**Webisode 7 – Rapid reviews**

Presenter: Mark Newman (EPPI-Centre, UCL)

Youtube video:<https://youtu.be/b5YMJyQCW8k>

JOANN STARKS: Welcome to another session from EPPI-Centre Evidence Tools, Products, and Projects. This series of brief webisodes will introduce the audience to several tools, products, and projects of the Evidence for Policy and Practice Information and Co-ordinating Center or EPPI-Centre based at University College London's Institute of Education.

The EPPI-Centre focuses on the development of systematic reviews and studies the use of research evidence. I'm JOANN Starks from the Center on Knowledge Translation for Disability and Rehabilitation Research or KTDRR and American Institutes for Research.

The Center on KTDRR are sponsoring these webisodes with support received from the National Institute on Disability, Independent Living, and Rehabilitation Research or NIDILRR in the US Department of Health and Human Services. This session discusses rapid reviews. Mark Newman is the presenter for this webisode. He's the Associate Director of the EPPI-Centre and he is a reader and evidence informed policy and practice in education and social policy.

His interests include developing methods and processes for systematic reviews for policy and practice decision making across social policy, capacity building amongst practitioners, researchers, and policymakers to produce critically appraise and utilize research evidence, methods for the design and evaluation of effective learning environments in professional and clinical education. Welcome, Mark. I'll now hand things over to you.

MARK NEWMAN: Thanks, Joann. Yes, so today I'm going to be talking to you about the scenarios when we want to try and find a way of carrying out systematic reviews in a more accelerated fashion. Just to recap on when we talk about this about the reviews what we're talking about.

Research reviews in general or a meta level of research that aims to answer research questions by synthesizing the findings of existing research studies. Systematic reviews are a form of research review that is both systematic and explicit about the methods used in the review.

Systematic reviews can address different research questions and use different methods. There is a webisode on dimensions of difference in reviews you can look at and which discusses these issues berther.

Whatever the type of research question that is being addressed by a systematic review, the focus and complexity of the question might vary. Complexity in research question the number of dimensions which may include the population or participants, the context, the complexity of the phenomena that's being investigated, either conceptually or practically, or and/or that type of data and answers that are required from the systematic review.

If we think of systematic reviews of a project, the possibilities of a systematic review are what we can hope to achieve by doing a systematic review are determined by three factors, the scope of the work required, the quality of the work required, and the time and the resources available.

Typically the broader and/or more complex the review research question and/or more rigorous the review method, the longer it will take to complete a systematic review. There are many reasons why a review might need to be undertaken more rapidly.

Approaches for accelerating the progress or reviews either increase the speed by increasing the resources while maintaining the work done, reduce the complexity of the review question and thus the work to be done by the review, and/or reduce the rigor of the review process and reporting.

Approaches two and three are more commonly talked about as they are used in situations where we have fewer resources than we might ideally like in order to complete a review. It's worth saying that where the first option is considered to increase speed, increasing resources typically mean increasing the number of people.

Now it's not clear at what point this becomes a strategy that you can use because of course increasing the number of people involved in the review also adds complexity to the review management processes ensuring consistency of approach, quality appraisal, and the like. So that strategy may not always be an option.

Systematic reviews are a research process and we can identify a number of stages in that process. And at each stage we can think about possible acceleration strategies. At the first stage, we define the review stakeholders and the team members that are needed to carry out the review. We then formulate the review question, which will have a link to conceptual framework, that is the way in which we think about the phenomena to be investigated and how we think it should be investigated.

And this will lead us to develop inclusion criteria, which we then used to choose studies to include in our systematic review. Once we have completed the development of the protocol or plan, we begin the process of carrying out the review. And that involves searching for and identifying relevant studies.

We apply the selection criteria to select the studies to include in the review, but then use some kind of process of getting relevant information out of those studies. We make some judgment about the quality of those studies through appraisal. And we then synthesize the results of the individual studies to get an answer to our research question.

And we then have to communicate the findings of the review through some process of reporting and engagement with the stakeholders. We can look at each of those stages and think about the acceleration strategies, i.e., strategies that we might use to speed up the review process.

So thinking about the first stage in the review process is defining review stakeholders in the review team, one strategy to accelerate the process is to limit the stakeholder engagement in range and/or in the method. So we might undertake a reduced level of stakeholder engagement.

At the stage where we formulate the review question conceptual framework and selection criteria, we might accelerate our review by focusing on a very specific population, a very specific definition conceptually and practically of the phenomena. And this in turn will be reflected in very tightly specified selection criteria.

