



Series Viewpoint

Ethical insights from the COVID-19 pandemic in Germany: considerations for building resilient healthcare systems in Europe

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Key ethical insights from the COVID-19 Pandemic

The COVID-19-pandemic has brought many ethical issues of public healthcare systems to public attention in a new, urgent light. Despite a significant body of literature available on ethical concerns in pandemics, these insights have so far not been broadly integrated into health system preparedness, leading to a variety of serious ethical problems over the course of the pandemic.

In this paper, four key ethical concerns are discussed, namely 1) the distribution of scarce resources; 2) research ethics; 3) structural inequities; and 4) solidarity and social cohesion. The analysis draws on Germany as a case study and the authors' experience in German health policy-making during the pandemic.

Two overarching conclusions are drawn based on the analysis: 1) Healthcare system resiliency hinges on 'ethics by design'. Health systems need to proactively integrate ethical considerations into their design and operation. This is particularly relevant for pandemic preparedness.

2) Ethicists need to be part of preparedness efforts. Once a crisis hits, they should be invited to the table early on and remain present, accompanying the decision-making process, and in subsequent reflections for future planning.

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As of 12 August 2021, there have been 60,008,184 cases of COVID-19 (coronavirus disease 2019) reported in Europe, including 1,212,033 deaths [1]. This has put an enormous strain on European healthcare systems, and raised awareness of the ethical implications of a pandemic in which lives and livelihoods have been lost. The pandemic has not created such ethical concerns, but rather brought them to public attention in a new, urgent light. Nonetheless, pandemic responses across Europe have shown that despite a significant body of literature on ethical concerns in pandemics [2], these insights have not been broadly integrated into health system preparedness.

From the very beginning, ethical issues emerged around the role, duties and burdens of healthcare personnel [3-5]; the complexities of rapid decision-making under dynamic conditions of uncertainty [6-8]; the appropriate use of health information and digital technologies in combatting the pandemic [9-11]; the challenge of appropriate public health communication and the various causes and effects of the 'infodemic' that accompanied the pandemic [12-14]; and the multifactorial causes and effects of the pandemic itself [15]. One important lesson from the COVID-19 pandemic is that ethics needs to be an integral feature of resilient healthcare systems.

To underline this lesson and to further the debate around practical approaches for integrating ethics into healthcare systems more sustainably in future, we reflect on four key ethical concerns: 1) the distribution of scarce resources; 2) research ethics; 3) structural inequities; and 4) solidarity and social cohesion. Since early 2020, one of the authors (A.B.) has been the Chair of the German Ethics Council, which advises German government and politics on an ongoing basis and has issued several statements during the pandemic. She has also had various, partly ad hoc, advisory roles for individual ministries, governmental bodies and politicians. Germany is thus our case study; and much of our discussion is based on direct – if limited – involvement in German health policy-making. At the same time, we hope our contribution can be instructive for other countries and regions. The four issues were chosen due to their continuous importance in German policy-making during the pandemic; their perceived

relevance for future healthcare system resilience; and our particular expertise and experiences. We aim to provide ethical insights based on our professional experience in one European country, but we cannot provide a comprehensive overview of all relevant ethical aspects of the COVID-19 pandemic.

1. Scarce resources need to be distributed fairly

As COVID-19 cases grew, it immediately became clear that healthcare systems were not adequately prepared [16]. Fears about rationing of ICU resources (triage) arose early. There was also urgent need to allocate scarce personal protective equipment (PPE) and PCR-testing. This acute scarcity sparked debates around how to fairly distribute limited resources during the pandemic. The field of biomedical ethics, with its long history of discussing fair allocation of resources, was quick to respond with proposals for distributive criteria [17]. However, it immediately became clear that such principles would remain contested and require careful specification and operationalisation. Each area of scarcity also came with its own set of normative and practical challenges, and criteria differed widely between countries. For example, early on in the pandemic, age emerged as a clear risk factor for severe cases of COVID-19. Hence in some European countries such as Austria or Italy, protocols for ICUs included age as a criterion for triage [18]. These early triage protocols sparked intense public as well as expert discussion over their ethical appropriateness. In Germany, many considered the use of age as a rationing criterion to be discriminatory and even unconstitutional if used for triage [19]. German medical associations quickly developed suggestions that explicitly excluded age as an independent criterion in triage. These suggestions have since been included in an official clinical practice guideline [20], but continue to spark public debate and ethical and legal criticism [21].

Vaccine prioritization provides an important counterpoint as an example of ethical allocation of health resources. Expecting initial scarcity of the newly approved vaccines against the novel coronavirus SARS-CoV-2, three institutions – the Standing Committee on Vaccination, the Germany National Academy of Sciences Leopoldina, and the German Ethics Council – in a joint effort developed principles for priority-setting in the German vaccination campaign. This was a deeply interdisciplinary process that explicitly included ethical expertise. The resulting framework combined procedural as well as material ethical principles with constitutional and empirical considerations, and was communicated frequently and transparently with the public [22]. While there was intense public criticism of the speed and organization of the vaccination campaign, and the exact timing of the end of vaccination priority-setting was controversial, the priority-setting framework itself received high public approval and has been considered by many to be a policy-making success.

