster: Sudan's health system amidst armed conflict. Confl Health 17, 43, doi: 10.1186/s13031-023-00542-9.

4. Dale, E., Novak, J., Dmytriiev, D., Demeshko, O. and Habicht, J. (2024). Resilience of Primary Health Care in Ukraine: Challenges of the Pandemic and War. Health Syst Reform 10, 2352885, doi: 10.1080/23288604.2024.2352885.

5. Fehrer, V., Poß-Doering, R., Weis, A., Wensing, M., Szecsenyi, J. and Litke, N. (2023). Climate change mitigation: Qualitative analysis of strategies to reduce environmental impact in German primary care. European Journal of General Practice 29, 2232946, doi: 10.1080/13814788.2023.2232946.

6. Herrmann, A. and Sauerborn, R. (2018). General Practitioners' Perceptions of the Health Impacts of Heat on the Elderly in the Context of Climate Change – A Qualitative Study in Baden-Württemberg, Germany. Int J Environ Res Public Health 15, doi: 10.3390/ijerph15050843.

7. Innovation Committee, G. B. (2021–2024). RESILARE – Promoting crisis resilience: Development and validation of quality indicators to prepare outpatient medical practices for crisis situations. URL: https://innovationsfonds.g-ba.de/projekte/resilare.409 [Accessed 15 May 2026].

8. Kang, H., Fischer, I. C., Vus, V., Kolyshkina, A., Ponomarenko, L., Chobanian, A., Esterlis, I. and Pietrzak, R. H. (2024). Psychological Resilience of Mental Health Workers During the Russia-Ukraine War: Implications for Clinical Interventions. Prim Care Companion CNS Disord 26, doi: 10.4088/PCC.24m03761.

9. Köppen, M., Szecsenyi, J., Litke, N., Poß-Doering, R. and Wensing, M. (2025). RESILARE Results Report. URL: https://innovationsfonds.g-ba.de/downloads/beschlussdokumente/850/2025-05-23_RESILARE_Ergebnisbericht.pdf.

10. Kriit, H. K., Chen-Xu, J., Semenza, J. C., Heiliger, H., Markandya, A., Dasandi, N., Jankin, S., van Daalen, K. R., Achebak, H., Alari, A., Alcayna, T., Ball, E., Ballester, J., Bechara, H., Callaghan, M. W., van Cauwenberghe, M., Charnley, G. E. C., Courtenay, O., Cirach, M., Garcia-Corral, P., Cross, T. J., Dasgupta, S., Dickson, Z. P., Eckelman, M. J., Erfort, C., Fransson, P., Farooq, Z., Gasparyan, O., Hamilton, I., Hesselman, M., Hänninen, R., Hsu, S.-C., Janoš, T., Jatkar, H., Jay, O., Kennard, H., Khanna, K., Kiesewetter, G., Lowe, R., Lührsen, D., Maia, C., Martinez-Urtaza, J., Minx, J. C., Nieuwenhuijsen, M., Palamarchuk, J., San José Plana, A., Repke, T., Roa-Contreras, J. A., Robinson, E. J. Z., Scamman, D., Shartova, N., Sherman, J. D., Sirotkina, E., Singh, P., Sofiev, M., Springmann, M., Stucki, L., Tartarini, F., Triñanes, J., Walawender, M., Romanello, M., Antó, J. M., Nilsson, M., Tonne, C. and Rocklöv, J. The 2026 Europe report of the Lancet Countdown on health and climate change: narrowing window for decisive health action. The Lancet Public Health, doi: 10.1016/S2468-2667(26)00025-3.

11. Litke, N., Poß-Doering, R., Weis, A., Koetsenruijter, J., Köppen, M., Kümmel, S., Broge, B., Wensing, M. and Szecsenyi, J. (2025). Quality indicators for promoting crisis resilience in general practice practices within the RESILARE project. Journal of General Practice 101, 74–80, doi: 10.1007/s44266-024-00305-6.

