MVF Congress ‚The impact of the pandemic on healthcare' (Part 2)

Far too many unnecessary deaths during corona?

‚This is about excess mortality and its measurement based on available data. It's about the effects of corona on inpatient care and the effect of forced ventilation in intensive care. And it is about evidence on collateral damage and the long-term effects of the decline in hospital cases for other diseases during corona.' With these words, MVF editor Prof Dr Reinhold Roski outlined the range of topics covered in the second part of the MVF Congress ‚Pandemic impact on care'. Roski continued: ‚We need a reappraisal and a learning process must begin - we want to contribute to this today, because healthcare research has a decisive contribution to make.'

>> ‚Covid-19-related mortality has been one of the most important indicators of the disease burden in the pandemic and has also been used to draw regional and international comparisons.' Professor Dr Daniel Wollschläger from the Institute of Medical Biometry, Epidemiology and Informatics (IMBEI) at the Mainz University Medical Centre explained in his presentation, which he developed together with his colleague Prof. Dr Maria Blettner, that this approach is anything but trivial. He explicitly answered the basic question of his lecture ‚Was there actually a Covid-19-related excess mortality?' in the affirmative, but also clearly qualified this statement because there are various difficulties in determining Covid-19 mortality. On the one hand, there is the possibility of underestimation bias if Covid-19 deaths are incorrectly attributed to other causes of death or not all Covid-19 deaths are identified as such due to a lack of testing capacity. On the other hand, according to him, there is also a risk of overestimation, especially when comorbidities in the main risk group - typically the elderly population - complicate the already high uncertainty of determining the cause of death. For example, the excess mortality estimated by the WHO, which was millions of deaths higher than the direct estimate, particularly for Germany, had to be corrected retrospectively. According to Wollschläger, this was due to methodological limitations, which meant that the estimates of excess mortality for Germany in the main coronavirus years ranged from 50,000 to around 200,000 - in other words, they differed by a factor of four.

One key aspect is that, apart from the Covid-19 pandemic, other factors also influence mortality. On the one hand, these are trends over longer periods of time such as demographic change or different mortality rates in the age groups or changing life expectancy due to socio-economic factors (education, income, etc.). On the other hand, there are also short-term influences on mortality, such as cold spells and heat waves or influenza activity, as well as the quality of clinical care for diseases with high mortality rates (such as cancer). Wollschläger: ‚There are heatwaves that cause 19,000 or even 20,000 deaths per week instead of perhaps 15,000, thus causing a dramatic increase in the death rate at certain points.' The same applies to influenza. This means, Wollschläger continues: ‚There are local and temporary selective influences that are generally important for the mortality rate and that were of course also important during the Covid-19 pandemic .' According to him, anyone who wants to investigate the question of how high Covid-19-related mortality actually was must include all influencing factors in a calculation, such as heatwaves and cold spells, influenza activity and social deprivation, and then present these in a spatial and temporal resolution at federal state level. This is the only way to do justice to the great regional heterogeneity of Covid-19-related mortality, which conversely also means that it basically makes no sense to talk about excess mortality in Germany as a whole.

Kuhlen: less SARI, higher mortality

‚There were fewer infectious lung diseases in hospitals during the pandemic than before.' Prof Ralf Kuhlen, Chief Medical Officer and Group Managing Director Medicine at Helios Health and Chairman of the IQM Scientific Advisory Board, surprised many of the congress participants with this statement. However, he was able to back up this statement with figures from the Quality Medicine Initiative, which is able to analyse around 40% of German hospital cases via its numerous member clinics, which, according to Kuhlen, is very representative of what is happening in German hospitals. This is because these Severe Acute Respi- ratory Infections also include Covid-19, which is a message that no longer surprises many people today, but

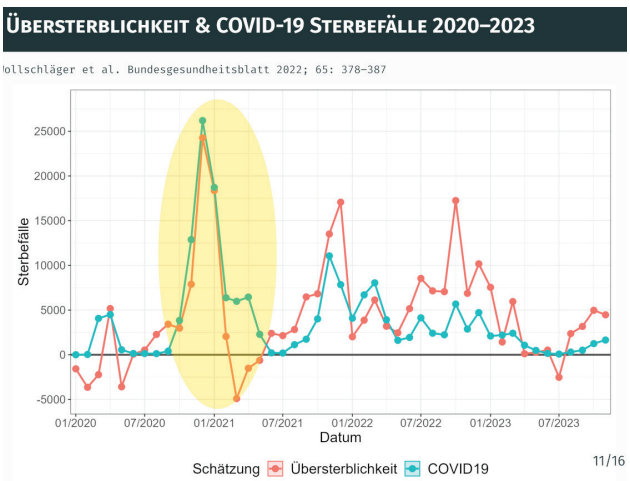




Fig 1: From the lecture by PD Dr Daniel Wollschläger, University Medical Centre Mainz ‚Was there actually a Covid-19-related excess mortality?', MVF Congress ‚Pandemic impact on care' on 18.1.24.

