

'A symbiosis in the sense improving patient benefit'

In the cover interview: Prof Dr Juliane Köberlein Neu, Congress President of the 23rd German Congress for Health Services Research

'Implementation science and health services research must come together even more closely at their intersection and work together more than before.' This is the plea of Prof Dr Juliane Köberlein-Neu, holder of the Chair of Health Services Research and Health Economic Evaluation at the University of Wuppertal and Congress President of the 23rd German Congress for Health Services Research. Professor Köberlein-Neu explains the congress title 'Implementation knowledge creates innovative care' in the cover interview with 'Monitor Versorgungsforschung' and talks about what she hopes to see from both scientific disciplines in the future.

>> Many experts assume that we don't have a problem with knowledge, but with implementation. Your congress, which you preside over as Congress President, is entitled 'Implementation knowledge creates innovative care'. What is the state of implementation knowledge in Germany?

You can't quantify that. However, it can be observed that the topic is increasingly gaining political and scientific awareness. Particularly in the field of health services research, more and more scientists are interested in how they can integrate implementation issues into their projects, they are increasingly dealing with the topic and building up implicit knowledge on it. Other countries such as the USA, the UK, Canada, the Netherlands and Switzerland are now conducting more systematic research on the topic of implementation and making the findings explicitly available for research and practice.

Do you see a strong focus on implementation in this country?

I wouldn't describe it as strong at the moment. Nevertheless, there is a visible endeavour to integrate initial implementation issues into the generally given project framework, such as barriers and facilitating factors for implementation or success factors in the implementation process. To date, however, the majority of funding institutions have not yet fully anchored stand-alone implementation studies in their funding programmes, because in health services research, the focus is first and foremost on the everyday effectiveness of complex interventions, such as new health care models. This means that the topic of implementation - at least in my perception - does not yet have a very high priority in the practical realisation of research projects in Germany, as the implementation science issues and the associated methodological requirements within the research projects are often in competition with the usual issues of health services research. In other countries - the USA, the UK and the Netherlands are mentioned here as examples - there are very specific projects that are only carried out on the topic of implementation, i.e. where the focus is no longer directly on the everyday effectiveness of a new form of care, but rather on the effectiveness of strategies for anchoring it.

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Is Germany lagging behind?

I wouldn't say so. In some countries, implementation research is simply carried out much more explicitly than in Germany. If we look at publications from Germany, we see that the majority of publications on funded projects address the effectiveness of new forms of care under everyday conditions, but also describe the results of process evaluations that have produced barriers and facilitating factors for the implementation of new forms of care, information on the target groups reached or findings on implementation fidelity. However, this is often where things stop.

'In Germany, explicit implementation science education, training and further education programmes are still being developed.'

What is the aim of implementation research?

Building implementation knowledge means focussing on issues that go beyond the aspects just described. These include questions such as which implementation strategies were used and how effective they were in certain application contexts; which barriers the implementation strategies actually address or which promoting factors supported them; which costs the implementation process of a new care concept caused from the perspective of the people behind it and so on. To give a concrete example: When a new care concept is implemented to improve drug therapy safety, it is not only of interest to know which barriers were encountered during implementation and which promoting factors favoured it. This information certainly helps in the planning of further initiatives on the topic. Even more relevant, however, would be the realisation of whether a particular implementation strategy, for example 'external support', was really able to reduce the barrier(s) for which it was developed. I think there is a lot of implicit knowledge on different aspects of implementation in Germany. It is often not written down enough on the publication side - I personally don't want to exclude myself from that.

Isn't that also due to the way funding is organised in Germany?

That's certainly true. The time and financial resources available for an individual project are often not sufficient to address both the classic questions of health services research and specific implementation science aspects in the same way. From a methodological point of view, however, this is not even possible, as each area has its own requirements. However, it is also possible that there has been a lack of human resources, particularly among junior researchers, to put the mainstream of implementation issues, such as the focus on the effectiveness of implementation strategies, on the research agenda. In Germany, explicit implementation science education, training and further education programmes are still in their infancy. There are currently only a few degree programmesthat either have implementation science explicitly in their title - as is the case in Heidelberg, for example - or teach implementation science in detail. There are virtually no training and further education programmes for so-called implementation practice in Germany.

Wouldn't we need a different funding culture in order to achieve better implementation findings?

