Prof. Dr. med. Matthias Schrappe
Hedwig François-Kettner
Prof. Dr. Dr. med. René Gottschalk
Franz Knieps
Dr. med. Andrea Knipp-Selke
Prof. Dr. rer. pol. Philip Manow
Prof. Dr. med. Klaus Püschel
Dr. med. Martin Sprenger, MPH[1]

The importance of basic scientific principles and the consequences of disregarding them

Summary

In the current process of coming to terms with the Corona crisis, professional and scientific points of view are in danger of being lost from view; instead, apologies or easy-to-see-through mea culpa admissions (‚yes, we were wrong about the children') dominate. Under the maxim ‚don't look back!', political responsibility for the deficits that have arisen in certain population groups and economic sectors is thus relativised or rendered irrelevant. The group of authors of the thesis paper therefore once again presents a compilation of the technical principles of effective and scientifically validated epidemic management in order to achieve a form of substantive reappraisal that helps to avoid a repetition of the mistakes made in future crises caused by infectious agents.

Schlüsselwörter

Pandemic, SARS-CoV-2, Covid-19, epidemiology, prevention, socio-political relevance

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The opinions of the thesis paper authors' group between April 2020 and June 2022 covered three levels: the infection epidemiological situation as a basis, the modern, multimodal prevention concepts as an option for action, and the societal level as a context that must be imperatively considered. Numerous other groups and individuals have set comparable priorities, but overall, the reversal of central professional standards in health care with regard to infection management could not be prevented any more than the use of inadequate prevention concepts and the social narrowing of discourse, the incitement of critical opinions and the revival of ‚governing through'. The full extent of the consequences is slowly becoming visible on the horizon. To give a particularly memorable example: In the case of aerogenic transmission by asymptomatic carriers, the ‚contact tracing' by means of the ‚containment scouts', which was presented with great emphasis at the end of April 2020, cannot only be described as a tragic error, which could also not be legitimised by the Anglicism placed in the media. Instead, this represents a misuse of the precious manpower of the health offices, whose actual competence is not to be seen in phoning possible contacts, but e.g. in the development of safe manners in the care of (dying) nursing home residents, in the support of schools with the aim of avoiding school closures - everything that would have been possible if one had wanted to use the knowledge of the offices and employees about the regional and social circumstances on the ground.

>> The process of coming to terms with the situation is underway, that is certain, but we will have to wait and see whether it will remain a matter of dutiful apologies for individual ‚excusable errors' or whether consequences will be drawn that will make a relapse into these technological measures, some of which border on inhumanity, unlikely in future comparable situations2. Scepticism is in order, because the synergisms of digital surveillance, restriction of individual fundamental rights, utilitarian overriding of group interests, nudging through selective access to social resources (up to gradual habituation to social-credit systems) and relativisation of (constitutional) judicial control through political occupation have, this can also be clearly observed on an international scale, acquired considerable appeal for the political level.

Against this background, the Thesis Paper Group is fully aware that the experiences of the last three years should not be viewed and interpreted solely at the level of health care, but that social and political factors must also be included. On the other hand, the professional level of concrete care must not be neglected either, because the overall health care has changed a lot due to the Corona management and has unfortunately deteriorated significantly in parts. The proportion of citizens who ‚have little or no confidence in health policy to provide high-quality and at the same time affordable health care' has doubled from 30% to 60% in the short period from 2020 to 2023.3 Numerous development strands of the last decades have been interrupted, pushed back and turned into their opposite, just think of the central topics of patient orientation, quality, patient safety, evidence-based medicine, outcome reference in health services research, management of complex health care processes. These competences had shaped the health care system quite decisively in the last decades, were intensively discussed in public, reflected social processes (e.g. personal self-determination and decision-making), which are regarded as central components of an enlightened society, and last but not least are also scientifically well substantiated.

The consequences of this unfortunate development run deep. Hospitals, care facilities and practices have been significantlyweakened, be it by inflexibly handled isolation and quarantine obligations, be it by the failure of politics to improve the staff shortage through credible campaigns, and above all by the persistent unwillingness to really tackle the central structural deficits (e.g. separation of outpatient/inpatient), i.e. to end sectoral cosmetics. Instead, there are endless panic messages - and one cannot get rid of the impression that the change of direction suits some authoritarian currents (which have

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1: In memoriam Prof. Dr. Gerd Glaeske, einem Freund und Weggefährten. G. Glaeske war bis zu seinem Tode Mitglied der Thesenpapier-Autorengruppe.
2: Heudorf, U.: Covid-19-Pandemie – wirkliche Aufarbeitung tut not. Hess. Ärzteblatt 5/2013, https://www.laekh.de/fileadmin/user_upload/Heftarchiv/Einzelartikel/2023/05_2023/Ansichten_Einsichten_Heudorf_lang.pdf?trk=public_post_comment-text
3: Robert-Bosch-Stiftung 2023: „Bevölkerung verliert Vertrauen in die Gesundheitspolitik", https://www.bosch-stiftung.de/de/bevoelkerung-verliert-vertrauen-die-gesundheitspolitik

always been opposed to transparently proven evidence in the sense of EBM or an evidence-based health policy), a certain shrinkage of facilities is not seen as unwelcome (such as the intended reduction in the number of hospitals), and staff and energy shortages do the rest. Of course, the situation before Corona was not satisfactory, that is clear to state (lack of further development of the DRG system, replacement of personal interaction by technical instruments, economisation of the last private sphere (health data) through digitalisation, deficiencies in care close to home, staff shortages, complications, etc.). But there had been some positive developments, and it was precisely these that were weakened and partly destroyed by pandemic management. First and foremost, the elements of a ‚modern corporatism' must be mentioned here, i.e. the flanking of the corporatist German health care system by external control elements such as transparent benefit assessment and scientifically based innovation promotion, as aimed at by the Innovation Fund. This is where the criticism must start, because the last two heads of department, Spahn and Lauterbach, have departed from these steering concepts based on network theory and returned to simple, ultimately long-outdated linear top-down concepts.

After just under three years of pandemic management, according to our starting point, an attempt must therefore be made to limit the losses and resume development, precisely because they - examples funding and transparency of institutions - not only concern epidemic control, but are of general interest.4 Fourteen aspects emerge in the analysis, ranging from the understanding of the disease to patient and quality orientation to communication in risk situations and ultimately damage to the political system. They all concern professional standards that have guided the actions of the professional groups in the health care system. The first step is to start with basic knowledge of infectious diseases.

Thesis 1: At no time was there ‚acting in ignorance', but the relevant information was already available in mid-March 2020.

‚Acting under conditions of ignorance' is the formula that is almost always put forward today as an excuse for negative developments. One would have to deal with an ‚unknown challenge' (according to Chancellor Merkel in the PK after the first Minister Presidents' Conference on 13.3.2020), with ‚decisions in the unknown' (according to Federal Minister of Justice Lambrecht in the fireside round in the Chancellor's Office with the Federal Constitutional Court on 30.6.2021 shortly before the ‚federal emergency brake ruling').

But the truth is different, in fact all the relevant information was available very early on: The aerogenic route of transmission dominates (after Heinsberg it was clear that smear infection hardly plays a role), older people are particularly vulnerable, and - of crucial importance - the infection is often transmitted by asymptomatically infected people. For example, of the 2010 military personnel on the French aircraft carrier ‚Charles de Gaulle' , 1,048 (24 hospitalised, no deaths) had become infected, but half of them presented no symptoms and could have passed on the infection unnoticed. For the infectiologist, this finding of transmission by asymptomatic persons is groundbreaking, because it is clear that the spread cannot be completely controlled by containment measures , i.e. that further spread must occur regardless of all measures (as is similar with other respiratory infections or HIV infection).

The consequences are obvious: we must abandon the illusion of eradication and not limit ourselves to containment measures, such as focusing solely on reducing and tracking contacts (as has unfortunately happened). Instead, we must take care of the groups of people who are particularly affected and who are at high risk for the consequences of the infection, i.e. the consequences of the disease, in a targeted and informed overall effort by all those involved (with the help of social and professional structures and not exclusively by locking them away). As mentioned above, the knowledgeable staff of the health authorities should have been used to establish risk-adapted measures in institutions (homes) and e.g. in particularly high-risk occupational environments (meat industry!) instead of using them up in an unhelpful ‚contact tracing' .

These Merkelian terms like ‚contact tracing' and ‚containment scouts' sounded handy at the end of April 2020, but Merkel, guided by her linear physical logic, was completely on the wrong track. The hypothesis that we need a lockdown ‚for all' in order to protect the vulnerable not only did not work (to date 85% of the deaths are over 70 years old), but was also blind to those who did not need this ‚care', namely e.g. the children and young people (see below), who had to suffer exclusively from - as they say today - ‚collateral damage' (which corresponds to a complete failure in mitigation) 5 .

