MVF Specialist Congress: 'Vaccination Status 2026 – The Current State and Economics of Vaccination'

by: MVF Editor-in-Chief Peter Stegmaier

Why every vaccination is a good investment

"Germany has delivered on the regulatory front – and yet faces a paradox." With this assessment, Prof. Dr Reinhold Roski, editor of "Monitor Versorgungsforschung", opened the 9th MVF Specialist Congress, which focused on the current state of affairs and the economics of vaccination. Four presentations and a panel discussion addressed the question of how medical innovations can be translated into healthcare practice despite structural hurdles. The unifying theme: vaccination is far more than individual protection against infection and protection against secondary complications. Vaccination is at the same time collective health protection and, above all – though this has largely gone unnoticed until now – active resource protection and even an investment with measurable added value for society and the economy.

>> In his opening remarks, Roski outlined the contradiction that characterised what was certainly a controversial afternoon. He noted that, under its new structure, STIKO was acting more swiftly and decisively; with RSV prophylaxis and the standard MenACWY vaccination, powerful preventive tools were now available. However, this is set against the sobering reality highlighted by the RKI's Epidemiological Bulletin 50/2025: vaccination rates continue to stagnate and remain well below the vaccination targets defined by the WHO and recommended by STIKO.

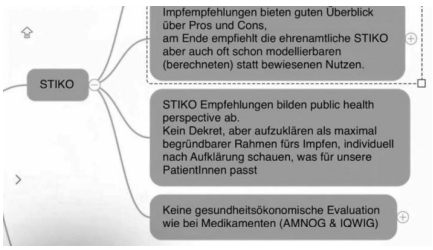


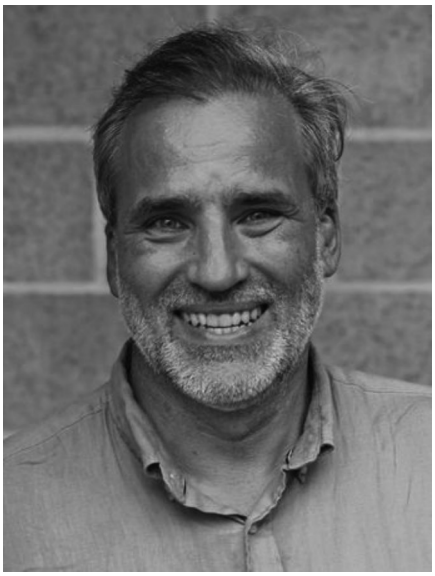
Fig. 1: From a presentation by Dr Wolfgang Schneider-Rathert, DEGAM Vaccination Working Group: 'Vaccination rates between STIKO recommendations and patients' expectations: vaccinators as mediators', MVF specialist congress 'Vaccination Status 2026' on 17 June 2026

Added to this is an implementation problem at the digital level. Despite the introduction of the electronic patient record (ePA), including an opt-out option, the roll-out of an electronic vaccination record and an urgently needed recall system has failed due to technical hurdles – quite apart from the rather modest uptake of the ePA to date.

Roski's key demand was to finally stop making sweeping accusations of "vaccine fatigue", whatever its cause. The real obstacles, he argued, were structural in nature and primarily attributable to digital teething problems and economic short-sightedness. Roski: "Vaccinations are still being discussed as a cost factor, rather than their value for system stability and public health being recognised." The aim of this congress, therefore, was to move from mere exhortation to active shaping and to view vaccination as an investment. The speakers provided the scientific evidence to support this and demonstrated, amongst other things, how protection against influenza prevents costly secondary complications such as heart attacks or dementia, thereby relieving the burden on the healthcare system, and also how the economic value of vaccinations can be calculated.

Caught between two stools: the GP's perspective

Dr Wolfgang Schneider-Rathert, from the Prevention Section of the German Society for General and Family Medicine (DEGAM), opened the technical programme with a presentation on vaccination rates – balancing STIKO recommendations against patients' perceptions – and on the role of vaccinators as mediators. Having practised in general practice since 1999 and been involved in DEGAM's statements on planned STIKO recommendations for over 17 years, he began by lamenting that, as a GP, he could only bill for the vaccination itself, but not for the considerably more time-consuming consultation. His membership of the organisation 'Mein Essen zahle ich*selbst*' (I pay for my own food) explains why he was giving the talk – as, incidentally, were all the other speakers – on a pro bono basis; at the same time, he mentioned his long-standing collaboration with CompuGroup Medical, with whom he had been able to implement, on a pro bono basis, a reminder function for the second measles-mumps-rubella vaccination for those born after 1 January 1970 as part of the 'Check-up 35' programme.



