KING'S College LONDON

Lecture Transcript

Module Name	Mental Health in the Community
Week 5	Implementation in Health Care
Topic	Introduction to Implementation Science (Part 2 of 3)

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So in the first part of this lecture, we talked about the need for the development and the effectiveness clinically of the WHO surgical safety checklist. We've had a look at the success that this checklist has had in terms of improving rather spectacularly, as I commented, surgical outcomes. What we will do in this part is to look at how this checklist, once it was published and developed was actually used in practise.

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The largest study to date that investigated how this checklist was used in practise is the one that is summarised on this slide. The study was published several years after the initial introduction of the WHO checklist. And it's fair to say that the study really shocked the world. The study relied on electronic health records. It studied the effect of the surgical safety checklist which was Introduced in the province of Ontario in Canada.

The size of the study is truly huge. It looked at records of over 215,000 patients. The size of the study means that it could never be a randomised or other type of trial or a real-time observational study. That's why it was done based on electronic health records, which were essentially examined as part of a desk research. So the comparison here is of the surgical patients' health records which include their surgical outcomes before the introduction of the checklist and after the introduction of the checklist, in the entire province of Ontario.

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The headline results of this study have been summarised for you in these slides as a quick reference. So essentially what you can see here is that both mortality and the overall complication risk. So the number of deaths and what surgically you would call overall morbidity rates, following the use of the checklist are essentially the exact same as what they were before this checklist was introduced. Essentially, what you're looking at is a constant pattern, both for mortality and for morbidity. That is what this study shows, and this is why the study was shocking. It is the first and remains the largest implementation study for this checklist that fails to find any useful, any beneficial effects for patients. A really interesting commentary followed the publication of this paper. So a few pages later in the same journal, in the same issue of the journal. An academic surgeon wrote, and this is verbatim his commentary: 'The likely reason for the failure of this study to find any effect of this checklist is that the checklist was not actually used.' So essentially what you have here is an academic surgeon commenting on what he thought was going on in operating theatres, despite the fact that there was national guidance in Canada for the use of this checklist. Now, could this be the case? Could it be the case that people are not following national guidance? And essentially what studies like this are picking up is the lack of compliance, the lack of utilisation of an evidenced and well-supported intervention in surgical care.

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We've tried to answer this question with my research group for several years now. I think it's fair to say that we have been doing research on the implementation of this checklist for well over a decade. One of the studies that we did, and this is one of the earlier studies, when we realised that such questions were being asked of the checklist, not just in the UK or in Canada, but globally, was to try and understand the process of implementation. In simple terms, how was this checklist introduced, for example in England when it became national policy after 2009?

So here's an example of a study on this slide where we spent a couple of years doing interviews with several dozens of surgical pathway professionals. So these of course are surgeons. There are anasthetists, there are nurses who work in operating theatres or in surgical wards, there are surgical service managers and people like these. These were the participants of this study.

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What we did was we asked participants about the process of implementation. In other words, how this checklist was introduced in their own hospitals, in their own national health service trusts as they're known in England, when the national policy came into effect. I have some of their comments, some of their answers to our questions verbatim on this slide.

So some of them basically said that 'there was no discussion, there was no introduction of this intervention or anything else'. 'Our chief executive, had a bee in their bonnet', and that's how the checklist was introduced. Or it was like, 'no, you will do this' or the checklist just appeared. So you can see from these comments you get a sense that these people were not very happy. They were not consulted about the introduction of the checklist, they're not engaged. And I would propose to you that these comments suggest that people have a rather aggressive attitude towards the whole implementation process and the people who led that process within their hospitals.

We're not saying here that this lack of well-thought-out implementation was the case everywhere, of course it was not. And we had some participants across several hospitals who quoted that there was an implementation process that was well-thought-out and it really supported the introduction of the WHO checklist. But because we had so many cases where people suggested that this was not the case, the point of the study and the conclusion we're making here is that there's fairly large variation in how a rather simple intervention was introduced within the NHS in England after the national policy came into effect.

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Why do we care so much about the process of implementation and the way a new intervention is being introduced? It is because we feel, and there is indeed evidence for this, that the way something is introduced into clinical practise has a relationship with how it will then be used. So essentially, what we wanted to know as part of our research programme around the checklist implementation was not only what people felt and thought and what their opinions were about the implementation process, but we also wanted to know what the implementation actually looked like on the ground in operating theatres.

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So we train the number of observers. So the people who were surgeons or psychologists or operating department technicians, and we send them into operating theatres in UK hospitals to observe in real time how surgical teams were actually using the checklist in practise.

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What this study found was, again, substantial variations in how the checklist was used in real-time in operating theatres. Of course, this is surprising in many ways because the checklist, as we talked about earlier, is a fairly simple intervention, it is literally, remember a single piece of paper with a relatively small number of checks to be read-out and confirmed amongst the team members, and it only takes a few seconds to go through it. But essentially what this study showed and what we observed was that the number of checks that were actually done varied a lot. In many cases, not all the checks were done or they were not done appropriately. People were not in the operating theatre while the checks were being done, whereas of course they were meant to be there, or when they were there, they did not stop what they were doing to actually pay attention to the checks and confirm or not whether a check was done and whether they had something to add to that check for the team to know. So the point of this study is that it's not really enough to have a good implementation process. It is necessary. But in fact, one needs to study what the implementation looks like on the ground. And we need to follow through to ensure that we support clinical teams in a way that interventions are intended to be used to ensure good quality implementation.

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As we said in the beginning, the WHO surgical safety checklist is just one example. It is a simple intervention. It impacts on millions of patients worldwide. It is part of a wider public health issue that surgery has rapidly become over the last couple of decades. But essentially, the key aspect of this intervention is its simplicity. It is one piece of paper to be delivered at a single point in time by a relatively small team that's congregated around the patient.

And yet, what we're finding is significant variation in both how this intervention is introduced into a service, but also how clinical teams use it in practise in their daily clinical work. The interesting part here is that what we described in relation to the checklist in terms of its implementation and its usage, I would propose to you applies to pretty much all clinical interventions. They get introduced into a clinical service following research evaluation. And you can imagine that things can only get worse for clinical interventions that are more complex than this simple checklist.

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So here we're reaching the end of the second part of the introductory lecture to implementation science. What we have seen essentially is that there are really significant reasons to study the implementation process, because it can vary when an intervention is being introduced following national or other types of guidance. We also showed that there can be significant variation between clinical teams in how they use interventions that are part of national guidance. If this is the case with simple interventions such as the WHO checklist, which is really a single page of checks, you can imagine that this is the case, even more so for interventions that are more complex.

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