However, for an adequate strategy, one would have had to ask the right people who deal with epidemic control in their daily practice and represent modern concepts, primarily from hospital hygiene, infectiology (infection control isthe international term), public health, etc. (hardly anyone who represents more than pure containment policy was asked). One must develop the correct understanding that such an epidemic does not progress ‚exponentially' as a homogeneous spread, but develops from clusters in a regionally very different form. And not to forget: An approach based on social interaction and intelligent local management cannot be based on spreading fear and terror, as has been openly advocated by official bodies6 , but requires an active public that is capable of action, that is informed in a differentiated manner and to whom the solutions are communicated clearly and comprehensibly.

Thesis 2: The ‚war against the virus' contradicts modern concepts that understand epidemics as a social event and stands for absolute, reductionist scientific thinking.

The essential knowledge of infectiology includes the distinction between infection and infectious disease. In the case of an infection, the pathogen is detectable; in the case of an infectious disease, there are also signs of illness. The latter can rarely be explained by the pathogen alone, but always represents an interaction of the pathogenic effect of the pathogen and the reaction of the host (patient). Sometimes signs of illness only appear when the host starts to activate its immune system against it; the ‚inflammation' with subsequent organ damage is not only caused by the pathogen, but equally by the defence reaction. It is therefore not helpful to talk only about the virus and perhaps declare war on it (Macron on 16.3.2020 on French TV),

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4: Teile dieses Artikels basieren auf M. Schrappe: „Verlorene Jahrzehnte – zurück zum paternalistischen Gesundheitssystem" (Teil 1 bis 3) in Cicero Online https://www.cicero.de/innenpolitik/corona-krise-aufarbeitung-zehn-thesen-schrappe-teil-1 dar

5: Es gab Zeiten, in denen selbst das RKI die *mitigation* nach *containment* und *protection* als drittes zentrales Ziel jeglicher Maßnahme in der Infektionsprävention bezeichnete: Nationaler Pandemieplan Teil I. Strukturen und Maßnahmen. Robert Koch-Institut, Berlin 2017, ISBN 978-3-89606-286-4, DOI 10.17886/rkipubl-2017-005

but one must also talk about the host. We are constantly talking about the next ‚killer mutation', but rarely about how we can define the vulnerable groups more precisely and what exactly the relevant immunodeficiencies are (currently, for example, with regard to vaccination recommendations).

However, a third element is still missing for the complete description of an infectious disease, namely the environment, the context. Rudolf Virchow said it quite correctly: a tuberculosis therapy or vaccination does not eradicate tuberculosis, but one has to shed light on the living situation. A polio vaccination campaign can only succeed if the drinking water supply is improved - the examples are numerous. And this is exactly what played (and still plays) a leading role in Corona: the housing and work situation in the meat industry led to the outbreak at Tönnies in Gütersloh, the institutions of nursing and care for the disabled predictably led to the first hotspots, and nosocomial transmission in the poorly prepared hospitals led to the first regional outbreaks in Italy.

Instead of using an understanding of the disease based on the three pillars pathogen/host/environment from the very beginning, a real tragedy took its course: a reductionist picture of the disease was used exclusively, staring only at the virus and its mutations, and was therefore not in a position to also differentiate according to host characteristics and environmental conditions from the very beginning, in accordance with the fundamentals of modern infectiology. Thus, no effort was made to set priorities, to work out figures and to develop targeted prevention strategies. Of course, a purely pathogen-focused understanding of infectious diseases was once modern, namely in the 19th century, when one learned to identify bacteria (and later viruses), but today development has progressed considerably further.

Thesis 3: The medical and nursing expertise on modern concepts of infection control and prevention strategies was disregarded.

One of the little-noticed analogies between Corona and HIV is the conflict between the legal-political perspective and the professional perspective of the health professions or institutions. In the 1980s, there were also political efforts to set up registers of infected persons or to banish infected persons to Baltic Sea islands, instead of classifying HIV infection as a medical and nursing problem of diagnostics, therapy, expert care and infection epidemiology. At that time, too, people were afraid of ‚buzzing germs' and even refused to touch the passports of supposedly infected people, although it quickly became clear that there was no danger of infection from them.

Corona is no different: SARS-CoV2 infection is also first and foremost a medical diagnosis, and technical principles are addressed that had long since become routine and consensual (e.g. methodology of numerical detection, testing regimes, multimodal prevention concepts). However, in many cases the technical classification is not congruent with political preferences: every epidemic is a social phenomenon, therefore reflects political forces and also promotes political career prospects. So what is at stake in this context is not at all the scientific process in the sense of iterating hypotheses and falsifying them, but the dominance of the legal/political perspective over the implementation of established professional principles. Science plays on a different level, it is indispensable to investigate unclear questions and to initiate the advancement of knowledge, but in the Corona epidemic what was required was the adherence (or non-adherence) to professional standards - which in turn should have been scientifically advanced. Of course, study approaches were lacking!

This subordination of the technical perspective gives rise to numerous questions, mostly reflecting suboptimal approaches that were owed to political trade-offs. Why no early use of differential antibody detection to indicate fresh infection? Why recognise convalescent status only for 3 months (as opposed to vaccination) when professional experience basically assumes a higher immunity from contact with the whole pathogen than can be assumed from vaccination with a single antigen? Why not use the number of replication cycles in the PCR (so-called CT value) from the outset to distinguish (residual) colonisation from infectivity? Why propagate vaccination of immune convalescents (AK diagnostics!) when little vaccine was available? Why were the experiences from the control of 700,000 nosocomial infections (acquired during therapy) in hospitals alone each year in Germany not included? Why was care outside hospitals not better structured to ensure that all people at high risk of ending up in hospital because of Covid-19 are well cared for and monitored so that they are not admitted to hospital too early, but above all not too late? Why were multidimensional score systems not taken into account, e.g. in order to distinguish upon admission to intensive care whether admission is necessary ‚with' or ‚because of' SARS-CoV2, or in order to be able to diagnose death due to SARS-CoV2 with sufficient certainty at autopsy (such score systems have been proposed, e.g. in the publications of the thesis paper group, see also thesis 4).7 This list of questions could be continued indefinitely. Some medicaland nursing associations had pointed out these and other questions. All in all, the situation must be seen as a testimony to a comprehensive regression, unfortunately there is no other way to put it, because the examples described are without exception fundamental professional standards, the violation of which leaves one speechless not only at present but also in retrospect. But perhaps this explains the morally ‚high tone' - probably many actors were well aware of the regression, but for this very reason felt compelled to deal out particularly harshly and to discredit or even incite other opinions in order not to have to admit to this regression. This may be a key to the unfortunate course the discourse has taken in the past three years.

The disregard for professional standards naturally also casts a critical light on the legitimacy of the restrictions on fundamental rights. If one may agree with the point of view that the guarantees of Article 2 (2) of the Basic Law on the physical integrity and freedom of the person can be restricted in the case of massive threat situations, then the restrictions must, however, obey certain conditions: they must be suitable to positively influence the state of emergency, they must be necessary and, moreover, they must satisfy the principle of appropriateness. However, the comprehensive violation of professional standards cannot be considered a good argument for the ‚suitability' of the measures, especially since better suited measures were (and are) available. The further development of this discussion is of utmost importance, also for situations that may arise later.

6: BMI 2020: „Überblick über die gesundheitlichen Auswirkungen (Schäden) der staatlicherseits verfügten Maßnahmen und Beschränkungen in der Coronakrise 2020", https://fragdenstaat.de/dokumente/4123-wie-wir-covid-19-unter-kontrolle-bekommen/, letzter Zugriff 30.3.2023.

7: s. Thesenpapier 4.1 vom 5.10.2021 [LINK: https://www.monitor-versorgungsforschung.de/Abstracts/Abstract2020/MVF-05-20/Schrappe_etal_Thesenpapier_4-1_Corona-Pandemie])

Thesis 4: The images of Bergamo and the ‚millions dead' anticipated in models stand in clear contrast to, among other things, the ban on autopsies or the inability to provide exact mortality figures. Death as a portent, proclaimed every evening as a column graph on the news, was exaggerated to such an extent that not only the population fell into a state of rigidity of fear, but also the political level was caught up in its own projections. Suddenly, planned, differentiated action was no longer conceivable, although it would have been indispensable in view of the threat.

The fear of death (and of the dead) was overwhelming, that must be stated today. Unfortunately, this fear was not dealt with wisely and reassuringly, so that society would retain its ability to control itself, but the images of the coffins of Bergamo were brought up again and again. No attempt was made to divide the deaths into those in which there was only a colonisation with SARS-CoV2 and those in which SARS-CoV2 was causally involved, in accordance with infectiological self-evidence, in order to obtain a clearer picture and to objectify the discussion. To this day, the Minister of Health, Lauterbach, who, according to his own statements, has been trained in epidemiology, refuses to recognise this basis of every infection epidemiological action (comparable to a Minister of Finance who does not understand double-entry bookkeeping).