Resilient healthcare systems need procedures in place for dealing with rapidly developing issues of allocation of scarce resources, both those that can be clearly expected from past experience as well as mechanisms for addressing scarcity concerns that cannot be easily anticipated. In light of experiences during COVID-19, we recommend building a curated repository of literature and guidance relating to priority-setting and allocation criteria in various areas of healthcare, to allow decision-makers to quickly access and build from state-of-the-art material in future crisis situations. This should include developing practice tools such as ‘how to-guides’, checklists for different areas of allocation, suggestions for setting up ad hoc-committees, etc. While the repository could be hosted in Europe, it should be accessible from elsewhere. We also suggest that countries establish interdisciplinary, priority-setting groups for crisis situations that can build on existing priority-setting systems and can promptly swing into action and form ad hoc-committees if allocation conflicts emerge. In addition to robust ethical and legal frameworks, community engagement will be vital for public support and acceptance. Experiences from

other parts of the world show that it is possible to have meaningful and detailed engagement with communities about prioritisation, which could improve public empowerment and aid political support in advance [23]. Finally, more research is needed to illuminate specifically which rationing criteria are deemed acceptable for which context, by different groups, and why.

2. Research ethics and coordination are necessary, even in moments of crisis

With the discovery of the SARS-CoV-2 virus, studies and scientific articles on COVID-19 increased exponentially. Some of these studies were subsequently debunked or found to be misleading, raising the question of whether it is justifiable to take methodological ‘shortcuts’ during a pandemic to increase speed, but potentially decrease accuracy, validity and reliability [24]. As has been discussed recently, a crisis cannot be an excuse for foregoing the ethical standards of high-quality scientific research; methodologically-flawed evidence is not better than no evidence and even a global crisis does not merit research exceptionalism [25]. Over the past year, various research ethics guidelines for pandemics have been put forth, echoing established concerns around the trade-offs between speed and quality, maintaining safety and consent for participants, and ensuring methodological validity, transparency, and rigorous peer review.

In Germany, many local research ethics committees rapidly streamlined their working mode to allow for online meetings and faster review. Particularly in the first phase of the pandemic, COVID-19-related research was often fast-tracked and so far, there are no signs that research ethics review quality was compromised by this. However, fast-tracking also led to research in other areas being postponed [26], leading to potentially lost benefits to patients in need of potential treatments. Concerns over research exceptionalism – where a crisis situation is seen to justify substandard methodological review – may also have had unintended effects in Germany. Reports of poor quality trials of medicines in other regions of the world appear to have led to an abundance of caution on the part of German funding bodies and ethics committees regarding studies on COVID-19 medicines and treatments. While there were some funding programs launched that were targeted at developing treatments (e.g. by the German Federal Ministry of Education and Research), far more funds were used to support research focused on various aspects of understanding the virus, its spread and its impact, on vaccine research, or on different measures to curb the pandemic. Widely discussed in German media, concerns remain that funders may have over-focused on ‘safe,’ well-established forms of research (e.g. vaccine research led by major companies) to the detriment of some promising potential treatments.

From an ethical perspective, a balance must thus be struck between making sure that enough research in all relevant areas is funded and supported. Ethical standards need to be respected across all areas of research, even when speedy results are urgently required. The challenge is thus strategic as well as practical. One strategic move to address these concerns would be for Germany to form a national coordinating body that links research funders, the research community, and the national healthcare system. This body could provide continuous research ‘foresighting’ as well as monitoring and coordination of rapidly emerging research in a crisis. While research ethics committees were initially very helpful in supporting rapid research in pragmatic ways, it became obvious that at the level of practice, much greater investment in infrastructure for monitoring and approving research is necessary. We also suggest Germany and other European countries build a national ‘reserve’ of people that could be ‘on-call’ as an additional ethics committee workforce in a crisis.

Finally, the multitude of parallel clinical trials across the world in the early phase of the pandemic emphasized the need for

infrastructure that allows rapid coordination and oversight of research both nationally and globally, to improve and solidify results, share knowledge, and avoid redundant studies. Although strengthening existing structures within the ECDC and WHO is necessary, it is also important to establish a new European or even global body for health crises, such as the recently announced WHO pandemic preparedness hub [27]. This could serve as a platform to coordinate international research activities and maintain an overview of all data and results, avoiding redundancy, facilitating better comparison through shared databases, pointing out under-researched areas and ensuring high ethical standards [28]. This body should receive full support by governments and the research community to gain momentum and fulfil its role.