In my opinion, the funding culture in Germany is currently undergoing a radical change. It is also being increasingly recognised on the funding side that we are wasting research resources without devoting ourselves intensively to the topic of implementation, as

valuable scientific findings are not being put into practice. Let's take a look at how the Innovation Fund has developed in recent years, for example. The current structure clearly shows the endeavour to provide a funding framework for bridging the gap between innovations with proven everyday effectiveness and healthcare practice. However, this alone is not enough, as all funding organisations are dependent on which applications are actually submitted, which experts review them and what awareness they have of the need for certain implementation science issues, for example. This is made more difficult by the fact that there are many questions in implementation science that appear to be very application-oriented, but which would be described as basic research from the perspective of implementation science, for example the effectiveness of implementation strategies and their mechanisms of action.

What is the problem? There is funding for basic research.

Funding organisations such as the DFG, for example, which pays very close attention to basic research, like to classify implementation science projects as application-related research and not as basic research in the true sense of the word. What funding organisations describe as basic research or regard as such therefore clashes with how research is carried out in implementation science and with the methodological breadth that can be applied here. But I think this will also increasingly change over the next few years.

Where can implementation science be implicitly promoted? Through the BMBF, the BMG or the Innovation Fund, in the context of which there are almost always many questions about implementation?

All of the funding institutions mentioned should have a great interest in advancing implementation science issues, and I think they do. However, there needs to be a greater awareness that the issues in the projects are perhaps different from those we have been used to in the past - namely not only the pure everyday effectiveness of a new form of care and the barriers and facilitating factors that are observed during its implementation. It is also important that projects may have a different structure and dynamic - for example, they may have to be much more iterative if implementation becomes more of a research topic.

'Individual implementation strategies and measures only have added value ifthey specifically address barriers and factors that promote implementation.'

Let's illustrate this with an example.

For example, we have a new care concept that is to be evaluated in a study to determine its effectiveness in everyday care - ideally in a randomised controlled study. Incidentally, this is by no means always the case in healthcare research because we are often unable to realise this level of evidence.

So where is the implementation?

Exactly. This would require either a separate project or at least a clearly defined and also funded part within the same project that explicitly deals with questions of implementation. Here, in-depth questions can be asked and researched, such as which implementation strategies are more or less effective in anchoring the new care concept in question in different contexts of standard care. In the best case scenario, the implementation strategies are also compared with each other in a control group design - and this 'implementation knowledge' cannot be provided by a process evaluation alone, which we often find in projects in addition to summative evaluation.

The aim of the Innovation Fund is to support precisely those projects that can be transferred to standard care.

This in turn requires knowledge of the effectiveness of implementation strategies, which has only been researched to a limited extent in the projects funded to date. In addition, many projects are launched from the outset with certain ideas about implementation strategies that are rarely scrutinised and are not very context-specific.

Which ones?

There are many implementation strategies. In order for them to be effective, they must be very specifically tailored to the barriers and facilitating factors that are expected in an implementation initiative or de facto occur during the process. However, it is not uncommon at the beginning of a project for a kind of watering can principle to be followed and, for example, training courses for nursing staff, doctors or other healthcare professionals involved in the introduction of a new care concept to be defined - because training is always part of the process in some way. This is often supplemented by information material, guidelines or recommendations for action. However, these individual measures only have added value if they specifically address the barriers and facilitating factors for implementation that actuallyexist at aninstitution participating in the project.Of course, a certain spectrum of expected barriers and facilitating factors can initially be developed on the basis of literature in the course of the application process; after all, you need a reference point for the budget calculations. However, it should be clear that at the beginning of a project, it is not possible to start with a fixed bundle of measures developed without any specific contextual reference. For example, it would make sense to explore the actual barriers that arise during the introduction or transfer to the reality of care in a specific context before starting a project or right at the beginning. If these barriers are known - for example, a lack of support from managers or organisational values that stand in the way of the new measure - it is much easier to define the appropriate strategies. Once this has been done, a study can be conducted to evaluate various options that can be used to influence a barrier and these can then be tested against each other. This is precisely one of the core tasks of implementation science, whose object of investigation is not the actual care concept, but the question of how an already evidence-based care concept can best be transferred into practice.

Best means?

Which strategies work most effectively and efficiently during implementation. The strategies identified and evaluated in this way can then be useful not just for one, but for several new forms of care. It is therefore important to research implementation strategies in such a way that generalisable knowledge can be derived from the results. In all of this, however, it is important to realise again and again that implementation strategies only ever create meaning and benefit in a very specific implementation context, namely when the barriers and facilitating factors that they address are also present.