But the issue is likely to go deeper, with several strands of explanation seeming possible given the current state of knowledge. It cannot be ruled out that the political control ultimately became a victim of its own fear-driven measures. Later research will show to what extent - this is a hitherto little discussed idea - the personal consternation and fear inclination of the politicians (and journalists) involved also played a reinforcing role. In any case, fear not only had the task of inducing the population to behave in a desired way, but it could also be used to create a situation of general lack of clarity, to the extent that terror covered everything, to the extent that planned action seemed beyond the realm of the conceivable. Thus, a paradoxical situation arose: on the one hand, the epidemic development with the resulting morbidity and mortality demanded considered and differentiated action; on the other hand, precisely this ‚wise action' was prevented by fear-driven epidemic management.

Nowhere was this paradox more evident than in the recommendation issued by the RKI to refrain from performing autopsies on SARS-CoV2 infected patients, i.e. those suspected of having died of Corona. The Robert Koch Institute had declared the virus to be so infectious that dying patients were to be isolated and dead patients were not to be examined further. This was opposed from the outset by (actually) sufficient knowledge about the spread of viral diseases and effective hygiene measures (e.g. in the dissection room). In particular, the repeated recommendation to avoid dissections because of the aerosol formation and the associated risk of infection was counterproductive. Scientific research into the new viral infection and the disease it causes, Covid-19, with regard to pathogenesis, clinic and therapy was thus considerably limited.

When the SARS-CoV2 outbreak expanded into an official pandemic, our legal system was faced with the fundamental question of how protection against infection in the event of a potentially severe course was to be balanced with fundamental rights and how the evidence base could be further expanded at the same time. For one thing is certain: it is mainly thanks to scientific knowledge and innovations that we can now live out our freedom again after several waves of infection. Even in the dark early days of the pandemic, glimmers of hope in Germany were to be found in particular in an internationally acclaimed series of autopsies carried out at the Institute of Forensic Medicine at Hamburg University Hospital Eppendorf (UKE). By ordering systematic post-mortem examinations of corona-associated deaths in accordance with § 25 para. 1, 4, sentence 2 of the Infection Protection Act, knowledge was gained regarding the pathology of the specific tissue tropism of the SARS-CoV- 2 virus. 8,9 Among other things, they led to intensified thromboembolism prophylaxis in the treatment of covid-19 patients. Risk factors for a severe course of the disease were identified, which enabled more specific protective measures for vulnerable groups of people.

This so-called Hamburg Way10,11 was found to be exemplary in the NUM, the German Network of University Medicine later founded by the Federal Ministry of Education and Research (BMBF) for academic pandemic preparedness. Its nationwide establishment as a means of pandemic preparedness since 2020 was investigated and declared a goal. This very successful project was then transferred to the National Autopsy Network (NATON) in 2022.

Apart from the long-lasting discussion about the influence of the SARS-CoV2 infection on the occurrence of death (‚died with' or ‚died of' Corona), there have also been repeated discussions about deaths in temporal connection with vaccinations. Of course, these deaths should also be investigated systematically, i.e. in institutes for pathology or forensic medicine that are technically well-equipped. In this respect, too, a national register is absolutely recommended.

Ultimately, a Hamburg working group (legal medicine in cooperation with Bucerius Law School) developed the proposal for a new version of the Infection Protection Act (§ 25 a IfSG) and published it in concrete wording (in the journal Medizinrecht); however, this has so far remained unconsidered in politics (also in the last revision of the IfSG).

The law on the protection against infectious diseases, with § 25 para. 4 sentence 2 IfSG, does have a regulation that permits official obductions in a proportionate form as a means of combating pronounced pandemics. However, should the actual use of this means not continue to be based on the random initiative of individuals (‚Hamburg way'), actual and especially legal reforms should be suggested. The IfSG should contain more detailed regulations on the official obduction, which is sensitive to fundamental rights, e.g. in § 25 a IfSG, in order to affirm this option in a differentiated manner and at the same time to provide meaningful procedural support. In this way, Germany can significantly and convincingly promote pandemic preparedness, which has now become painfully necessary, and create certainty of action. It can thus nurture the hope that scientific findings can better serve the goals of protecting health and freedom in the future.12

Regarding the many Corona deaths, it should also be noted that disturbing figures were presented here, which above all caused fear. The lethality statistics must be viewed in a very differentiated way in connection with the pandemic.13 This is not only about the Co-

8: Wichmann D., Sperhake J.P., Lütgehetmann M., Püschel K., Kluge S. (2020) Autopsy findings and venous thromboembolism in patients with Covid-19.
9: Puelles V., Lütgehetmann M., Lindenmeyer M., Püschel K., Huber T., (2020) Multi-organ and renal tropism of SARS-CoV-2. The New England Journal of Medicine 383 (6): 590-592
10: Püschel K., Äpfelbacher M. (2020) Umgang mit Corona-Toten. Obduktionen sind keinesfalls obsolet. Deutsches Ärzteblatt 117: A 1058-1060
11: Püschel K. (2021) Die Toten können uns retten. Wie die Rechtsmedizin uns hilft, Krankheiten zu erforschen und das Sterben zu verhindern. Quadriga, Köln

rona deaths in the narrower sense, but also in particular about the effects of the pandemic on the health system as a whole. Due to the sometimes very one-sided focus on the danger posed by SARS-CoV2 infections, the timely and consistent therapy of other diseases has been impaired and neglected, much more than this corresponded to the medical danger posed by the virus itself.

Thesis 5: Whether in hospitals, inpatient care facilities or in outpatient care at home: fundamental standards have been violated by total isolation and compartmentalisation of people in need of care.

During the entire pandemic, the professional involvement of nursing care in the necessary protective measures for vulnerable people usually took place only marginally and rather in individual cases, both in acute, outpatient and inpatient care needs. After some very critical and avoidable courses of events, especially among the approx. 800,000 residents in the approx. 14,000 nursing homes, many findings have now been compiled, critically evaluated and compiled or adopted in recommendations for a graduated catalogue of measures. However, the extent to which nationwide implementations are available remains to be determined.

However, it is important to note that all preventive measures must be taken: Whether in hospitals, inpatient care facilities or in outpatient care at home, total isolation and sealing off of people in need of care is unacceptable, even if the highest possible protective measures should appear necessary in the event of new high infection rates. The experiences made, which led to increasing states of confusion, extreme loneliness and neglect in the everyday care of many of those affected, must not be repeated. Politicians, society, service providers and those affected or their relatives bear joint responsibility for this. Even though the situation has eased considerably in the meantime due to vaccinations among the people to be cared for and among the staff, as well as due to many structural measures that have been initiated, improper rules have still not been completely eliminated:

- severely restricted visiting rules
- Too few services for therapeutic and recreational offers
- Poor dialogue in the interaction between persons and institutions involved

The German Nursing Council appointed an expert council in 2022 after evaluating the inadequate integration of nursing expertise.14 The aim is to ensure better health care in the future and to be present as a specialist group. The experiences made during the pandemic are to be used, bundled and made visible in order to form an alliance in the population for nursing care in a renewed similar situation. In doing so, research foci of nursing in these contexts are to be identified and corresponding gaps are to be closed as quickly as possible.

Thesis 6: Come through it well? The government often says that we as a society have come through the pandemic well. But children and young people in particular suffered more from the measures than from the virus. The consequences of lockdowns and school closures are devastating.15

Children and adolescents were one of the two age groups most severely affected by pandemic-related interventions, along with residents of nursing homes and homes for the elderly. For no other age group was the extent of the restrictions more disproportionate to the benefits. School and university closures, the prohibition of school and club sports, contact bans and, in addition, a mask obligation over such a long period of time that hardly any other (occupational) group had to provide.

As early as the summer of 2020, the German Academy of Paediatrics and Adolescent Medicine hadpointed out the negative consequences of closing community facilities for children and adolescents and thenecessity of reopening them.16 Even at that time, it was clear that a SARS-CoV-2 infection is only a mild illness for the vast majority of children and adolescents.

The politically induced social division did not stop at educational institutions. It was not the virus that was carried out of the schools, but social conflicts that were increasingly carried back into the schools by parents in one direction or another. In this way, kindergartens and schools became the burning glass of a policy that focused its measures on a population group that had nothing to oppose it with.

The children met teachers in the schools who, unfortunately, all too often did not fulfil their pedagogical responsibility out of concern for their own well-being, which would have been their professional task. They also all too often failed to fulfil their core task of teaching learning content in a targeted manner and according to scientific findings, as well as individual assessment and systematic reflection.

However, a reappraisal of this failure is not publicly discernible, critical voices, such as that of the Leipzig secondary school teacher Alexander Wittenstein, a laudable exception. In a contribution to the Corona debate in the Berliner Zeitung, he posed these questions to himself and his colleagues and expressed perplexity that no protest had been made.17

Instead, children and adolescents in schools experienced restrictions that would have been unthinkable before the pandemic or at least would have provoked a social outcry. Medical data was requested that ran counter to all data protection regulations, personal rights were regularly violated, boundaries were crossed as a matter of course.18 And all this in the name of a misunderstood idea of solidarity that had been robbed of its basic prerequisite, voluntariness.