3. Crisis exacerbates existing structural inequities

The pandemic has illustrated that we may all be in the same storm, but we are not all 'in this together' [15]. The differential impacts of health crises on marginalized groups has been well-established, even before the pandemic, however, it took a long time for the unequal effects of the pandemic to penetrate public debate and even longer to affect decision-making. In Germany, well-known concerns regarding stigmatization, closed-off discussions, as well as lack of easily accessible large-scale cohort datasets and restrictive cultures of data usage in Europe – and certainly in Germany have likely contributed to this [29–30]. Countries with established datasets provided earlier findings [31]. However, even when data became available on the differential impacts of the pandemic on social groups in Germany [32–34], pandemic response measures were largely not changed in response to this information. Targeted multi-lingual communication in the vaccination campaign and efforts to establish low-threshold vaccination in socially deprived areas [35], were the only large-scale policies responding directly to these concerns. So far, here has been a lack of discussion in Germany regarding the introduction of tools, such as disadvantage indices, which could capture various forms of vulnerability and other structural aspects in multidimensional ways when assessing pandemic measures and allocating relevant resources [36–37]. The focus of these conversations also needs to extend beyond local political boundaries: supply chains, virus mutations, vaccine availability are all global concerns. The beginning of the pandemic illustrated how little medical equipment, medicines and chemical substances are produced and readily available in the country. Western countries have bought-up supplies over the course of the pandemic, leaving poorer regions in short supply. Hence, to improve future healthcare system resilience and address structural inequities, existing programs that respond to the needs of underserved, structurally-disadvantaged groups need to be prioritized and extended with urgency. In addition, new programs – for example, supporting those whose mental health was affected by the pandemic most strongly – must be established. Preparedness plans for future crises in all healthcare systems must also include a significant focus on those at highest risk and measures need to be developed now.

4. Solidarity and the dangers of losing social cohesion

Solidarity has been a rallying cry throughout the pandemic, and many governments have called for increased social cohesion to contain the virus and protect national healthcare systems. Initially, there were many examples of solidarity to support strong public health measures and restrictions. However, not everyone has the same capacity to be solidaristic. As the pandemic stretched on, 'solidarity fatigue' grew: people became tired of complying with guidelines, the burden of the pandemic was exacerbated for particular groups, and the spread of fake news and misinformation fostered further social divisions. Solidarity requires a common goal, such as protecting a national healthcare service. In Germany, the threat of the healthcare

system becoming overburdened appeared to be a key motivator for public support for restrictive pandemic measures, with support for measures tending to rise following warnings from intensive care physicians [38]. However, solidarity, particularly long-term, also relies on (indirect) reciprocity. This was highlighted in Germany when legal provisions to lift restrictions for the fully vaccinated were discussed. Although younger people had shown solidaristic support of restrictive measures that imposed significant burdens on them over the course of the pandemic, and studies showed great support for vaccine prioritization for the elderly and at-risk [39], lifting restrictions for the vaccinated was met with significant public resistance and frustration. This likely resulted in part from impressions of violated reciprocity [40].

Solidarity in the pandemic is obviously broader than any healthcare system alone [19]. However, it is an important stabilizing factor in healthcare systems, and without it, adherence to measures responding to a health crisis could wane quickly, increasing strain on healthcare provision. Reciprocity is particularly important in longer-term crises [41]. Monitoring the impact of crisis measures on different groups is necessary so that direct impacts can be compensated for on an ongoing basis. Governments can also strengthen reciprocity through a range of concrete support measures (e.g. financial support programs for out-of-work-employees or businesses affected by shutdowns like *kurzarbeit*, *coronahilfen* in Germany), however, particular attention needs to be paid to the ways that such programs may unintentionally disadvantage segments of the population or reinforce existing gender or class inequalities [42]. Finally, political actors also need to play a key role with clear communication: being transparent and empathic, explaining the changing situation, clarifying how burdens and benefits are distributed across groups and why, and most importantly, emphasising common goals and focus on foregrounding the threads that keep us together, and not what sets us apart.

5. Conclusion

The past year has shown that ethics should not be an afterthought of a pandemic response. We believe two points are at the core of the recommendations outlined above: 1) Resiliency hinges on 'ethics by design', where regular ethical analysis is a relevant structural element of the system and can thus occur early, should a crisis emerge. Ethical considerations, such as those identified above, need to be proactively integrated into the design and operation of healthcare systems. This is particularly relevant for pandemic preparedness. 2) Ethicists need to be part of preparedness efforts. Once a crisis hits, they should be invited to the table early on, when plans are made in response to a new public health threat, and remain present, accompanying the entire decision-making process, and in subsequent reflections for future planning. While our recommendations may not be new to ethicists and other experts, (2) they have not yet found wide application in current healthcare systems. We thus hope they can help in addressing the current pandemic, and be instructive for shaping how medicine, public health, and public policy can respond to crises in the future.

Author contributions

All authors contributed to the conceptualization of the manuscript. AB provided the initial structure. AF wrote the first draft of the manuscript. SM provided critical feedback on the draft, which was subsequently revised and re-written by all authors.

Declaration of Interests

AB is Chair of the German Ethics Council. AF and SM have nothing to disclose.

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