12. Litke, N., Weber, S., Breckner, A., Roth, C., Peters-Klimm, F., Wensing, M. and Stengel, S. (2024a). Resilience of the primary healthcare system: perspectives of German stakeholders at primary care interfaces during the second wave of the COVID-19 pandemic. Front Med (Lausanne) 11, 1322765, doi: 10.3389/fmed.2024.1322765.

13. Litke, N., Weis, A., Koetsenruijter, J., Fehrer, V., Koeppen, M., Kuemmel, S., Szecsenyi, J. and Wensing, M. (2022). Building resilience in German primary care practices: a qualitative study. BMC Primary Care 23, 221, doi: 10.1186/s12875-022-01834-4.

14. Litke, N. A., Poß-Doering, R., Fehrer, V., Köppen, M., Kümmel, S., Szecsenyi, J. and Wensing, M. (2024b). Building climate resilience: awareness of climate change adaptation in German outpatient medical practices. BMC Health Services Research 24, 184, doi: 10.1186/s12913-024-10664-2.

15. OECD/UNDP (2025). Investing in climate for growth and development: The case for enhanced NDCs. 4, URL: https://www.oecd.org/content/dam/oecd/en/about/projects/new-ndcs-to-deliver-climate-action-for-growth/investing-in-climate-for-growth-and-development-the-case-for-enhanced-NDCs-key-messages.pdf [Accessed 27 April 2026].

16. Poß-Doering, R., Koetsenruijter, J., Litke, N. A., Weis, A., Köppen, M., Kümmel, S., Szecsenyi, J. and Wensing, M. (2024a). Strengthening crisis resilience in German primary care by using quality indicators: findings of a process evaluation in the RESILARE project. Archives of Public Health 82, 177, doi: 10.1186/s13690-024-01400-7.

17. Poß-Doering, R., Litke, N. A., Koetsenruijter, J., Köppen, M., Szecsenyi, J. and Wensing, M. (2024b). Using quality indicators to strengthen crisis resilience in primary care. In 64th EQuiP Conference (Ghent, Belgium).

18. Poß-Doering, R., Köppen, M. and Litke, N. (2024). RESILARE – Self-assessment to promote crisis resilience in medical practices. (Heidelberg University Hospital, aQua Institute, Göttingen. https://static-content.springer.com/esm/art%3A10.1007%2Fs44266-024-00305-6/MediaObjects/44266_2024_305_MOESM2_ ESM.pdf.

19. Robayo, M., Lucchetti, L. R., Delgado-Prieto, L. and Badiani-Magnusson, R. (2025). Soaring Food Prices Threaten Recent Economic Gains in the EU (The World Bank. Romanello, M., Di Napoli, C., Drummond, P., Green, C., Kennard, H., Lampard, P., Scamman, D., Arnell, N., Ayeb-Karlsson, S., Ford, L. B., Belesova, K., Bowen, K., Cai, W., Callaghan, M., Campbell-Lendrum, D., Chambers, J., van Daalen, K. R., Dalin, C., Dasandi, N., Dasgupta, S., Davies, M., Dominguez-Salas, P., Dubrow, R., Ebi, K. L., Eckelman, M., Ekins, P., Escobar, L. E., Georgeson, L., Graham, H., Gunther, S. H., Hamilton, I., Hang, Y., Hänninen, R., Hartinger, S., He, K., Hess, J. J., Hsu, S. C., Jankin, S., Jamart, L., Jay, O., Kelman, I., Kiesewetter, G., Kinney, P., Kjellstrom, T., Kniveton, D., Lee, J. K. W., Lemke, B., Liu, Y., Liu, Z., Lott, M., Batista, M. L., Lowe, R., MacGuire, F., Sewe, M. O., Martinez-Urtaza, J., Maslin, M., McAllister, L., McGushin, A., McMichael, C., Mi, Z., Milner, J., Minor, K., Minx, J. C., Mohajeri, N., Moradi-Lakeh, M., Morrissey, K., Munzert, S., Murray, K. A., Neville, T., Nilsson, M., Obradovich, N., O'Hare, M. B., Oreszczyn, T., Otto, M., Owfi, F., Pearman, O., Rabbaniha, M., Robinson, E. J. Z., Rocklöv, J., Salas, R. N., Semenza, J. C., Sherman, J. D., Shi, L., Shumake-Guillemot, J., Silbert, G., Sofiev, M., Springmann, M., Stowell, J., Tabatabaei, M., Taylor, J., Triñanes, J., Wagner, F., Wilkinson, P., Winning, M., Yglesias-González, M., Zhang, S., Gong, P., Montgomery, H. and Costello, A. (2022). The 2022 report of the Lancet Countdown on health and climate change: health at the mercy of fossil fuels. Lancet 400, 1619–1654, doi: 10.1016/s0140-6736(22)01540-9.

