

The GREAT Network Knowledge Synthesis Seed Grant Podcast

Supporting knowledge syntheses, including systematic reviews and scoping reviews, that are relevant to maternal and infant health in low and middle income countries.

Background

The GREAT Network Knowledge Synthesis seed grant funding opportunity aims to support the completion or updating of knowledge syntheses, including systematic reviews and scoping reviews, that are relevant to maternal and infant health in low and middle income countries. This podcast features work done by Dr. Marzia Lazzerini and her team as part of their seed grant funded project. Dr. Lazzerini and her team conducted two systematic reviews:

- **Review # 1:** Impact of the facility-based individual case Near-Miss Reviews in improving the Quality of Maternal and Newborn Care in low and middle income countries (LMIC): systematic review.
- **Review # 2 :** Facilitators and barriers to successful implementation of the facility-based individual case Near Miss Reviews in LMIC: a qualitative systematic review.

Interview

Today is June 21, 2016 and I'm here with Dr. Marzia Lazzerini a recipient of the second round of the GREAT Network Knowledge Synthesis seed grant funding. Today, Dr. Lazzerini will speak to her funded knowledge synthesis project, its impacts on maternal health and the key success factors and lessons learned from her team's project work.

Dr. Lazzerini thank you for speaking with us today.

To begin, could you please tell us about yourself and your work?

So I'll begin with a brief introduction from me. I am currently the director of the WHO Collaborating Centre for Maternal and Child Health and we are based at the Institute for Maternal and Child Health, IRCCS Burlo Garofolo in Trieste, Italy. Our unit works in collaboration with WHO and other UN agencies. Our main types of activities include technical support to WHO, research, technical support to countries, and also networking activities.

For example, some technical support that we recently gave to WHO included the development of manuals, such as the new manual developed for the regional Office for Europe on "How to implement the maternal Near-Miss Case Review (NMCR) cycle at the hospital level". This has just been finalized; it should be available on the WHO EURO website soon. Recently, we have also been developing training packages, such as the Effective Perinatal Care (EPC) training package, which is available for downloading on the WHO EURO website. In the last ten years, we have also been involved in developing tools for assessing and improving quality of care for mothers, newborns, and children. And they are all available on WHO website and have also been translated into different languages, such as Russian and other languages. We have also been involved in process of guidelines, such as the Pocket Book for Hospital Care, guidelines for newborn resuscitation, then several nutritional guidelines. Also, the development of indicators, for example, recently we developed indicators on quality of care and we used these indicators in a cluster randomized control trial (RCT) in Kyrgyzstan, in collaboration with the WHO EURO. And we also help the WHO in providing technical assistance in the development of policies and strategies. For example, we contributed to the development of new sexual reproductive health (SRH) strategies for WHO EURO.

In terms of research, we conduct different types of research. First, evidence synthesis, such as Cochrane reviews, and GRADE tables and other related projects. Many of these have been used for developing WHO guidelines. We also do health system research, currently we are involved in a study in Sri Lanka on how to improve adherence to WHO guidelines of maternal hospital care. That study has also been funded by the GREAT Network. Also, we are doing impact evaluation as a cluster RCT as I mentioned in

Kyrgyzstan, but also another cluster RCT that we're doing in Uganda to explore whether supportive supervision can improve adherence to WHO guidelines on nutrition, and whether it can improve health outcomes of malnourished children. Lastly, we do epidemiological research. Recently, we developed a compendium on child health in the European Region, for the European community. That was the first compendium on child health in the European Region.

And then we provide support to countries, especially providing train-the-trainer or providing support for the development of national action plans to improve quality of care. And then we also organize networking activities. For example, we are organizing in Trieste the 20-year anniversary of the Kangaroo Mother Care Congress and it will be from 14 to 17 November this year. It's my pleasure to invite all colleagues to this nice event, which will be the anniversary of the Kangaroo Mother Care.

Excellent! That all sounds very interesting.

And so, for your GREAT Network seed grant project your team performed two systematic reviews. The first one looked at the impact of the facility-based individual case Near-Miss Reviews in improving the Quality of Maternal and Newborn Care in low and middle income countries (LMIC). The second looked at facilitators and barriers to successful implementation of the facility-based individual case Near Miss Reviews in LMIC.

Could you give us a brief overview of the inspiration and background for these reviews as well as the purpose of your study?

Sure. First of all, I'll give the definition of a near-miss. A Near-miss (NM) case is "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy". Now, the facility based individual NM cases review is the review of the cases of NM performed at facility level. Actually, it is a type of medical audit, where NM cases are reviewed against standards of care, and recommendations are developed in order to improve quality of care.