At the stage where we search for and identify relevant studies, strategies we use to accelerate the review process might include searching using for fewer search sources and simpler search strings. We might also carry out a lighter touch quality assessment process, and in the in our own review processes.

For example, we might only use a single person to screen the possible studies for inclusion. We might decide to emphasize that there must be a very clear fit with the selection criteria before study can be selected for inclusion, as opposed to erring on the side of caution and including things even when we're not sure. But we might, the sort of thing we might do if we had more time.

At the state of describing studies, typically we use some form of data extraction tool to get this information from the individual studies. The analogy there would be a questionnaire and the questionnaire would ask questions about each individual study so that we would consistently collect the same information from all of the studies.

We might use a more simplified version collecting a minimum dataset from the individual study which would reduce the amount of time that it takes to do that operation. We might here, we might also reduce our quality assurance procedures by using a single person only to data extract from each individual study as opposed to the gold standard, which is normally assumed to be a double data extraction independently by two people.

At the stage of appraising the quality of the included studies, we might choose to use a more simple form of study quality assessment or indeed not to make any study quality assessment at all. If we were proposing to use study quality assessment for selection of studies, we might choose to make it a very simple quality assessment thus reducing the work required by the reviewer to identify whether or not a study meets that quality assessment selection criteria.

Similarly, at this stage of the review we might also take a light touch on the quality assurance processes by using a single person quality assessment of the quality.

At the stage of synthesizing an appraising findings, we would typically use a named method of research synthesis to combine the results of the individual study. In order to accelerate the review process we may choose to use a less complex method of synthesis that's still appropriate to the type of research question and/or research designs that we have in our review.

But it's actually more or less complicated to carry out and not speeding up the review. The synthesis often includes exploration of the variation in the patterns of results across studies in order to explore potential reasons for differences between study results and to understand the interpretation of results in different contexts.

We may choose to do less of it if we want to accelerate the process of the review and/or we may also decide that we're not going to test the sensitivity of our analysis by repeating our synthesis changing various dimensions of the included data.

At the stage of communication engagement, review findings need to be written up in some way and typically in a systematic reviews reports. The writing required can be quite lengthy and time consuming in order to communicate the messages and therefore complexity of the findings to the audience. We might choose to use shorter and less complex reports following pretty structured template, which will reduce the amount of time required for report writing.

We can use any of these choices to accelerate the review process and thus produce systematic reviews more quickly. But what is important to consider when deciding which acceleration strategies to use? Firstly, it's important to remain systematic and transparent whatever the acceleration choice you choose.

If you don't remain systematic and transparent, then you are at risk of losing the potential benefits of carrying out a systematic review. We should know that each strategy does have the potential to speed up the review process, either alone or in combination with others.

However, each strategy also has the potential to introduce more error or bias into a systematic review. The more strategies that you use to speed up the process, there is more risk that this problem might occur. For example, if we use fewer research search sources, we will increase the risk of not finding a piece of relevant research.

Or another example might be that if we use less complex methods of quality assessment, this will increase the risk of us not identifying whether the method used in a particular study are influencing the result in a particular way.

These judgments can't be avoided, however, the choice of which acceleration strategies should be used could be informed by all the stakeholders views about which risks are most important to them.

What general conclusions can we make? We've described how systematic reviews may be accelerated in a number of different ways. It's always important to remember that any evidence claims based on the findings of a systematic review should be consistent with the limitations of the systematic review questions and methods.

It's probably true to say that acceleration strategies are less risky when the review research question can be very clear about the population phenomena and data, answers, outcomes required that are of interest. Where there is complexity in any of these dimensions, this will increase the risk that the acceleration strategies may reduce the utility of the reviewer to provide a clear rigorous answer to the review research question.

I hope you found this webinar useful. If you are interested in following up and finding more about ways of accelerating reviews and the potential benefits and risks associated with them, you can see two papers that have been written by colleagues from the EPPI-Centre are referenced here.

You can also find out more about systematic reviewing in general by visiting the EPPI-Centre web site and looking at the EPPI-Centre's produced textbook on Introduction to Systematic Reviews. I hope you found this webinar useful and thank you for your engagement.

JOANN STARKS: Well, thank you very much, Mark, for sharing these strategies from the EPPI-Centre for rapid reviews. We also want to thank our funding agency, NIDILRR, for supporting this and other webcast activities. Please look for the other sessions in this series on the EPPI-Centre Evidence, Tools, Products, and Projects. Thank you.