MACHEN SIE IHRE **IDEE** ZUM GEWINN FÜR ALLE.

MSD

Bewerben Sie sich mit Ihrem Projekt beim MSD Gesundheitspreis.

Mit dem MSD Gesundheitspreis möchten wir innovativen Ideen in der Patientenversorgung mehr Sichtbarkeit geben und Ihr Projekt gezielt fördern. Denn durch Innovationen in der Gesundheitsversorgung gewinnen alle! Eine unabhängige Jury aus Gesundheitsexpert:innen freut sich bereits, spannende Lösungen mit insgesamt bis zu 115.000 € Preisgeld auszuzeichnen.



Jetzt anmelden bis zum 15.04.!

Mehr Informationen unter:

https://m.msd.de/gp2024

GESUNDHEITS**PREIS**
GESUNDHEITS**FORUM**
PUBLIKUMS**PREIS**

MSD SHARP & DOHME GMBH
Levelingstraße 4a, 81673 München
www.msd.de

which was completely unexpected during the pandemic because it was expected at the time that hospitals would be much fuller than normal. According to Kuhlen, this decline is surprising because before the pandemic, there were a lot of SARI cases that had nothing to do with Covid-19, but strangely enough, there were fewer of them. We can now speculate whether this has to do with the contact restrictions and the wearing of masks. Kuhlen: ‚In any case, these cases have become fewer. But the number of intensive care treatments has also decreased, which is certainly the most astonishing message, because during the pandemic there were of course hospitals that were extremely full and overloaded overall, such as specialised and university hospitals.'

Characteristic	CH, N = 118,851[1]	D, N = 1,303,071[1]	Difference	95% CI[2]	p-value
SARI	89,681 (75%)	1,087,150 (83%)	1.6	1.6, 1.7	<0.001
SARI & U07.1	29,170 (25%)	215,921 (17%)	0.61	0.60, 0.62	<0.001

[1] n (%)
[2] CI = Confidence Interval

Fig. 2: From the presentation by Prof Dr Ralf Kuhlen, Helios Health and IQM, Berlin ‚Effects of the SARS-CoV-2 pandemic on inpatient care'. MVF Congress ‚Pandemic impact on care' on 18.1.24



However, according to Kuhlen, less intensive care was provided in Germany during the pandemic than before, and there were also fewer ventilator cases. On the other hand, the SARI cases treated in hospitals had a significantly higher hospital mortality rate (unadjusted 2.1 to 2.2 before and 2.9% during the pandemic) and also a higher mortality rate for ventilation therapy, which has been around 30% for many years.

Overall, more people actually died in German hospitals during the pandemic than before. According to Kuhlen, unadjusted mortality was 15% higher, but adjusted for the difference to the normal risk mix (age, gender and comorbidity) it was only 9% higher. If the Covid deaths are then factored out, then ‚just as many people died as before the pandemic'. This means that the unadjusted excess mortality of 15% can be attributed to a mix of a riskier population in hospitals and higher severity plus the effect of Covid as a particularly deadly disease.

But apparently just as deadly was something equally disturbing: the high number of intensive care beds (and their utilisation) in Germany, which according to OECD statistics is by far the highest in the world at 33.9 beds per 100,000 inhabitants. In an analysis comparing Switzerland with Germany, Kuhlen comes to the conclusion that more people died in German hospitals than in Swiss hospitals; this applies both to patients without SARS-Cov2 and to those with Covid. Kuhlen: ‚This is astonishing when you realise that intensive care and ventilation rates were much higher here.' It is therefore necessary to discuss the treatment procedure used, especially with mechanical ventilation. Even if the result (see Fig. 2) is corrected for the effects of different age and equally different multimorbidity using a matched-pair analysis, the difference in mortality remains with very comparable patient characteristics. The question of which patient is hospitalised and which is admitted to an intensive care unit and which is then ventilated was answered very differently in Germany and Switzerland. In Germany, the logic was that the lower the utilisation of intensive care and ventilation, the higher the hospital mortality rate. But perhaps it is more the case, Kuhlen asked, that lower utilisation of intensive care and ventilation has contributed to lower hospital mortality. He was fully aware that this was a great passport for the next speaker, who was dealing with precisely this topic.