In the meantime, many pilot projects have been supported by the Innovation Fund. Most of them will probably rely on similar implementation strategies, but without having first evaluated which are the best in the respective context. Would it be advisable for health services research or implementation science to create a methodological and theoretical toolkit of the most optimal implementation strategy for pilot projects, for example?

Let's call the whole thing a strategy bundle, because implementation is always context-specific and several barriers usually need to be addressed. More funding projects need to be initiated for these. To stay on the subject of pilots, follow-up projects would now have to find out which implementation strategies work best in which situations and contexts. If necessary, the projects can also build on data already collected in the previous projects and analyse it with a different lens or carry out in-depth studies with new data.

Context-specific work seems to be the speciality in the field of implementation science.

Exactly. An intensive analysis of the context is often an important starting point in implementation projects - both from a practical and a scientific perspective. However, this also means that the whole thing is becoming increasingly complex. Let's take a certain barrier, 'knowledge', which stands in the way of the introduction of a new form of care. This can have the same name for different locations at a superordinate level, but can be very individualised at one or more locations in interaction with the respective context. For example, the 'training' strategy may work better for this barrier at one location, while the 'information material' strategy may work better at another location. This is simply because each barrier is different in each context and must therefore be addressed specifically. The challenge for implementation science now lies in generating context-specific knowledge on the one hand and still achieving a certain generalisability of its findings on the other.



Prof. Dr. Juliane Köberlein-Neu

has held the Chair of Health Services Research and Health Economic Evaluation at the University of Wuppertal since October 2019 .She studied health economics and completed her doctorate at the University of Cologne in 2008. From 2010 to 2017, Juliane Köberlein-Neu held the Junior Professorship for Health Economics and Management at the BUW and took over the chairmanship of the Bergisches Kompetenzzentrum für Gesundheitsökonomik und Versorgungsforschung (BKG) in 2014. Until September 2019, she headed the 'Health Services Research and Health Economic Evaluation' working group at the BKG, which was transferred to the chair in October. A key focus of her current work is the (health economic) evaluation of concepts for interprofessional collaboration in the healthcare system.

Is it even possible to achieve this in 'normal' health services research projects?

Only with great difficulty, but it doesn't have to be. Rather, it is important that we develop an awareness of the fact that additional knowledge is needed for the evidence-based design of implementation processes, which may not be generated in a large project. For example, a project that is primarily concerned with day-to-day effectiveness can always be supplemented by a second project that is explicitly concerned with how implementation can best be designed afterwards. This is the only way to create the full breadth of knowledge required to successfully transfer new forms of care into standard care. It is clear that every project must use the methods, theories and study approaches required for the fundamental questions. And since the methodological requirements differ depending on the focus of the research question, it is very rare to generate evidence on the effectiveness of everyday care and implementation of the same quality in one and the same study.

Is implementation science considered from the outset?

Not everywhere yet. However, I believe that a large proportion of health services researchers are already trying to get the best possible implementation out of their projects. The fact that this is not yet fully successful is simply due to the fact that there are still too few people who have made or could make implementation their focus in health services research, but also beyond that.

This is perhaps also due to the fact that, historically, health services research in Germany has developed very strongly at medical universities and colleges, while implementation science has a sociological character.

That is certainly one possible reason. However, I think that it is also due to a certain extent to the funding opportunities available to date. In every field of science, there are further developments that will largely go in the direction that is possible at a certain point in time due to the existing funding opportunities.

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In this respect, only what can be achieved within the funded projects will be implemented.

That is the big difference, especially compared to the Anglo-Saxon and Nordic countries or our neighbours such as the Netherlands: Centres for implementation science and dissemination now exist there. In Switzerland, too, there are the first institutions that are devoting themselves very intensively to implementation and conducting excessive research in this area.

Let's take a look at implementation science and health services research at this point. Aren't they two sides of the same coin?

For me, they each have their own character, but they have a large overlap due to an overarching goal that can unite both and the range of methods used together. Implementation science should be seen more as a cross-sectional area that is used by many disciplines, such as the education sector, which is concerned with how innovations can be introduced into the school system, for example. In recent years, implementation science has developed a great deal of basic knowledge in this area in particular.

Is the same true for the field of health services research?

A person who explicitly sets out to generate implementation science findings has a different interest in knowledge than a person in 'classic' health services research. However, both are working towards the same goal, namely the improvement of healthcare. This is why it is so important to understand what and how research is conducted in both areas and to reflect on and consciously position oneself in this field.