20. German Council of Experts on Health System Development (2023). Resilience in the healthcare system – ways to manage future crises. https://dip.bundestag.de/drucksache/gutachten-2023-des-sachverst%C3%A4ndigenrates-zur-begutachtung-der-entwicklung-im-gesundheitswesen-resili-enz/265765. [Accessed 4 May 2026].

21. Praxissiegel Foundation (2025). 'Sustainable Practice' Quality Seal. URL: https://www.praxissiegel.de/nachhaltigkeit/ [Accessed 4 May 2026].

22. Vus, V. I., Shkoliar, M. V., Proskuriakov, S. and Fradelos, E. (2024). Maintaining the mental health of Ukrainians in times of war: searching for a mechanism to provide a comprehensive system of psychosocial support and mental health awareness. Pol Merkur Lekarski 52, 373–379, doi: 10.36740/Merkur202403116.

23. Warken, N. (2026). Security policy without a functioning healthcare system is inconceivable. URL: https://www.bundesgesundheitsministerium.de/presse/interviews/interview/wams-15-02-26 [Accessed 13 April 2026].

Abstract

Introduction: Crises such as pandemics, rising costs, vulnerabilities in supply chains and acts of war pose major challenges for primary care. Against the backdrop of a threatened security situation in Germany, Minister Warken sees an urgent need for action to strengthen the resilience of the German healthcare system and to build capacity in the event of war. In the RESILARE project, quality indicators to promote resilience in primary care were developed and piloted. Based on data collected for this purpose, the study aims to investigate the extent to which war is viewed as a relevant threat to outpatient care in Germany and whether the resilience and vigilance of practice teams in this regard are already being addressed.

Methods: In a secondary analysis, qualitative data from focus groups and individual interviews with experts and primary care providers were analysed inductively.

Results: 'War' was already being discussed in primary care in 2021. Impacts such as the failure of critical infrastructure, resource shortages, migration, increased demand for care and the strain on practice teams, as well as how to manage these, were reflected upon across various crises.

Discussion: Concrete measures to strengthen vigilance, resilience and the safeguarding of critical infrastructure should be promoted with the support of policymakers and the academic community, and implemented in collaboration with all stakeholders involved.

Keywords: resilience, vigilance, general practice, war

War as a Threat to Primary Care in the German Healthcare System: Strengthening Resilience and Vigilance

Introduction: Crisis situations such as pandemics, rising costs and acts of war repeatedly pose challenges to primary care. Against the backdrop of a threatened security situation in Germany, Minister Warken sees an urgent need for action to strengthen the resilience of the German healthcare system and build capacity in preparation for war. In the RESILARE project, quality indicators for promoting resilience in primary care were developed and piloted. Based on data collected for this purpose, this study aims to investigate the extent to which war is viewed as a relevant threat to outpatient care in Germany and whether the resilience and vigilance of practice teams in this regard are already being addressed.

Methods: In a secondary analysis, qualitative data from focus groups and individual interviews with experts and primary care providers were analysed inductively.

Results: The issue of war was already being discussed in primary care in 2021. Impacts such as the failure of critical infrastructure, resource shortages, migration, increased care needs and the strain on practice teams—as well as how to manage these challenges—were considered in the context of various crises.

Discussion: Specific measures to strengthen vigilance, resilience and the protection of critical infrastructure should be promoted with the support of policymakers and the scientific community, and implemented in collaboration with all stakeholders.

Keywords: resilience, vigilance, war, general practice