This approach was introduced by the manual "Beyond the numbers", launched by WHO in 2004. In the WHO European region, the introduction of this approach was driven by Dr Alberta Bacci. She was responsible for the Making Pregnancy safer Program for WHO EURO for about 10 years, and now she is our collaborator and also contributor in these two systematic reviews. So the background and reason for our work is basically a gap in knowledge. In fact, so far, there are no systematic reviews exploring the global impact of the NM case review approach. And also, there are no reviews exploring which are the facilitators and the barriers for implementation of this approach at country level. Basically, the purpose of our project with the first review was to look at all literature reporting on the impact of this approach. So the "Impact of the facility-based individual case Near-Miss Reviews in improving the Quality of Maternal and Newborn Care in low and middle income countries (LMIC)". And the second review is complementary to the first one and is looking at facilitators and barriers for the successful implementation of the approach.

Great! So, to build on that background, could you give us a preview of the results from your study or any key impacts that you want to highlight?

Sure. So far, we have screened over 12,000 references using 6 different electronic databases and also consult with experts. We have retrieved so far 22 studies for inclusion. We have observed that most studies were conducted in Africa; we have studies from Benin, from Burkina Faso, Cote D' Ivore, Ghana, Malawi, Morocco; but also there are some studies in Central and South America, such as Jamaica and Brazil; and from China and Vietnam.

In relation to review number 1, which was the impact of the NMCR, we had very interesting findings. Mainly, we found that eight studies report on the impact of the NMCR on maternal mortality, and when results were pooled together they showed that there is a significant reduction in maternal mortality after the introduction of this approach. So it is a very promising approach. Studies also reported a significant reduction in severe maternal complications, such as uterine rupture or other complications of pregnancy. And also most studies reported a significant improvement in process indicators, such as quality of case

management, such as adherence to protocols, for example the use of partograph, implementation of a triage system, or monitoring of women, and also improvement in structure indicators, such as for example improvements in the equipment and supplies of the hospital.

I want to acknowledge that, when looking at the quality of the studies, most studies were uncontrolled before and after studies, so they were open to some sort of bias. We were unable to find any RCT studies relevant to our review. In addition, the low number of studies that we have retrieved may also suggest that actually there is a publication bias. We suspect that this may be due to implementation in different countries where things are not reported until much later. However, the evidence, which is available in other studies suggest that the NMCR can be an effective method for reducing maternal mortality, and also severe morbidity, and in improving quality of care.

In relation to review number 2 on facilitators and barriers we have found different studies highlighting a number of recurrent problems. The main problems reported were the lack of motivation and understanding from the hospital staff, the lack of leadership and coordination, work overload, and also reluctance of doctors to agree on standards of care, the mis-perceptions of audit requirements, the fear of blame, the perception of the audit as a mean of control, and also difficulties in data collection.

We found poor reporting on facilitators, but when these factors were reported they included first of all, good leadership, secondly, clear and convincing explanation of the importance of the project, and third, a good monitoring and evaluation team, and promotion of mutual respect of people. Lots of studies reported difficulties in putting in practice the recommendations coming out of the case review and also in sustaining the process over time. So, in sustainability in the long term to the NMCR.

Again, the paucity of studies suggest that many experiences on implementation have not been published and are currently unavailable for review. Overall, we think that the findings of our reviews are giving important lessons to a number of stakeholders which include UN agencies, policymakers and also programme managers and researchers. These finding can provide relevant evidence on how to implement the NMCR approach more effectively, more widely, and also how to ensure sustainability over time of this approach.

Great! I think your results are showing some interesting factors related to challenges of implementation and sustainability, which sound very interesting. Could you now talk about how has your project contributed to the area of Knowledge Translation science and practice in the low and middle income country context?

Well, ultimately, these 2 reviews shall help different stakeholders in implementing more effectively and also more widely the NMCR approach, as proposed by WHO. And so, ultimately, the effective implementation of the NMCR approach should help in reducing maternal and well as perinatal mortality and severe morbidity. And of course it should also promote the effective use of evidence-based guidelines.

And do you have any plans for next steps for the project?

Yes. We plan to publish two papers within the next few months and report the findings of the two reviews.

Great! Looking forward to seeing those.

What advice would you give to others wanting to conduct knowledge synthesis work in the low and middle income country context? Maybe you could highlight some key success factors and lessons learned from your project.

I believe that the two main success factors are, number 1, having a team of experienced people for conducting the systematic reviews; and number 2, also the knowledge of the intervention. We have in our team, working at reviews and both expertise and I think this was really the success factor for finalizing the reviews.

Great! And do you have any other lessons learned and suggestions for other work that you would like to highlight?

Well I think that reporting of initiatives aiming at improving quality of care, such as the NMCR, should be improved. These will be important lessons that will benefit the overall community. Also, a lesson from our reviews is that there's a need for more high quality studies to evaluate the effectiveness of different approaches to improve Quality of care in LMIC, including probably high quality studies looking at the impact of the NMCR in multi-country evaluations.

Great! So, before we conclude, is there anything else you would like to share with us today?

No, I think that's all. I think we have expressed all our findings and lessons. That's all from our side.

Great! Dr. Lazzarini, thank you for taking the time to speak with us today about the work you're doing to improve maternal and infant health outcomes in low- and middle-income countries. For more information about work done by researchers like Dr. Lazzarini, please visit our website at www.greatnetworkglobal.org.