The students were defenceless against the behaviour of such teachers who abused their power to such an extent and exposed students without any consequences, because their behaviour was beyond any control. Even individual cases of this kind are capable of affecting the whole system. Parents, teachers and politicians too often took violations of the fundamental rights of children and young people for granted or at least accepted them.

Despite the devastating consequences of school closures, which were already known at the time, the teachers' associations pushed for a renewed end to face-to-face teaching at the end of December 2021 in view of the upcoming omicron wave. The president of the German Teachers' Association, Heinz-Peter Meidinger, made the demand not to forget the schools in a new lockdown.19Onecould not help but get the impression that the teachers' officials were more concerned with

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12: Gaede K, Heidemann J, Goebels H-L, Heinemann A, Püschel K, Ondruschka B (2022) Pandemic preparedness bei der Obduktion? Potentiale und Grenzen des IfSG. Med R 40: 892-901
13: Richter, E., Liebl, D., Schulte, B., Lehmann, N., Fuhrmann, C., Jöckel, K.-H., Ioannidis, J.P.A., Streeck, H.: Analysis of fatality impact and seroprevalence surveys in a community sustaining a SARS-CoV-2 superspreading event. Nature Scientific Reports https://doi.org/10.1038/s41598-023-32441-7
14: Deutscher Pflegerat beruft Expert:innenrat Pflegewissenschaft / Hebammenwissenschaft und Pandemie ein – Deutscher Pflegerat (deutscher-pflegerat.de)
15: Dieser Abschnitt stammt in geänderter Form aus dem Artikel A. Knipp-Selke: „Gut durchgekommen?", Cicero Online vom 27.3.2023 (https://www.cicero.de/innenpolitik/kinder-und-jugendliche-in-der-corona-pandemie-gut-durchgekommen)

their own health than with the welfare of the children. As early as August 2021, Meidinger had warned of a ‚contamination of schools' and predicted that ‚between 30,000 and 180,000 pupils would have to be treated in hospitals, not to mention any Long Covid consequences'. 20

At the time of Meidinger's model calculation, a total of 1,708 children and adolescents had been reported to the registry of the German Society for Paediatric Infectiology (DGPI), in which about one third of all paediatric hospitals nationwide were involved, since March 2020 - and this since the beginning of the pandemic. When the register was closed, a total of 7,375 cases had been reported there from 1 January 2020 up to and including 30.11.2022, of which about 75% were due to SARS-CoV-2 and the rest required inpatient treatment for other diagnoses (positive test as part of the admission screening).21

Meidinger also spoke out in favour of a general obligation to vaccinate 22 , but rejected such a requirement for teachers, pointing to the high vaccination rate of 95% among his colleagues. 23 Monthsearlier, he and his colleagues had succeeded in obtaining an upgrade in the vaccination ordinance. Originally assigned to the same priority level as people working in particularly relevant positions in government and other critical infrastructure institutions, teaching staff climbed up a level and then competed with doctors, nurses and people over 70 for the then still highly coveted and scarce vaccination doses. 24

One would have wished for clearer statements from many paediatricians as well. Some of them had already pointed out the negative consequences of the kindergarten and school closures early on and rep eatedly.25However,numerouspaediatricians in private practice refused to treat corona-infected children, issued 3G rules for their practices or refused to admit non-vaccinated parents, sometimes even non-vaccinated children and adolescents altogether. 26The German Society for Paediatrics and Adolescent Medicine alsoadhered for a long time to the special hygiene measures in kindergartens and schools (serial/pool testing, quarantine, compulsory masking of pupils), although these lacked scientific evidence and were neither suitable nor proportionate in terms of risk, effort and benefit assessment. 27 In order to accommodate the politicians, the medical side proactively proposed compromises that did not represent a health benefit for the children, but were rather detrimental to them. Sometimes one had to get the impression that the measures adopted followed more social pressure than an evidence-based scientific factual basis. It is to be feared that this dynamic will accompany society for a long time to come.

It is now generally accepted that the collateral damage caused by the measures imposed during the pandemic exceeds the risks of corona infection among children and adolescentsseveral times over. In particular, the educational deficit of children and adolescents is immense. According to recent studies, the learning gap caused by the Corona pandemic amounts to several months - or 35% of a school year - for all grades.28,29 Thegaps are greatest among low-income families and in mathematics. The consequences of this are not foreseeable at this stage, but could well cost society more than all the Corona measures combined.

Lack of social contact with peers, malnutrition, lack of exercise and increased media consumption were also associated with a considerable health risk for adolescents. For example, the frequency of counselling at help hotlines, such as the ‚Nummer gegen Kummer' (number against grief), increased by 7% in 2020 compared to 2019 and has increased even further in 2021. A total of 7,148 counselling sessions were conducted at the child and youth helpline in direct connection with the current Corona pandemic, which is 8% of all counselling sessions in 2021 (+1.7% compared to 2020). Girls and boys were equally concerned with this special situation. The three most frequent reasons for calling were: loneliness, boredom and concern about one's own psychological stability.30

The Corona-KiTa-Study, published in November and conducted jointly by the German Youth Institute (DJI) and the Robert Koch Institute (RKI) from mid-2020 to the end of 2022 and funded by the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ) and the Federal Ministry of Health (BMG), provides an overview of the impact of the Corona pandemic on children and their families in Germany. In it, the authors state that children of pre-school age already suffered from the closures of care facilities because they lacked interactions in the social environment.

A small but substantial proportion of the families reported that their children were displaying conspicuous behaviour, psychosocial problems or psychosomatic symptoms. Parents affected by the KiTa absences were particularly stressed if they were single parents or both parents were working. Many facilities reported a relevant proportion of children who had a significantly higher need for support in various developmental domains than before the pandemic, which was evident, for example, in language acquisition31 , which takes place around the third to seventh year of life. Experiences that are not made at this age can only be compensated for with great difficulty or not at all, which is of crucial importance especially for children from educationally disadvantaged households or with a history of migration or flight.

During the pandemic, the number of reports of violence in day-care centres has also increased. This is shown by the statistics of some state youth welfare offices. The fact that parents were forbidden to enter the facilities may have contributed to this. The topic is a taboo, and figures published on it represent at best the ‚tip of the iceberg', according to the chairwoman of the Child Protection Association NRW, Gaby Flösser, in an article in the Neue Westfälische from Bielefeld, because it is still considered nest contamination and betrayal in the facilities if one reports such incidents.32 The daily newspaper had reported that the reporting figures published by the NRW state youth welfare offices had jumped since 2018, which was particularly noticeable in the Rhineland. The state youth welfare office responsible there had recorded 34 cases of pedagogical misconduct in 2018, but

16: https://www.dakj.de/stellungnahmen/massnahmen-zur-aufrechterhaltung-eines-regelbetriebs-und-zur-praevention-von-sars-cov-2-ausbruechen-in-einrichtungen-der-kindertagesbetreuung-oder-schulen-unter-bedingungen-der-pandemie-und-kozirkulat/
17: https://www.berliner-zeitung.de/open-source/lehrer-zur-corona-debatte-wieso-haben-wir-nicht-protestiert-wo-ist-die-aufarbeitung-li.310701
18: https://www.welt.de/debatte/kommentare/article235387210/Corona-Die-Spaltung-der-Gesellschaft-ist-in-den-Schulen-angekommen.html?icid=search.product.onsitesearch
19: SZ vom 28.12.2021: Schulschließungen? Das darf doch nicht wahr sein
20: https://www.news4teachers.de/2021/08/meidinger-durchseuchung-der-schulen-bringt-bis-zu-180-000-schueler-in-krankenhaus/
21: https://dgpi.de/covid-19-survey-update/
22: SZ vom 23.11.2021: Spahn: Impfpflicht löst unser aktuelles Problem nicht
23: SZ vom 18.11.2021: Das geschlossene Klassenzimmer
24: Heudorf U, Gottschalk R. The risk of asymptomatic and symptomatic Covid-19-infection among schoolteachers and day-care workers compared to hospital and nursing home staff. Dtsch Arztebl Int 2021; 118. DOI: 10.3238/arztebl.m2021.0170 (online first). https://cfcdn.aerzteblatt.de/pdf/di/118/12/m213.pdf?ts=19.05.2021+12%3A58%3A58
25: https://www.dakj.de/stellungnahmen/massnahmen-zur-aufrechterhaltung-eines-regelbetriebs-und-zur-praevention-von-sars-cov-2-ausbruechen-in-einrichtungen-der-kindertagesbetreuung-oder-schulen-unter-bedingungen-der-pandemie-und-kozirkulat/
26: https://www.tagesschau.de/faktenfinder/hetzkampagne-praxis-wedel-101.html
27: https://www.schrappe.com/ms2/index_htm_files/Thesenpap8_endfass.pdf

by 2020 the figure had risen to 120. This number almost doubled to 222 cases in the following year. There had also been a sharp increase in physical violence. From 42 cases in 2018, the number of reports rose steadily during the pandemic, and by 2021 there were more than twice as many. For sexual assault, the number of reported incidents had increased from 38 in 2018 to 76 in 2020 and 2021.