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General practitioners see themselves as the backbone of the vaccination system. The vast majority of vaccinations are administered in GPs' practices. The medical profession does not wish to be a stumbling block to vaccination, but does have very clear ideas about what scientifically sound vaccination should look like. As early as 2009, a DEGAM position paper with the telling title' Vaccination at any price? Vaccine hesitancy in Germany?' had pointed out that the growing number of new vaccination recommendations had led to confusion for both the general public and doctors, and that long-established vaccinations such as diphtheria, tetanus and polio tended to be accepted more readily than newer ones.

According to Dr Schneider-Rathert, GPs find themselves caught between a rock and a hard place: between the public health perspective of the RKI, patients' individual views and legal standards. STIKO is a voluntary commission at the RKI, which reports to the Federal Ministry of Health. Its recommendations are now very well researched, but in the end it often recommends a vaccination based solely on a modelled, calculated but unproven benefit. It is important to clarify that STIKO's recommendations are neither a decree nor a standard to be implemented to the letter . GPs must provide information about them, which is, for example, a mandatory component of the 'Check-up 35' programme. However, once informed, patients have the right to decide for themselves. A low vaccination rate is therefore not automatically a sign of poor quality.



Fig. 2: From a presentation by Prof. Dr Irit Nachtigall, MHBA, Vivantes: 'Health economic evaluation of modern vaccination strategies', MVF specialist congress 'Vaccination Status 2026' on 17 June 2026

When modelling and regulatory approval diverge Dr Schneider-Rathert illustrated the tension between science and wishful thinking particularly vividly using the example of HPV vaccination for boys. He considers the STIKO's vaccination recommendation for boys to be poorly substantiated. The RKI fact sheet gives the impression that the vaccine also protects against oropharyngeal and penile cancers, yet according to the product information, Gardasil is not authorised for these at all, but only for cervical, vulvar, vaginal and anal cancers, and genital warts. Nevertheless, the modelling assumed that the vaccine also protects against penile and oropharyngeal cancer – he refers to this as 'off-label modelling'. Furthermore, the calculations were based on around 4,800 cases, whereas in reality only the approximately 684 cases of anal cancer plus genital warts are relevant for boys. And even when including the much more common oropharyngeal cancers, a 100-year timeframe had to be used in order to calculate any benefit. His point: one should not suggest to parents that the vaccine offers protection against penile or oropharyngeal cancer when this has not been proven. His view: "Anyone who does not engage honestly and openly with people who are critical of vaccination will quickly be put on the back foot in the debate".

In the discussion following his presentation, the next speaker, Prof. Dr Irit Nachtigall, agreed with him in principle, but phrased her comments more cautiously. In her view, the final word has not yet been spoken on penile cancers. They occur very rarely and are therefore poorly documented in studies, and are associated with HPV in only about half of cases. Consequently, it would be more difficult to demonstrate a statistical association than with more common cancers. By contrast, the reduced incidence of invasive cervical cancer is undisputed. As a second example, Schneider-Ratherts cited the tetanus booster. Whilst in Denmark children are vaccinated four times by the age of 18 and not again thereafter, the Dutch and British vaccinate children six times by their 18th birthday – and do not have more cases of tetanus and diphtheria than Germany, which administers a booster every ten years. The WHO also recommends six vaccinations. According to Schneider-Rathert's calculations, following this recommendation would save around 120 million euros annually, without any additional tetanus or diphtheria deaths being expected; on the contrary, there might well be additional cases of Guillain-Barré syndrome and around four million extra doctor's appointments per year.