Köhler: 80,000 patients died unnecessarily

Prof Dieter Köhler, MD, former Medical Director of Kloster Grafschaft Hospital, immediately did just that by postulating: ‚Forced ventilation has only brought disadvantages for patients.' There had clearly been more deaths due to the consequences of ventilation with a tube, and post-Covid syndrome after an intensive care stay was also partly the result of invasive ventilation. At the very beginning of the pandemic, studies had shown that the mortality rate for invasive ventilation was 97% in China, 66% in the UK and 88% in New York. However, it was assumed at the time that this was primarily due to the high lethality of the SARS-CoV-2 virus.

According to Köhler, however, today's knowledge makes it clear that this was only a partial truth. He sees the responsibility for the use of forced ventilation mainly in the unquestioned application of the S3 guideline on ‚Recommendations for inpatient therapy of patients with Covid-19' in version 9/2022, which has remained unchanged to this day and whose algorithms demand that patients must be admitted to the intensive care unit if their oxygen saturation is below 92%. According to Köhler, there are ‚system errors that run through the guideline'. This applies to mandatory admissions to the intensive care unit, but also to the idea that intubation is necessary if the respiratory rate is above 30 per minute. However, there is no publication that supports the recommendation of intubation in isolated hypoxaemia, so there is no evidence available.

According to Köhler, two studies with comparable patient cohorts treated in intensive care units that compare invasive ven-

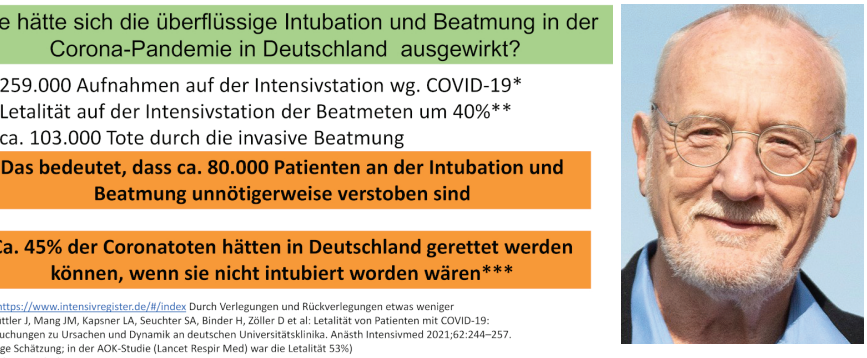


Fig. 3: From the lecture by Prof Dr Dieter Köhler, former Medical Director of Kloster Grafschaft Hospital ‚Intensive care: What has forced ventilation achieved?', MVF Congress ‚Pandemic impact on care' on 18.1.24.

Helfen Sie uns mit Ihrer Spende!

Sparkasse Gütersloh-Rietberg-Versmold
IBAN: DE80 4785 0065 0000 0000 50

30 JAHRE
STIFTUNG DEUTSCHE SCHLAGANFALL HILFE



Bernd steht auf.

Für sich. Mit uns. Gegen den Schlaganfall.



Team Bernd. Gemeinsam stark gegen den Schlaganfall.

Seit 30 Jahren lässt die Stiftung Deutsche Schlaganfall-Hilfe Bernd und andere betroffene Menschen nicht allein und begleitet sie zurück ins Leben. Erfahren Sie ihre Geschichten auf

gemeinsam-stark.team

tilation versus non-invasive ventilation in Covid-19 pneumonia provide an important indication. In the Hamburg study (75% intubation with ECMO), the mortality rate for ventilated patients was 44% and the mortality rate for all intensive care patients was 35%; in the Moers/Grafschaft study with only 10% intubation, the mortality rate for ventilated patients was 5% and the mortality rate for all intensive care patients was 7.7%. According to Köhler, this results in a lethality difference of a factor of 4.5 when intubation is avoided. According to Köhler, if we now assume 259,000 admissions to the intensive care unit due to Covid-19 and a mortality rate of 40% in the intensive care unit of ventilated patients, we arrive at around 103,000 deaths due to invasive ventilation. This means that, taking into account the factor 4.5, around 80,000 patients died unnecessarily due to intubation and ventilation. Köhler: ‚Around 45% of corona deaths in Germany could have been saved if they had not been intubated.' In addition, there is consequential damage such as neuropathy and myopathy, which have not even been taken into account here. Köhler's first conclusion: ‚Although anchored in the guidelines, there is no evidence for intubation with ventilation in cases of isolated hypoxaemia'. And the second: ‚The established clinical practice of intubation in these cases causes many thousands of deaths worldwide and even more long-term consequential damage, but since the guidelines specify the wrong indication, it is established in the legal system and therefore not enforceable.'