At the beginning of February 2023, the Federal Government presented the ‚Final Report of an Interministerial Working Group (IMA) on the Health Effects of Corona on Children and Adolescents', which incorporated the investigations. According to the report, the consequences of the pandemic for children and adolescents continue to this day, with 73% of children and adolescents still suffering psychological stress. For example, in the 4th survey of the COPSY study in February 2022, about 81% of 7-17 year olds reported being ‚quite' or ‚extremely' psychologically distressed, which is a 10% increase compared to the beginning of the pandemic. According to the KIDA study, parents in the 3-15 age group reported that their mental health had deteriorated by as much as 21% compared to before the pandemic. A similar picture was found for the general health of children: according to KIDA, this has deteriorated in 15% of the 3-15 year olds. According to the current prevention radar, half of lower secondary school students experience reduced mental well-being.

- ‚Kindergesundheit in Deutschland aktuell' (KIDA) of the Robert Koch Institute (RKI) ,
- the Corona-KiTa-Study of the German Youth Institute (DJI) and the RKI ,
- the study ‚Corona and Psyche' (COPSY) of the University Medical Center Hamburg-Eppendorf ,
- the study ‚Growing Up in Germany: Everyday Worlds' (AID:A) by the DJI ,
- the DAK Children and Young People's Report and the prevention radar it promotes for the school year 2021/22, as well as
- the joint project ‚Social-paediatric care and bio-psychosocial health of children and adolescents during the Corona pandemic' of the University Hospital Schleswig-Holstein

The DAK's Children and Young People's Report shows some significant increases in medical diagnoses for some mental disorders based on its own care data in certain age and gender groups: for example, the proportion of girls aged 15 to 17 with an eating disorder in 2021 was 54% higher than in 2019. For the diagnosis of depression, the increase in the group of 10- to 14-year-old girls in the same period was 23%, for 15- to 17-year-old girls it was 18% and for anxiety disorders 24%.

The DAK data also provide information on the development of the frequency of diagnosed obesity. In some cases, there was a significant increase in the number of new cases in 2021 compared to the pre-pandemic period. For example, boys between the ages of 15 and 17 were 15% more likely to be diagnosed with obesity in 2021 than in 2019.

It is also assumed that the pandemic measures will lead to an increase in domestic violence, with fear as an additional trigger and the loss of a possible detection and control function by kindergartens and schools. This is supported by the criminal statistics evaluation for 2021 published by the Federal Criminal Police Office in November 2022, in which 221,831 victims of domestic violence were recorded. Compared to the previous year, the number of victims fell by 1.8% (2020: 225,884 victims), but in relation to the pre-Corona year 2019, there was an increase of 3.4%.33

According to the Police Crime Statistics (PKS) 2021, 145 children died violently in 2021, which is a slight decrease (- 7 cases) compared to the previous year. 118 of them were younger than six years old at the time of death. In 83 cases, there was an attempted killing.34According to the PKS, the cases of child sexual abuse, which rose again in 2021 by 6.3% to over 15,500 cases (previous year: 14,500), and the depictions of abuse, which rose by 108.8% to over 39,000 cases, areparticularlydrastic. The annual PKS figures only indicate the offences known to and investigated by the police. The number of unreported offences and the number of offences of which the police are not aware are many times higher. It is estimated that 1-2 pupils per school class in Germany are affected by sexual violence in various areas of life. According to the PKS, the number of under-18s who redistributed, acquired, possessed or produced abuse images in Germany, especially on social media, increased more than tenfold from 1,373 suspects in 2018 to 14,528 last year. 35

Conclusion: In view of these facts, the politically ubiquitous claim that we have come through the pandemic well degenerates into a hollow phrase. What are the criteria for such a judgement? Measured against the consequences for children and young people, the opposite is the case. In November 2022, the Federal Minister of Health, Karl Lauterbauch, finally had to admit that the closure of day-care centres was definitely not medically appropriate and ‚would not have been necessary to the extent we did it at that time, according to today's knowledge'. In January 2023, he then also described the closing of schools as a mistake.

Thesis 7: The orientation of the health system (and of health research) towards the principle of patient orientation, which was achieved in decades of debate, was abruptly regressed to a paternalistic system.

The gradual strengthening of patient orientation has played a very prominent role in health care in the years before Corona. Under Federal Minister of Health Hermann Gröhe, this development was shaped, for example, by the Patients' Rights Act (2013) and thus took up a fundamental social discussion about the informal self-determination of the person, which was also accompanied in particular by the Federal Constitutional Court (from information to euthanasia).

Yesterday (before the pandemic) we asked patients about their satisfaction with treatment, about quality and about communication. Patient welfare was the focus, the Federal Health Ministers Ulla Schmidt and Hermann Gröhe saw it as their primary duty to strengthen the quality of treatment, even hospital planning was to be further developed according to quality criteria (Hospital Structure Act Dec. 2015), the last attempt so far to further develop hospital care through

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28: https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Gesundheit/Berichte/Corona/Abschlussbericht_Corona-KiTa-Studie_DJI-RKI_2022.pdf
29: Betthäuser, B.A., Bach-Mortensen, A.M. & Engzell, P. A systematic review and meta-analysis of the evidence on learning during the Covid-19-pandemic. Nat Hum Behav (2023). https://doi.org/10.1038/s41562-022-01506-4
30: https://www.nummergegenkummer.de/wp-content/uploads/2022/05/2021_Statistik_KJT.pdf
31: https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/5_Publikationen/Gesundheit/Berichte/Corona/Abschlussbericht_Corona-KiTa-Studie_DJI-RKI_2022.pdf
32: https://www.nw.de/nachrichten/zwischen_weser_und_rhein/23457977_Gewalt-an-NRW-Kitas-steigt-deutlich-Sitzengelassen-im-eigenen-Urin.html

structural changes and not through top-down regulations. Ulla Schmidt even ventured into the topic of patient safety and supported the founding of the Aktionsbündnis Patientensicherheit (Patient Safety Action Alliance) in 2005. It was unthinkable that one could not visit a seriously ill relative or that he even had to die alone.

Today, all that has changed. The staff of the facilities do their best, but they were marginalised by the regulations and by a shift of power within the hospitals that put all the power in the hands of the administrations (and the ‚corona officers') who were attentive to the RKI regulations. The hospitals pulled up their bridges, old people could not be accompanied (even if they decidedly wanted it, even at the risk of infection). They did not get any visitors, even getting a charging cable for the mobile phone became an existential problem, the ‚total institution' reappeared.

All that came before, in vain? Again: Of course the staff did and do their best, the facilities were decimated by Corona cases among the staff, the staff shortage was an obstacle. But has anyone ever heard the responsible politicians on Sunday evening at 20:15 on German television make a fiery appeal to the country's nursing staff, whether part-time, retired or in other professions, to please - emergency! - and fill the gaps that arise? No. The best example was the political failure in the intensive care units, where millions of euros of new equipment were distributed, but no one put it into operation. In addition, retention bonuses were distributed to improve the balance sheets - the thesis paper authors' group that exposed this was hounded.36 However,the Federal Audit Office has followed up and criticised the procedure much more clearly, but the process has still not been dealt with. 37

Thesis 8: The successes of evidence-based medicine (EBM) and health technology assessment (HTA) focused on everyday effectiveness have not been used in the context of Corona measures and instead have been actively displaced from the debate on the benefits of Corona measures.

Patients should not only be able to rely on quality and patient safety (basic requirement for patient orientation), but also on the fact that the care they receive is based on the current state of scientific knowledge. For this purpose, evidence-based medicine (EBM) was developed in the 1980s, a procedure for reliably identifying scientific studies, evaluating them and ultimately summarising them in guidelines . This was a decisive step for the professionalism of the health professions, because the ‚right thing' was no longer proclaimed ex cathetra ‚but was the result of a transparent process of knowledge. This process was also accompanied by a new evaluation of the treatment outcome, namely that the focus was not only on the question that the tumour had become smaller or that the patients lived a little longer, but that the patients should actually get better (the question of survival/cure was supplemented by quality of life). It was also soon agreed that studies that only look at laboratory values or X-ray findings (so-called surrogate markers) are less meaningful than studies with patient-relevant endpoints such as pain frequency, disease frequency, complications or death. Thisdevelopment was complemented in the early 00s by the establishment of outcomes research (health services research) in Germany, whose range of methods under the term Health Technology Assessment (technology assessment in the health sector) was geared towards translation into everyday care and therefore also included social science, economic and ethical perspectives.