Where low vaccination rates become dangerous

To avoid any misunderstanding, the speaker expressly emphasised that the DEGAM advocates the highest possible vaccination coverage for key vaccines. In Europe, 87 per cent of measles cases affect unvaccinated people. In 2024, there were around 35,000 measles cases across Europe, 90 per cent of which were in Romania, where 22 children died. The mortality rate during outbreaks is generally around one per thousand, whilst the rate of side effects from the MMR vaccine is ten orders of magnitude lower. Germany is in a comparatively good position, with 97 per cent receiving the first dose and 93 per cent the second, whereas Romania's latest figures stand at 78 and 62 per cent respectively. In Africa, around 17,000 suspected cases of diphtheria were recorded in 2025, with 900 deaths. These are diseases against which four vaccines provide reliable protection. Polio has not been eradicated either; polioviruses have been detected in wastewater surveillance in Bonn, Cologne, Hamburg and Munich, alongside outbreaks in Ukraine, Tajikistan, Israel and the United Kingdom.

Schneider-Rathert concluded the economic section by referring to pricing. As STIKO – unlike IQWiG and G-BA with the AMNOG for medicines – has no mandate to carry out health economic assessments, there is no corrective mechanism. According to the Warken Commission, the price of Shingrix has risen by 140 per cent since 2020. For the HPV vaccine, the German pharmacy price is over 200 euros, whilst the European average, according to an older publication, was just under 50 euros . With regard to the RSV vaccine, he pointed to the uncertainty of the data: Depending on the assumptions, preventing one hospital admission for a person over 75 costs between 100,000 euros and two million euros, because the incidence figures published by the RKI fluctuate by a factor of 100.

DEGAM assumes that people aged over 80 in particular would certainly benefit, as they face a fourfold higher risk. His conciliatory conclusion: it is not orthodoxy, but openness that offers protection. Therefore, the recommendation is not to apply pressure or impose compulsory vaccination, but to act on ethical grounds.

Here, too, Prof. Nachtigall took a somewhat contrary position. Unlike Dr Schneider-Rathert, she assumes that there is significant under-reporting of RSV cases and does not advise general caution: Under-reporting is taken into account via sensitivity analyses in the models, and RSV vaccination is cost-effective or even cost-saving in many scenarios – particularly maternal vaccination with nest protection.

Is the vaccination worth the money – and can we afford it?

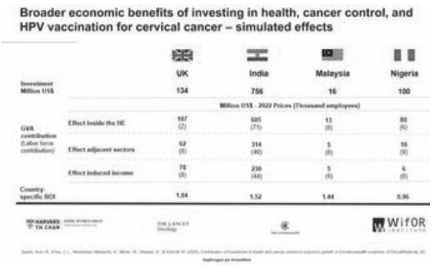


Fig. 3: From a presentation by Dr Maike Schmitt, WifOR Institute: 'Vaccination as an investment: macroeconomic effects', MVF specialist congress 'Vaccination Status 2026' on 17 June 2026



Prof. Dr Irit Nachtigall (Medical School Berlin, Vivantes) addressed this discrepancy between mere model calculations and the actual benefits for individual patients in her presentation on the health economic evaluation of modern vaccination strategies. As a doctor and qualified health economist, she juxtaposed two perspectives between which, as she put it, her "two*hearts*" were torn: cost-benefit analysis, which assesses the long-term societal value of a vaccination in terms of cost per QALY or life saved, and budget impact analysis, which quantifies the absolute short-term budgetary change for the state, health insurance fund or hospital. Only together do they provide a robust basis for decision-making. However, she urged caution regarding data quality: a 2017 review of 22 studies had shown that only just over half met the established standards, and merely 36 per cent of the calculations were verifiable.

She expressly endorsed the assessment made by the previous speaker regarding HPV vaccination, but phrased her comments more cautiously: As regards penile cancers, the final word has not yet been spoken, as they are very rare and are associated with HPV in only around half of cases; to date, there is insufficient high-quality data on them, neither for nor against. The reduced incidence of invasive cervical cancer, on the other hand, is undisputed. For the vaccination of 12-year-old girls in industrialised countries, the figures range from 3,000 to 45,000 dollars per QALY – which, given thresholds of 50,000 dollars in the USA and 30,000 euros in Europe, is clearly within the cost-effective range. She identified the lack of gender-specific cost-benefit analyses as a blind spot in research: many viral pathogens are processed differently by the immune systems of men and women, yet such analyses have so far only been carried out for HPV – and even then, not particularly well.