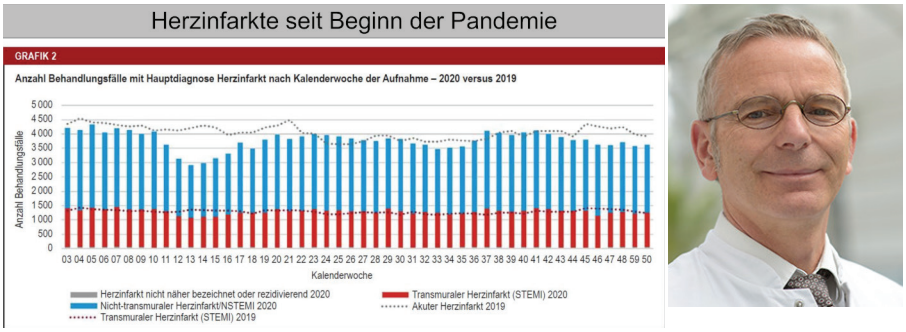


Fig. 4: From the lecture by Prof. Dr Martin Möckel, Charité Berlin: ‚Collateral damage and long-term effects of the decline in hospital cases during the pandemic', MVF Congress ‚Pandemic impact on care' on 18.1.24.

Möckel: Collateral damage and long-term effects

Prof Martin Möckel, MD, Medical Director of Emergency and Acute Medicine Central Emergency Departments and Chest Pain Units at Campus Charité Mitte and Campus Virchow-Klinikum, addressed precisely the collateral damage and long-term effects of the decline in hospital cases during the pandemic mentioned by Köhler. Like Wollschläger before him, he began by talking about the ripple effect of the pandemic, which has also had an impact on the decline in hospital cases, but also on collateral damage. Using the example of myocardial infarction cases, he showed that these had definitely fallen overall, but that there were also some hospitals whose case numbers were even higher than in 2019. A different effect can be seen in COPD with a sustained effect of decline, even though there was an enormous frequency of respiratory infections such as influenza or RSV last winter. However, this did not mean that the existing intensive care units were full or that there were no more nursing staff available.

Overall, according to Möckel, it can be said that there is evidence of collateral damage in the case of strokes during the pandemic due to untimely treatment. His theory is that older people in particular suffer a stroke at home, family members or neighbours come and take them to hospital. During the pandemic, this no longer worked due to the contact restrictions. And because elderly stroke patients are rarely able to call the emergency doctor themselves because they are often no longer able to speak, he believes this is one of the clear collateral damages of the pandemic. With the keyword ‚theories', he made a perfect transition to the closing speaker of the MVF Congress on the consequences of the pandemic, Prof Pfaff.

Pfaff: Theories are congealed knowledge

In his lecture ‚EBM + Theory: How to make serious decisions despite an uncertain database', Prof Dr Holger Pfaff, Head of the Institute for Medical Sociology, Health Services Research and Rehabilitation Science at the University of Cologne, explained that a fundamentally different approach to evidence is necessary for highly dynamic events such as pandemics. His explanations, which were jointly developed by Prof Dr Jochen Schmitt from Dresden and himself and published in two articles, recommend an acceleration solution (organic turn of EBM), an effect mechanistic solution (EBMplus) and a theory-integrating solution (EBM + theory) for decision uncertainties in dynamic times.

