Foreword

Resilience – a frequently used keyword and also shorthand for a fundamental trait which individuals and also systems must possess if they are to overcome unique challenges such those faced in dealing with a pandemic. At a first approximation, resilience can be described as the ability to cope with the effects of extraordinary crises, or what are known as "external shocks" (see Section 1 for a more detailed definition), and to deal with them in a way that the individual's or system's ability to perform is quickly stabilised and, ideally, strengthened once the crisis has been overcome. The crises seen in recent years – not least the SARS-CoV-2 pandemic, the disastrous floods seen in Germany's Ahr Valley and Erft regions and the increased incidence of heat waves and their effects on human health – have shown that when it comes to Germany's healthcare system, its resilience is not satisfactory in the face of disasters and unique challenges where the task at hand is to protect people's health and provide healthcare in times of crisis (for a more in-depth assessment see primarily Section 2).

The Advisory Council on the Assessment of Developments in the Health Care System (the Council) has used these observations to analyse both the strengths and weaknesses of the German healthcare system in dealing with the health-related dimensions of external shocks and develop recommendations for use in strengthening the system's resilience. This is in line with the legal mandate set out in Section 142 (2) of Book V of the German Social Code (SGB V), to propose "ways and means of furthering the development of the healthcare system" – notably, for the purposes of the present report, in relation to the future crises which people and thus the healthcare system will face.

But how can we give Germany's healthcare system the resilience it needs to ensure the country's response will be more efficient and effective than it has been to date? The Council perceives its report as a means to help tackle this question, one which must be addressed by both policymakers and civil society. There is no pat answer. Even the differing academic disciplines can only analyse "their" realm of reality and then use the results to formulate their recommendations (see Section 10). That assessments can differ between representatives from the different sciences, even between representatives from the same discipline, is both characteristic of scientific discourse and one of the great strengths of our democracy. This must be made integral to educating communication (see Section 11), not least to effectively counter anti-science hostility and populism, and – to the greatest extent possible – prevent not just social tension but the kinds of verbal and physical violence seen in response to COVID-19 measures.

German society must be better prepared to cope in times of crisis (see Part 2 of the report) and, whenever they arise, be in a position to act despite the surrounding uncertainty and then, where necessary, implement measures that prove unpopular and inconvenient. In many cases, there is no time to wait until well-founded knowledge and findings are available for use. Mindful of such uncertainty, it is important to identify scientifically-supported views from renowned experts and, above all, to take these into account when forming opinions and reaching decisions. At the same time, it is necessary to counter both absolutism surrounding individual scientific standpoints and disinformation on the part of scientists and scholars from other disciplines

who nonetheless address issues beyond their field, adopting the arbitrary position that "it's all a matter of opinion". Freedom of opinion does not mean that all opinions are equally well-founded. The attention that many media channels afford to non-scientific opinions makes them appear more important and far more wide-spread than they actually are. But, to the extent people adhere to such opinions, even social relevance — whether real or artificial — does not mean they are scientifically valid.

What the COVID-19 crisis has reminded us of is that rather than living in a well-informed society, we live, it could be said, borrowing from Kant, in one of enlightenment – one in which a broad consensus on how to assess a development or trend and determine what needs to be done to deal with it must always be reached anew by means of objective, fact-based information. This task will become even greater in the face of climate change and its effects, not least on human health.

Ultimately, in a parliamentary democracy, it remains the non-substitutable responsibility of elected representatives to decide what is to be done politically within the framework of a constitutional value system. In the event of a crisis, this can include an authorisation, limited in duration and specified as precisely as possible in terms of content, for the Executive to take measures to protect human life and human health by means of decree, and to safeguard self-determination, solidarity, the legal system, the economy, education and culture. Such political responsibility includes the requirement that *prior* to reaching such decisions – those usually made in "normal" times and those in acute periods of crisis – the best-possible, relevant scientific advice when looked at from all aspects of reality be obtained, assessed and given due consideration.

The Council comprises experts from the worlds of medicine, nursing science and economics. We want to use these various standpoints to provide those responsible for healthcare in Germany, both policymakers and self-governed institutions, with a scientifically-founded guide for use in strengthening resilience in the healthcare system. The Council is aware that given the inherent complexities of the German healthcare system, this is *only one* of the many and considerable challenges faced. Civil protection and disaster management call for a broad-based approach. Experience has shown that if we are to counteract the causes of many foreseeable challenges, we must adopt a more concerted, future-focused strategy than has been the case so far. But even if we do, the health-related outcomes from climate change – be it extreme weather events or the outbreak of tropical diseases in temperate climate zones – will still occur even if global warming is limited to 1.5 °C. The guiding principle here is that while taking one course of action (resilience-building measures), we should not neglect our efforts in the other (measures to mitigate climate change).

In the interests of an all-hazards approach, the recommendations contained in the report are to be seen as a contribution to help strengthen resilience in the German healthcare system in the face of myriad and diverse challenges and, in the interests of the "health in all policies" approach, as a contribution to joint and coordinated efforts whose integral objective and goal is safeguarding human health across various policy and social sectors. Unfortunately, good plans often go unnoticed as they are left lying in desk draws. This has less to do with lacking knowledge and more to do with deficits in implementation, connectivity and networking, practice and control.

Following on from the Executive Summary, Part 1 of the report deals with terms and definitions, and a review of relevant events and their scientific evaluation to date (see Sections 1 to 3). Part 2 describes the measures usually taken in "normal" times when the healthcare system is not suddenly forced to respond to external challenges (see Sections 4 to 8). Part 3 focuses on aspects that must be considered in times of crisis and when dealing with crisis outcomes (see Sections 9 to 12).

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The Council is responsible for any errors or deficiencies contained in the report.