Again, the same picture: the progress of the last decades was swept away in one fell swoop during Corona. Non-verifiable information (late-night calls to Harvard) and individual studies (‚the last study from Israel clearly showed …') dominated(d) the discussion. Many studies had not even gone through a review process, were often interpreted very idiosyncratically and aggressively held up to the ‚opponents' instead of relying on a regulated process of knowledge. In general, the scientific process was suddenly seen as too time-consuming (because the state of emergency prevailed) and syntheses of studies (so-called meta-analyses) were not prepared at all or were immediately challenged.

World-famous EBM experts were declared to be extras or even completely incited as charlatans, while so-called ‚corona experts' dominated the media and monopolised ‚science', not without promoting their personal advancement. Conflicts of interest were no longer discussed at all. Instead, the institutions in the German health care system that have the legal mandate to evaluate the benefits of measures by means of EBM and to integrate them into care (e.g. the Institute for Quality and Efficiency or the Federal Joint Committee) were completely bypassed or occupied with minimal secondary tasks (telephone sick notes or similar).

This development is difficult for the public to recognise, but it hits the health professions, their associations and the interaction of the health system to the core. If it is no longer possible to identify the relevant and most valuable knowledge for practice independently of individual interests, then the autonomy of the professions is shaken to its foundations. Rather, we are facing a relapse into times when individuals or individual groups proclaim the truth without having to allow for a review of opposing hypotheses (‚science says'). As a consequence, this ‚eminence-based' approach will lead to a deterioration in patient care, because the transparent comparison of alternative courses of action will be eliminated. The entire system of different players will be discouraged from taking responsibility for solutions themselves, because transparent rules and procedural guidelines will no longer apply and will ultimately be replaced by an ‚every man for himself' approach.

Thesis 9: Contrary to the central trend of the last 30 years, in which one learned to understand and steer health care and the health policy field from a complexity-theoretical perspective, one has fallen back into a purely linear approach to social processes in the context of the Corona epidemic.

In the distant past, there was certainly the view that crises and catastrophes could be ‚fought' with purely technical means. If the screw broke and the cage fell into the depths, another, stronger screw was used. In order to realise that it is the employees who make mistakes, that it is the teams on the ground or even the entire social

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33: https://www.bka.de/SharedDocs/Downloads/DE/Publikationen/JahresberichteUndLagebilder/Partnerschaftsgewalt/Partnerschaftsgewalt_2021.html?
34: https://www.tagesschau.de/inland/bka-kriminalstatistik-101.pdf
35: https://beauftragte-missbrauch.de/presse/artikel?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=652&cHash=2f4ccb3e6f0591c91abbf74a7f194c8d
36: 2. Adhoc-Stellungnahme der Thesenpapier-Autorengruppe vom 17.5.: Die Pandemie durch SARS-CoV-2/Covid-19 – Zur intensivmedizinischen Versorgung in der SARS-2/Covid-19-Epidemie. Monitor Versorgungsforschung, doi: http://doi.org/10.24945/MVF.03.21.1866-0533.2303
37: Bundesrechnungshof: Bericht nach § 88 Absatz 2 BHO über die Prüfung ausgewählter coronabedingter Ausgabepositionen des Einzelplans 15 und des Gesundheitsfonds (Abgabe von Schutzmasken an vulnerable Personengruppen, Ausgleichszahlungen an Krankenhäuser und Aufbau von Intensivbettenkapazitäten) vom 09.06.2021

system that fails in crises, it took a learning process full of losses, ranging from Apollo to Challenger to Chernobyl. But it was precisely this learning that made it possible (also in the health sector) to develop credible concepts for improving safety.

Even if it does not seem understandable at first glance to attribute these findings to the professional expertise of the health professions, this is the case: through developments such as evidence-based medicine, quality management or patient safety, the health.

professions increasingly developed the competence to stabilise team structures, to see through complex processes and to engage themselves in their control. Often they even represented the decisive success factor, because solutions were not possible purely from the ‚green table' of administrations and system bureaucracies, as many processes in a complex field like the health system cannot be regulated top-down.

Under the conditions of Corona, however, people fell back into the past times of linear thinking and made dramatic mistakes. Thus, already at the beginning of 2020, it was said: Once we have the vaccination, everything will be fine. Of course, the first studies on the vaccines showed that the effectiveness (prevention of disease, not infection) was 95% (quite a success). But this meant nothing other than that for every 20 vaccinated people, one vaccinated person (5%) would still fall seriously ill - so that theoretically, with 80 million vaccinated people, one would have to reckon with 4 million vaccinated people falling ill. Nevertheless, people relied on vaccination as an all-encompassing problem solver instead of communicating from the outset that vaccination had to be integrated into well-thought-out accompanying programmes, which had to target the particularly vulnerable host populations in particular. None of this happened. The only way to do this was to increase the willingness to vaccinate, but this would not have changed the above-mentioned fact. Instead, the phenomenon of re-infections further worsened the situation.

This overestimation of the technical linear approach to complex issues is well known from other areas of health care. Linear governance - if we have a problem with nosocomial wound infections, we just issue an instruction on hand disinfection. Hundreds of studies have clearly shown that this does not work (because instructions are often ignored). Only the realisation that this is a social process led further, but then the technical means (incl. digitalisation) recede into the background. Instead, feedback, team building, role models and trust-building lead to success.38 Butit is precisely these points that were massively lacking in the vaccination campaign. 39

Thesis 10: The attempt tocontrolthe epidemic in Germany with inadequatedata has failed and must be called a cardinal error.

Where do we stand, where do we want to go, where are sensible intermediate steps, what is the use of the individual measures, what must be done differently? Information and feedback are the core elements of any crisis management; behavioural change and ‚participation' are inconceivable without a reliably collected database. How extensive the failure was here has been clearly stated by many sides.40 A reporting rate whose results cannot be distinguished from the testing frequency (drop at Christmas, increase after the end of the holidays), missing cohort studies (the epidemiological standard), missing data on the risk populations (one has to be interested in this in the first place), the list can be continued endlessly. And no insight from the responsible agencies, no outreach clinical epidemiology, no on-site visits, instead bureaucratic list keeping and report writing.

Again: Why is this a disastrous performance? Because the citizens, whose independence and responsibility were otherwise always in demand (e.g. when choosing health insurance companies according to the amount of the additional contribution or hospitals according to quality criteria), were not taken seriously, and because they naturally noticed it. Sometimes a limit of 30, sometimes of 50 and the next moment ‚300'? This helpless wandering was shown not least by the changing courses in different countries, where the numbers ‚went down significantly' because they had implemented certain measures in such an exemplary way - only to rise steeply again the next moment. Who hasn't been a ‚master in pandemic management': Portugal, Italy, Austria, Denmark, even Great Britain, to all end up in the same course in the medium term.

What does professionalism mean in this context? First and foremost, numbers have to be collected reliably (and this cannot be done through random testing and spotty tracking programmes). Secondly, one has to consider what they say: should they accurately describe the situation? If so, one would have had to form a large cohort of teachers, for example, and examine them regularly over longer periods of time to find out whether this occupational group is really at greater risk than employees in the supermarket or in health care - surely this could have saved children a lot. Or are the numbers supposed to predict unfavourable trajectories, like a warning light? In the latter case, key figures would have been necessary, as suggested by the thesis paper group.41 Wastewater testing was not a bad idea at all either (you don't know who is infected, but you do know that you have to be mindful when the signals in wastewater increase).

Of course, there has also been a failure to consult the scientific community at this point, but not the aforementioned ‚usual suspects', but experts who are really involved in combating epidemic situations (infection control specialists , not modellers). Basically, however, it was a failure of professional practice principles in recent years, a disregard for basic knowledge, so to speak.

Thesis 11: A classic leadership deficit: instead of setting an example, use of the Corona crisis for other purposes.

A second serious mistake in the management of the epidemic is and was the disregard of the role model function. Complex processes place great demands on those responsible, but above all they must not give the impression that they themselves are not meant and that everything suits them just fine for other reasons (e.g. as an occasion to reduce costs). We know very well from science that people pay a lot of attention to how credible the management level acts and whether the visible motivation is clear and unambiguous. The best example is the studies on hand disinfection to prevent nosocomial infections in hospitals. The most important factor is the behaviour of the management level: if the head physicians do not disinfect their own hands, then this is a clear indication for the employees that the factual justification is missing or is not accepted by the management level itself.