Let's illustrate this once again with the example of pilots.

In a classic care research project, for example, questions would be asked about whether a new form of care in which pilots were integrated has led to an improvement with regard to certain patient-relevant endpoints in everyday care compared to current standard care. An accompanying process evaluation would also ask to what extent the new care concept has been used in everyday care; or which components that comprise the new care concept have been provided and in what form and quality. In addition, it would probably be investigated which patients have actually been reached with the new form of care.

These are classic healthcare research questions.

Exactly. From a more implementation science perspective, the same project would investigate which implementation strategies were used and developed and, above all, how they addressed and changed the existing barriers.

Although, as you mentioned, these were often developed ex ante, virtually in a vacuum. Or were simply implemented because someone's gut feeling told them that training is always needed.

From an implementation science perspective, one would first analyse whether a barrier that can be addressed through 'training' exists at all. If, for example, there is no real knowledge problem, a 'training' implementation strategy focussed on this will also provide little or no benefit. Implementation science, on the other hand, also analyses, for example, which implementation strategies were used in the way they were planned for a specific context and which successful steps there are in the implementation process within an organisation.

The focus is therefore on the implementation activities and no longer on the new form of care itself.

Quite right. I also want to make it clear that classic process evaluation, as we conduct it in health services research, is not congruent with implementation science research. Sure, there is an overlap, but there is no congruence.

Would you personally see yourself as an implementation scientist?

I don't know if anyone would describe themselves as a pure implementation scientist. We all have our scientific home and socialisation. Many people who do implementation science come from psychology or sociology. I wouldn't describe myself as an implementation scientist in that sense, but as someone who really endeavours to pose and answer questions from implementation science within health services research. However, I have to keep reminding myself that some questions need to be formulated differently and researched differently from this perspective.

Implementation scientists are also rather rare in Germany. I can think of Professor Wensing from Heidelberg, Professor Vollmar from Bochum and Professor Roes from Witten/Herdecke, for example, who will probably be attending the congress that you will be chairing at the end of September this year. Are the topics you have just mentioned and discussed reflected there? If so, in which of the four strands?

This time we have tried to define the strands a little differently and have built them up on each other. They follow the process of how knowledge finds its way into healthcare practice.

The programme committee and you have defined four strands for the German Congress on Health Services Research, DKVF for short, taking place in September. Namely: Strand 1: Creating knowledge, Strand 2: Presenting and interpreting knowledge, Strand 3: Disseminating and communicating knowledge and Strand 4: Applying knowledge in practice. In strand 1, for example, the discussion on the (further) development of concepts, theories and methods is to take

place. What can we expect there?

The first strand is not so much about the findings per se that studies create, but about the question of which methods can be applied. For example, what alternatives there are to randomised controlled trials, such as the area of realist methods and the associated potential for evaluating complex interventions. Methods for handling healthcare-related data and mixed-methods approaches will also be discussed.

What can congress visitors expect in the second strand?

The topic of 'Presenting and interpreting knowledge'. This is about the implications that can be derived from the results obtained. 'What happens to it now and why?' - This is the core question of implementation science. And consequently, the third strand is about how the knowledge gained can be disseminated and communicated. This involves the development of expertise and capacity building in terms of both research methodology and practical implementation. And, of course, vice versa: what can we learn from practice and what can we incorporate into our own research in the appropriate form.

And in the fourth strand?

The fourth and final strand is ultimately about reflecting on project experiences and applying them in practice. Barriers are also discussed here: what barriers there are and how they can be influenced. And where we are perhaps simply limited. I would also like to take this opportunity to highlight the Patient Day, which will take place on Thursday alongside the rest of the scientific programme. Together, we want to explore the question of how participatory research can take place to an even greater extent in future.

If you have to summarise the congress theme 'Implementation knowledge creates innovative care' in a nutshell, then ...

... implementation science and health services research must come together even more than before at their intersection and work together more than before. Both disciplines must manage to utilise the symbiosis into which they can mutually enter even more efficiently in the interests of improving patient benefit. Both - healthcare research on the one hand and implementation science on the other - can benefit enormously from each other. This begins with the fact that in every project, the exact questions that will ultimately be needed for implementation in everyday healthcare must be asked as early as possible and then researched. Implementation science has a whole spectrum of theoretical approaches for this. It would be a great win-win situation if we could bring the two areas even closer together.

I'm really looking forward to this congress. See you there and thank you for the interview. <<

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