A flurry of figures across the vaccine spectrum

In quick succession, Nachtigall presented the evidence for the most important vaccines. For 73 low- and middle-income countries, data has been documented for over ten diseases, around 20 million deaths prevented and $350 billion in healthcare costs saved. With regard to pneumococci, current evidence suggests that PCV20 alone is the most cost-effective regimen for adults; in England, the switch from PPV23 to PCV20 prevented 1,414 deaths over five years, with a net budgetary impact of 58.7 million pounds. The Covid-19 vaccination is estimated to have prevented around 2.5 million deaths worldwide and saved 15 million life-years, with 90 per cent of the deaths prevented occurring in people over the age of 60. However, for younger people without underlying health conditions, the benefits are only marginal from a cost-benefit perspective. She addressed the issue of Long Covid, which primarily affects women, in detail: the incidence rate falls by 40 to 60 per cent following vaccination.

Turning to the RSV vaccine, which Nachtigall used as a bridge to the fourth presentation, she emphasised the significant under-reporting – the Vivantes hospitals had only been carrying out regular testing for the past two years, which is why reliable long-term cost data was lacking. RSV also opens the door to bacterial superinfections to a greater extent than influenza or COVID-19. Maternal RSV vaccination protects the child through 'nest protection' and is cost-effective or even cost-saving in many scenarios. Influenza vaccination is consistently cost-effective or cost-saving. The 2017/18 season was particularly striking, during which hospitals were in some cases half-closed due to staff falling ill – which is why the influenza vaccination for hospital staff represents an extremely cost-effective measure, one which, however, is not being implemented sufficiently.

She was critical of the decision to delay the meningococcal vaccination recommendation until adolescence, a time when the likelihood of vaccination is lower than among young children. In the African meningitis belt, the serogroup A vaccine has led to a reduction of over 99 per cent – a key component of the WHO's strategy to eliminate epidemic meningitis by 2030. The TBE vaccine is over 90 per cent effective against severe CNS infections and, with an incidence of one to two cases per

100,000 – as is the case in Brandenburg, for example – it is cost-effective. Dr Schneider-Rathert asked how this could be mathematically possible at such low incidence rates, given that, according to the product information, the risk of serious neurological side effects following TBE vaccination alone (1:1,000 to 1:10,,000) is 5 to 50 times higher than the annual risk of contracting TBE. However, even if the treatment of vaccine side-effects were factored in, Section 630e of the German Civil Code (BGB) stipulates that the risks associated with vaccination must be explained in every case, particularly in this context.

Nachtigall expressly welcomed pharmacies offering vaccinations – exclusively for inactivated vaccines – as a complementary service: "I believe there are enough upper arms to go round." She summarised her key message in two parts: Cost-benefit analyses showed that vaccination makes sense, whilst budget impact analyses showed that it is affordable – particularly for older people and at-risk groups. At the same time, she pointed to methodological shortcomings, particularly in the budget impact analyses carried out to date.

Vaccination as an economic stimulus

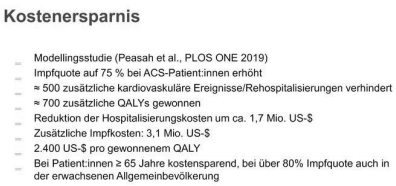
Dr Maike Schmitt from the WifOR Institute – an independent institute conducting research into the labour market, health and sustainability – took the economic thread further and broadened the perspective beyond the traditional health economics approach. Her aim was to view vaccinations not merely as an expense, but as an investment with measurable added value for society and the economy.

She began by calling for a fundamental shift in perspective: health is usually viewed purely as a cost factor, yet the health sector is not only a care sector but also a driver of innovation, an employer and a source of value creation. Vaccinations combine two mechanisms of action: they generate economic activity through the investment itself and create benefits by preventing illness, thereby enabling productivity and social participation.

From the health footprint to value creation



Fig. 4: From a presentation by PD Dr Carolin Fleischmann-Struzek: 'Reduction of secondary complications from influenza and other infections through vaccination', MVF specialist congress 'Vaccination Status 2026' on 17 June 2026



To make this value measurable, Schmitt presented a methodology developed over a decade and based on three pillars. The starting point is the health footprint of a vaccination programme, which models the incremental benefit in terms of the disease burden avoided – here she referred to the models from Nachtigall's presentation, which can often serve as a starting point. In the second step, this health gain is translated into productive time, taking into account both paid and unpaid work. In the third step, monetisation is carried out using gross value added per hour, as key figures in politics often only receive attention when a monetary loss is demonstrated. Even after leaving the labour market, people make a significant contribution through unpaid

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Dr Wolfgang Schneider-Rathert, Prevention Section of the DEGAM

activities; to distinguish these from leisure time, the third-person criterion is applied – only activities that would otherwise have to be purchased on the market are taken into account, such as care, childcare or maintenance work.