What did it look like at Corona? This is not about sponsor dinners without masks of incumbent federal health ministers or maskless cabinet members on aeroplanes (although important), but one has to look deeper. It is about the suspicion that Corona has been misused for other political purposes that could not be achieved for a long time by other means. At the very forefront is the digitalisation of health care, including the marginalisation of medical confidentiality. The dramatic nature of the epidemic situation is intended to eliminate the reservations that exist in the medical profession in particular with regard to confidentiality and the economic use of patient data (analogous to whaling: of course only for ‚research purposes'). And

without wanting to relativise climate change: It is doubtful whether the citizens of this country will increase their understanding of Corona measures by suggesting that they ‚also understand the virus as a small social exercise, as an exercise in dealing with each other, in solidarity', and then continuing: ‚Even in the climate debate, in which some would prefer to ban large cars and others see a new cycle path as an attack on their model of life, we will all have to put up with each other. ‚42

Analogous to this is the behaviour of politicians without a chance, who could only hope to ever advance to a responsible political position by scandalising the Corona crisis and incessantly, penetratingly speaking out (see thesis 14). Sure, this is legitimate, but completely out of place in the management of an epidemic. This tendency is so strong that it even cost a party its victory in the last Bundestag election, because the leading fighting cocks used their corona commitment for selfish bickering (Laschet and Söder). This hidden agenda problem extends up to theglobal level: the dispute over the question of whether SARS-CoV2 is of natural origin or stems from a laboratory accident has been exaggerated into a political issue of dispute between superpowers and forms of government and ultimately elevated to an indication of the superiority or inferiority of authoritarian systems over the ‚decadent West'. What these approaches have in common is that ‚ordinary citizens', who face drastic restrictions on their personal freedom, are unlikely to be motivated to play along with these games.

Thesis 12: Lack of confidence building: Pressure creates resistance.

At this point, we have to come back to the vaccination campaign. A vaccination campaign is one of the most difficult and complex social interventions imaginable.43 Now, it has been known for decades that there is an extensive scene of citizens in Germany who are generally sceptical about vaccination. Quite contrary to the ‚official' opinion, one must clearly emphasise: They have every right to do so.

With this in mind, one needs to think about how to go about planning a vaccination campaign. One can tackle the resulting conflict head on and - if pressure does not help - even think about coercion. But what is the consequence? We have been able to observe this live in recent years: rather a consolidation of the vaccination-sceptic scene, a radicalisation of views, in any case no moving towards each other. Especially important at this point: there were definitely good alternatives, but this would have required active confidence building. However, this requires a knowledgeable approach, and above all: one has to involve experts who have experience with vaccination campaigns and who also cover other disciplines, especially psychology, behavioural sciences, sociology and media.

In order to start such a process of confidence building, one needs a ‚priority list of open questions', and already here it would be worthwhile to involve the sceptical population groups and to develop such a list. What could be guessed at an early stage: The central question of the vaccine-sceptical fellow citizens relates to the side effects of the vaccination, precisely because it is a new active principle and the studies only covered a short observation period. It is completely irrelevant whether one actually assumes that there are side effects or not. But what must not happen under any circumstances: ridicule, dismissal, the statement of the current health minister: There are no side effects.

This important starting point exists for two reasons. Firstly, for the people concerned, a fear is their personal truth, and this cannot be easily wiped away, whether you accept it or not. And secondly, this approach is in line with the principle of any safety consideration, and that is what it is all about (it is NOT an educational measure!).

All safety issues are about detecting so-called ‚weak signals' as early as possible. Once the pit cage has fallen, it is too late. Instead, in the security field, one works with so-called near-misses, i.e. small inaccuracies, unclear observations, seemingly banal occurrences, in order to learn from them and recognise new patterns. It is of crucial importance that such reports are desired and valued. If you sanction the pilot who notices that the Boeing suddenly lifts its nose for no reason, so that he does not report this, then at some point the plane will really crash (as actually happened in 2018/19 with the Boeing 737 Max crashes). So one tries to detect possible ‚side effects' as early as possible with low-threshold reporting possibilities.

Therefore, for example, simple reporting by app or by phone would have been appropriate, including a friendly notification that this report will be accepted and processed. Not appropriate are bureaucratic complications (30 min. processing time per report by the GP), the lack of feedback on receipt, the lack of timely evaluation, the prayer-like repetition of the view that there are no side effects at all, and furthermore: the reporters are ‚covidiots'.

It therefore makes sense for two reasons to work with low-threshold reporting systems with positive connotations: This is the only way to recognise events early enough, and it also builds trust in further action. Trust, the precious commodity - if we had followed these rules, things would look different today. In addition, of course, there were numerous other mistakes, e.g. the lack of anticipation of the difficulties in prioritisation due to a shortage of vaccines and, crucially, the lack of attention paid to people who had already been through the infection (convalescents), because they could have been put on hold for the time being. It also took its toll that in the early phases of the epidemic, no attention was paid to better narrowing down the group of vulnerable people, e.g. by means of score systems - now such systems were doubly lacking, because it was not possible to prioritise the initially scarce vaccine to where it was most urgently needed.

Thesis 13: Helpless ‚business as usual' instead of skilful risk communication.

The reader may notice that there is no general sub-item on the communication deficit in this text. Of course, the majority of all interviewees repeatedly cite precisely this deficit, but the structural

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38: Zur Thematik der *Complex Multicomponent Interventions* als Standardmodell und deren Begründungen einschl. der Michigan-Studien von P. Pronovost et al. s. z. B. M. Schrappe, H. Pfaff: Health Services Research Faces New Challenges: Consequences for Definition and Concept. Geswesen 78, 2016, 689-94, außerdem M. Schrappe, H. Pfaff: Einführung in die Versorgungsforschung. In: H. Pfaff, G. Glaeske, E. Neugebauer, M. Schrappe (eds.): Lehrbuch Versorgungsforschung, 2. vollst. überarb. Auflage. Schattauer Verlag, Stuttgart 2017, S. 1-68

39: Zusammenfassende Darstellung der Anforderungen und Fehlermöglichkeiten einer Impfkampagne s. Thesenpapier 7 vom 10.2.2021 „Die Pandemie durch SARS-CoV-2/Covid-19 (Thesenpapier 7): Sorgfältige Integration der Impfung in eine umfassende Präventionsstrategie, Impfkampagne resilient gestalten und wissenschaftlich begleiten, Aufklärung und Selbstbestimmung beachten." Monitor Versorgungsforschung, http://doi.org/10.24945/MVF.01.21.1866-0533.2268

40. Thesenpapier 4.1 vom 5.10.2021, ebd.

41: Thesenpapier 3 vom 28.,3.2020, Kap. 2.3., Monitor Versorgungsforschung, http://doi.org/10.24945/MVF.04.20.1866- 0533.2231; Thesenpapier 8 vom 29.8.2021, Kap. 3.6., Monitor Versorgungsforschung, http://doi.org/10.24945/MVF.05.21.1866-0533.2337

42: Süddeutsche Zeitung vom 11.3.2020, kurz vor dem ersten Lockdown

problems are usually in the foreground. Communication can only be ‚good' if the conditions and concepts are right.

This was also the case in the Corona epidemic: Setting up a communication strategy without knowing a concept for de-briefing, i.e. ending the risk situation, is simply impossible, a ‚malpractice'. The whole thing is comprehensively presented under the term ‚risk communication' in freely accessible seminars: At the beginning, entering the risk situation is an acute, urgent step that requires direct intervention (briefing). However, this step is very quickly replaced by acting under risk conditions by the entire social structure (everyone knows what they have to do), and then the leadership must absolutely have a resolution ready, i.e. an exit (de-briefing). What definitely does not work is to perpetuate the risk situation with no prospect of an end (because ‚the next wave will come in the next few days'), as was repeatedly heard in the Corona pandemic. The consequences of such a deficient approach are multi-layered: on the one hand, solidarity and constructive cooperation slacken, on the other hand, evasion effects multiply and thirdly, credibility andthe chance of implementation for repeated crises sinks.It is one of the basic insights: You cannot let risk ‚alerts' follow one another endlessly without giving relief in between. Every crisis needs an outcome.

Thesis 14: The political incentives for fear-driven pandemic management were too strong overall, but proved unsustainable. What remains is again long-term ‚collateral damage' - a damaged public discourse and a great loss of institutional trust (both in the watchdog function of the legal system and in the government's ability to manage crises rationally).

In political philosophy, the phrase can be found that the state of emergency is an ‚instrument with which any donkey can govern'. Looking back at Germany's pandemic policy since 2020, this assessment can be seen as confirmed. In a public perception of the pandemic threat shaped by impressive panic images (Bergamo), far-reaching measures to protect life and health could understandably count on great support at first. Surges in approval ratings in the early pandemic phase are actually empirically proven for all countries and for all governments, quite independently of the concrete measures and their concrete effect. Germany is no exception, but rather a particularly pronounced case. The government, which was still bobbing along in an opinion poll low in the winter of 2019/20 (the CDU was temporarily overtaken by the Greens in the summer of 2019), experienced a surge in popularity in April/May 2020, during the so-called first wave (which was to last until January 2021, but then abruptly collapsed - in view of the increasingly hard-to-miss irrationalities of a hermetic lockdown policy).