First and foremost, however, Pfaff postulated that medicine, including EBM and health services research, must adapt, as the future of medicine and the health sciences is

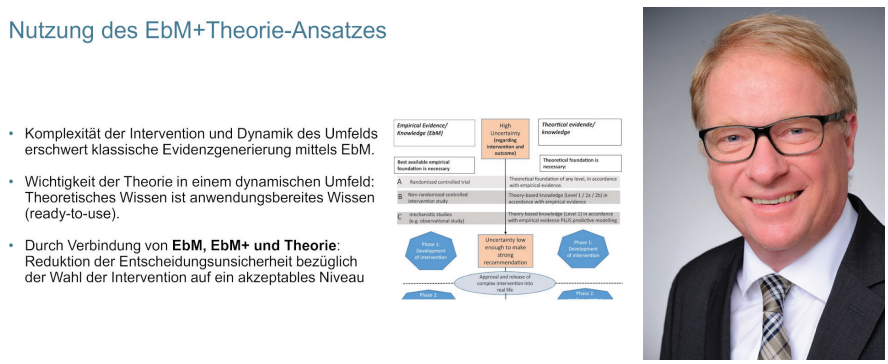


Fig 5: From the lecture by Prof. Dr Holger Pfaff, University of Cologne: ‚EbM + Theory: How to make serious decisions on an uncertain data basis', MVF Congress ‚Pandemic impact on healthcare' on 18.1.24.

Citation

Stegmaier, P.: ‚Far too many unnecessary deaths during corona', in „Monitor Versorgungsforschung" (01/24), S. 18–23. http://doi.org/10.24945/MVF.01.24.1866-0533.2572

characterised by constant change; a high level of dynamism is the ‚new normal'. In order to solve the fundamental problem of decision-making uncertainty, it is necessary to rethink the approach of evidence-based medicine (EBM). Although this is a good approach to reducing decision-making uncertainty for simple interventions and slowly developing areas of application, it is reaching its limits for complex interventions and dynamically developing areas of application, such as the Covid-19 pandemic. ‚The EBM lag thus becomes a fundamental problem,' explained Pfaff, because the EBM system always lags behind social, biological and technological changes and is only able to adapt to new changes at a late stage. He therefore calls for an ‚organic turnaround' and bases this on the contingency theory of Burns and Stalker (1961). This states that in a dynamic environment, organic, less formal forms of decision-making are better suited to dealing with the challenges of the environment than mechanistic, more formal forms. One element of the ‚organic turn' is the return of experts, as they reduce uncertainty for medical and political decision-makers. However, according to Pfaff, the return to experts and eminences cannot be the solution for dynamic and complex environments, which is why a more systematic solution is needed that is based on the principles of evidence generation but is more flexible. He thus brings the ‚EbMplus' approach into play, which he described as ‚Trisha Greenhalgh's solution to the EbM crisis'. However, this is supplemented with a theory-integrating solution, i.e. ‚EBM + theory'. Pfaff, who described theories as congealed knowledge: ‚The integration of empirical and theoretical knowledge for knowledge-based medicine and health science is only possible with EBM and theory.' However, in order to ensure better and faster scientific recommendations, the basis must be reversed: theory first, then EBMplus and finally EBM.

A heated debate broke out among the speakers and participants of the MVF Congress about the ‚how', a summary of which you can read on the following pages. <<

by: MVF Editor-in-Chief Peter Stegmaier

Deutscher Kongress
für Versorgungsforschung

23. Kongress
25. – 27.09.2024 | Potsdam

Implementierungswissen schafft innovative Versorgung

Themenschwerpunkte

WISSEN SCHAFFEN
(Weiter-)Entwicklung von Konzepten, Theorien und Methoden | Kritische Reflektion von Forschungsprozessen

WISSEN PRÄSENTIEREN UND INTERPRETIEREN
Beschreibung und Analyse der Gesundheitsversorgung | Entwicklung, Evaluation und Implementierung neuer Versorgungskonzepte

WISSEN VERBREITEN UND VERMITTELN
(Ansätze zur) Dissemination von Wissen aus Versorgungsforschung sowie Implementierungswissenschaft
Aus-, Fort- und Weiterbildungsprogramme

WISSEN IN DER PRAXIS ANWENDEN
Anwendungserfahrungen | Best-Practice-Ansätze

Call for Abstracts

Gestalten Sie den Kongress mit und reichen Ihr Abstract zu den genannten Themenschwerpunkten ein.
Die Beitragseinreichung ist ab 1. Februar 2024 möglich. Abgabefrist ist der 20. März 2024.
Alle wichtigen Informationen zur Abstracteinreichung finden Sie auf der Kongresswebseite unter www.dkvf.de.

VERSORGUNGSPRAXIS
VERSORGUNGS- UND IMPLEMENTIERUNGSWISSENSCHAFT
GESUNDHEITSPOLITIK

Deutsches Netzwerk Versorgungsforschung e.V.
In Zusammenarbeit mit: European Implementation Collaborative (EIC) und Implementierungs-Netzwerk für Forschung und Praxis

DKVF.DE