A strategic investment

In addition to the human capital effects, investment in vaccinations also generates an economic benefit. Schmitt demonstrated that this shift in perspective is already gaining traction in politics by quoting Federal Chancellor Friedrich Merz, who stated that the healthcare sector is the fastest-growing

sector of the economy. The healthcare sector now generates around 500 billion euros in gross value added, provides almost eight million jobs and has been growing faster than the economy as a whole for years. Investment in vaccinations is therefore not a marginal area, but rather an investment in one of Germany's largest sectors. She broke down its economic footprint into direct effects (development, production, distribution, administration), indirect effects via intermediate inputs, and induced effects via income and consumption.

Using the HPV vaccination as an example, Schmitt referred to a study (1) published last year by the Lancet Group on four Commonwealth countries. It had demonstrated, by way of example, how investment in health could translate into value added, income and employment; for the programme under consideration in the United Kingdom, this had resulted in a return on investment of around 1.8 – meaning that every dollar invested generated additional economic

"Every dollar invested generates additional economic activity."

***Dr Maike Schmitt,* WifOR Institute**

activity. Her conclusion was balanced: whilst it is essential to continue to consider the cost side, health must be understood more strongly as a strategic investment, particularly in political discourse. Anyone who looks only at the costs of vaccination will always invest too little – and overlook the costs of inaction.

Preventing an infection from turning into a heart attack

The fourth presentation, which explored in greater depth the cardiovascular dimension that had been touched upon repeatedly previously, was given by PD Dr Carolin Fleischmann-Struzek from Jena University Hospital on the reduction of secondary complications through vaccination. Particularly since the onset of Covid-19, it has become much more apparent that infections can lead to long-term consequences extending far beyond the actual acute phase of the illness, which are now collectively referred to as post-acute infection syndromes. She focused on cardiovascular complications, which, due to their high disease burden, offer a significant means of reducing morbidity.

The risk of serious cardiovascular events is significantly increased, particularly in the first 30 days following an infection. Major cardiac events occur around eight times more frequently following infections overall, and up to thirteen times more frequently following viral infections; the association between influenza and myocardial infarction is seven times higher in the first seven days and then returns to normal. Overall, around 4.4 per cent of cardiovascular events are considered potentially preventable: Of the approximately 2.4 million cardiovascular deaths each year in high-income countries, around 110,000 to 150,000 are preventable because they are caused by infections – a contribution comparable to that of established risk factors such as diabetes. From a pathomechanistic perspective, this is explained by infection-induced cytokine release, which can lead to plaque instability, thrombosis and myocardial infarction.

Evidence for a cardioprotective effect of vaccination

Research has demonstrated that vaccinations counteract this mechanism. A UK cohort of around 200,000 people (2) demonstrated a benefit in terms of myocardial infarction, unstable angina and stroke in the 120 days following vaccination – in both those with low and high cardiovascular risk. At the level of randomised controlled trials, the relative risk reduction was around 33 per cent, rising to 45 per cent in high-risk patients; the number needed to vaccinate to prevent one cardiovascular event was 56. Accordingly, the influenza vaccination has been incorporated into the guidelines on acute coronary syndrome and chronic heart failure and is listed in the World Heart Federation's secondary prevention package on a par with smoking cessation, exercise and statins. Evidence is also available for other vaccines: for COVID-19, a cohort of around 45 million adults in England shows a significant reduction in major

cardiac events and venous thromboembolism – with rare side effects such as myocarditis and pericarditis. A meta-analysis of 15 studies demonstrated a reduc-

tion in mortality of around 25 per cent for pneumococcal vaccination; a Danish randomised trial involving over 130,000 adults aged 60 and over showed a reduction of around ten per cent in cardiorespiratory hospitalisations following the RSV vaccine, although purely cardiovascular hospitalisations were not significantly less frequent.

Fleischmann-Struzek contrasted these findings with the low and declining German vaccination rates – particularly among high-risk groups. She derived a communication strategy from this gap. A Danish study had also shown that communication framed in cardiovascular terms using a 'gain frame' – namely, that the influenza vaccine could prevent heart attacks and heart failure – had itself had a positive impact on the vaccination rate. Her closing remarks summed up the idea in a single phrase: "The aim is to ensure that an infection does not lead to a heart attack."