As a result, the political temptation was obviously too great, especially since the relevant political actors already had the 2021 federal election in mind, so as not to pocket the political windfall profits that such an exceptional situation offered. Moreover

- the basics of rational pandemic management and the professional standards of epidemiology and infection control were criminally neglected (see above) ,
- Executive responsibilities were neglected; the Federal Chancellery and the state chancelleries became primarily responsible, the line ministries, on the other hand, became more like executive organs, the Robert Koch Institute degenerated into a reading body for unreliable data (vulgo: ‚incidence'), the Federal Centre for Health Education did not appear at all in the entire pandemic, etc.) ;
- the government/opposition opposition, which is actually the only reliable control mechanism in democratic societies, was abolished (in a super-major coalition called the Minister Presidents' Conference, consisting of a federal government, sixteen state governments with seven parties in fourteen different coalition constellations - only the AfD remained reliably outside, and this also marked the proximity to which any criticism of the super-major coalition's pandemic (mis)management could be placed) ;
- When the administrative courts, in view of the insufficient foundation of the restrictive measures in medical evidence, found it increasingly difficult to merely wave through the state activism, the matter was shifted to the Federal Constitutional Court with the ‚Federal Emergency Brake', which had been assured through ‚fireside chats' that it was more inclined to take over the executive perspective .

Politically, the actors involved benefited from the advantages of a permanent media presence and the activism that went with it. This activism brought us extremely expensive procurement scandals (masks, ventilators, tests) and extremely expensive subsidy measures (‚Hospital Relief Act'), but with incentives to constantly hysterise the population with ever new threat scenarios, it was able to serve personal career options (this is how the current Federal Minister of Health finally got into office) as well as short-term political illusions of feasibility (the curve of infection figures goes up, politics decides on a lockdown, the curve goes down). The strong moralisation of the discussion, with its ostracism of critical positions as ‚harmful to society' and ‚crazy lateral thinking', did the rest.

Electorally, however, this did not work out as well as it might have seemed possible for the actors involved for a long time (if one disregards the personal advancement of the aforementioned SPD health expert, who is only on his own account anyway). And all in all, one has to be glad about this, because the political lesson from the pandemic could then be that ignoring expertise and professional standards, levelling executive division of labour, ruling through and boyishly pushing aside legal proportionality checks, neglecting an open social discourse, etc., all this may work in the short term, but must fail in the medium term. However, this is little consolation for the damage done to ‚body and soul' (see theses 5 and 6), the damage to institutions and public discourse.

Conclusion

The process of coming to terms with the handling of the Corona pandemic is now being announced and demanded from many quarters in Germany as well. This statement concentrates primarily on the professional level, i.e. on the standards that have been developed over the past decades for dealing with epidemic infectious diseases and epidemic situations. Significant breaks have occurred here, some of which go so far that long-term developments that had taken shape in the last decades before Corona and that affect the entire health care system have been interrupted and turned into their opposite. These regressions caused by the Corona measures (not the SARS-CoV2 infection!) primarily concern the strengthening of the individuality and self-determination of patients, the importance and responsibility of social structures (e.g. teams in the issue of safety) and the participatory structures in health policy governance based on the involvement of the partners involved.

A return to the pre-Corona development would be desirable. Ver-

43: S. Thesenpapier, ebd.

bose proclamations of the ‚turn of the times' are dangerous because they could be understood to mean that patient orientation, quality and safety orientation and the transparent synthesis of knowledge are now obsolete. What a disaster! One would fall back into the age of ‚eminence-based medicine', instead of evidence-based guidelines, the credibility of the pre-lutes would lead again.

This professional level is closely interwoven with the scientific level, which serves to elaborate theoretical foundations, to develop concepts for future developments, but also to review the evidence and relevance of current practice. The relationship between science and politics has already been discussed very intensively here, mostly with regard to a ‚better' institutionalisation of ‚policy advice'. A discussion of the concepts of ‚evidence-based health policy' cannot be undertaken here, but it must be pointed out that first of all science and the scientific disciplines should ask themselves why the respective professional standards, which were after all scientifically derived and codified, were so obviously violated during the Corona crisis. The series of articles and comments on this question launched in the last issue of ‚Monitor Versorgungsforschung' is an attempt to ‚sweep at one's own door' in this sense.

Another approach is to look at the historical context in which certain decisions were made and implemented. It must already be considered an illusion that these decisions were derived and administered, so to speak, in the light of solitary, momentary knowledge. Instead, one must assume - and here lies a central field of activity for health services research, which is concerned with translation -

Thesenpapiere/Stellungnahmen

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that the contextual factors of political opportunity were often more relevant and more influential than the biological or medical factors. In every crisis lies an opportunity, and these opportunities were perceived very differently.

And of course this also applies to the side of the critics of measures: What influence could contextual conditions have had in the respective shaping of critical proposals and alternative strategies? The group of authors of the thesis paper will present a working paper on this topic if necessary.

Last but not least,the reappraisal process itselfmust bethe subject of a systematic and scientific analysis. It may still be too early for this, but the time will come when the question of whether the reappraisal process was carried out adequately and appropriately will have to be answered. Here, too, health services research, which sees the concept of adequacy at the very centre of its scientific understanding 44 , can contribute a great deal. <<

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Prof. Dr. med. Matthias Schrappe
1987-1995 Head of Infectiology, Univ. Cologne, 1995 Visiting Professor Infect. Disease and Clinical Epidemiology. Univ. Iowa, 2002-2005 Executive Board. Univ. Clinic Marburg, then Dean/Scientific Director Univ. Witten, Generalbev. Univ. Clinic Frankfurt. 2009 appointment W3 Univ. Bonn, until 2011 Director Inst. f. Patient Safety Univ. Bonn. Until 2011 Member/Deputy Chairman SVR Gesundheit, 2001-2007 Chairman GQMG, 2005-2009 Founding Chairman APS, until 2019 APL-Prov. APS, until 2019 APL Professor at the University of Cologne with teaching assignment ‚Patient Safety'. Contact: matthias@schrappe.com



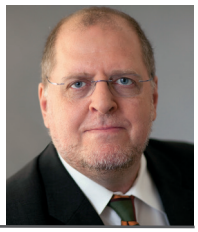
Hedwig François-Kettner
is a nurse; nursing manager (1984 to 2014), member of the Patient Safety Action Alliance (chair 2011 to 2019), member of the steering committee of the German Network for Quality Development in Nursing (1992 to 2014); various memberships in professional organisations of nursing associations; various awards, including the Federal Cross of Merit on Ribbon. Contact: francois-kettner@progewi.de



Prof. Dr. Dr. med. René Gottschalk ORCID: 0000-0003-0422-6456
is a specialist in internal medicine/infectiology, a specialist in public health and a graduate engineer in biomedical engineering. Until September 2021, he was head of the public health department of the city of Frankfurt am Main (Germany). At the Institute of Medical Virology of the University Hospital Frankfurt am Main, he is an adjunct professor of public health.
Contact: rene.gottschalk@med.uni-frankfurt.de



Franz Knieps
has been the head of the BKK umbrella organisation since 1 July 2013. Born in 1956, he is a lawyer, political scientist and literary scholar with decades of experience in the German and international health and social services sectors.
Contact: franz.knieps@bkk-dv.de



Dr. med. Andrea Knipp-Selke
is a doctor and science journalist. Medical studies in Cologne, doctorate in 2001, freelance work as a science journalist since 1984 (including WDR, Frankfurter Rundschau, Focus online, TKK), medical work in a paediatric practice in the Rhineland since 2005.
Contact: Andrea.Knipp@t-online.de



Prof. Dr. rer. pol. Philip Manow ORCID: 0000-0002-7154-7789
has been Professor of Comparative Political Economy and spokesperson of the SOCIUM Research Centre Inequality and Social Policy at the University of Bremen since 2010. Before that, he was Professor of Modern Political Theory at the Institute of Political Science at the Ruprecht-Karls-University of Heidelberg (10/2009-09/2010) and Professor of Political and Administrative Science at the University of Konstanz (04/2007-09/2009). He is a member of the Berlin-Brandenburg Academy of Sciences and Humanities.
Contact: manow@uni-bremen.de



Prof. Dr. med. Klaus Püschel
studied medicine at the Hannover Medical School and has worked at the Institute of Forensic Medicine at the University Medical Center Hamburg-Eppendorf (UKE) since 1976. In 1983 he habilitated, and in 1985 he was appointed Professor of Forensic Medicine. 1989 to 1991 Director of the Institute of Legal Medicine at the University Hospital Essen, from 1991 to 2020 Director of the Institute of Legal Medicine at the University Hospital Hamburg- Eppendorf. Member of the LEOPOLDINA, National Academy of Sciences.
Contact: pueschel@uke.de



Dr. med. Martin Sprenger, MPH
works at the Institute of Social Medicine and Epidemiology at the Medical University of Graz. He has headed the postgraduate university course in Public Health since 2010.
Contact: martin.sprenger@medunigraz.at