"I believe there are enough upper arms to go round."

***Prof. Dr Irit Nachtigall,* Medical School Berlin, Vivantes**

Panel discussion: Structures, trust and the digital divide

In the concluding Q&A session, moderated by MVF editor Prof. Roski, the focus shifted to structural conditions. When asked which groups contribute most to the stagnation, Nachtigall pointed out that vaccination rates among young children were good but declined with age, as older people needed to be approached differently. She advocated a targeted, data-driven approach modelled on the Israeli system, and an electronic vaccination record with reminder and educational features

. Strategically, she argued in favour of focusing on vaccination sceptics rather than anti-vaxxers.

Fleischmann-Struzek added that health insurance funds have only been permitted to analyse their diagnostic data for risk factors since the Health Data Use Act came into force. A pilot project funded by the Innovation Fund (3) is now testing, for the first time, how risk groups can be effectively identified and targeted – rather than adopting a*'one-size-fits-all' approach*. Schneider-Rathert drew attention to the challenges in outpatient care: complex vaccination figures and the risk of recourse claims. Above all, he emphasised the need to regain people's trust. A democracy must be able to withstand self-critical scrutiny of decisions made during the COVID-19 pandemic; it is precisely this openness that could help to reverse the declining uptake rates for essential vaccinations.

In the second section, which focused on the economic benefits and remuneration for information sessions, Schmitt urged that the evaluation framework be broadened and gaps in the evidence be systematically addressed, so that health outcomes become visible and "rewardable". Nachtigall, on the other hand, pointedout that, according to US data, financial incentives yielded less than hoped for. On the other hand, however, a fee of nine euros for a vaccination including an information session was by no means adequate. Schneider-Rathert clarified the situation: with a case value of 75 euros per quarter for all GP care, the impending eight per cent cut in fees – given fixed practice costs – would in effect mean around 16 per cent less income. This would inevitably curtail GP services. At the same time, he criticised the pricing of vaccines: a vaccination also becomes economically viable when it is offered at affordable prices.

The speakers responded largely in agreementto the concluding '*wish list*' ,each containing three measures. Nachtigall prioritised the electronic vaccination record – scannable, with reminders and educational information on why a vaccination is particularly important for the individual in question – and urged a look at countries that are more advanced digitally, such as Estonia. Schneider-Rathert called for the removal of practical barriers to vaccination: simple vaccination codes, straightforward access to vaccines, the waiver of recourse claims and, overall, a reduction in red tape; even an electronic vaccination list, similar to a medication list, would be helpful. Schmitt highlighted recall systems, the simplification of documentation

and a look at the Baltic states, where she had personally experienced their digital lead. Fleischmann-Struzek added that the expansion of electronic documentation and reminder systems was essential – not least to generate robust evidence based on better real-world data rather than mere modelling, and to communicate this more transparently, thereby helping to restore trust.

Roski concluded the afternoon by reiterating the goal that had run through the congress: a shift in perspective towards an 'economics of vaccination'. To drive forward vaccination, more is needed than appeals to citizens' personal responsibility. What is needed is greater openness and transparency in the information provided, appropriate remuneration for vaccinators, consistent reduction of red tape, cross-sector economic analysis and the roll-out of a fully functional e-vaccination certificate. Only by removing these structural obstacles can vaccination be made future-proof. <<

"The aim is to ensure that an infection does not lead to a heart attack."

PD Dr Carolin Fleischmann-Struzek, Jena University Hospital

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"Vaccinations are still being discussed as a cost factor, rather than being recognised for their value in terms of system stability and public health." ***Prof. Dr Reinhold Roski, MVF Editor***

Note

All speakers delivered their presentations pro bono. The congress received financial support from BioNTech, GSK, MSD, Pfizer and Sanofi, without these companies influencing the content. The audio and video recordings, including all presentation slides from the MVF specialist conference "Vaccination Status 2026", are available via open access on the MVF online portal:

Link: https://t1p.de/721hc

Citation

Stegmaier, P.: 'Why every vaccination is a good investment', in 'Monitor Versorgungsforschung' (04/26), pp. 38–43. http://doi.org/10.24945/MVF.04.26.1866-0533.2847