Education and training in patient safety research

1st meeting of the expert working group
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Summary of the meeting and next steps

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1. Education and Training in Patient Safety Research


1a. Goal of the Education and Training Project

The goal of the Education and Training Project is to address the lack of research capacity in patient safety research worldwide by developing leaders in patient safety research, especially in developing and transitional countries. These leaders in patient safety research require the knowledge and skills to do practical and valid research, as well as to directly influence the development of policies and practices that will make care safer and will lead to improvements in patient outcomes.

The Expert Working Group will be guided by the co-Chairs: Dr Narendra Arora, Executive Director of The INCLEN Trust, New Delhi, India, and Prof Peter Norton, Professor in the Department of Family Medicine at the University of Calgary, Canada.

1b. Objectives of the first meeting of the Expert Working Group

The purpose of the first meeting of the Expert Working Group was to establish the overall directions of the Education and Training in Patient Safety Research Project, as well as to define the deliverables, timelines and process of work.

2. Directions and scope for the Education and Training Project

There was a great deal of discussion during the first meeting of the Expert Working Group about the optimal directions and scope for the Education and Training in Patient Safety Research Project that would have the most impact. Over the course of the 2-day meeting, growing consensus and a shared vision emerged among the various possible alternatives raised.
2a. What are the core competencies required for patient safety researchers?

There was wide agreement that patient safety researchers should be engaged in practical research which aims to improve outcomes for patients. A preliminary assessment of the required competencies for patient safety researchers offered three possible broad categories: 1) understanding the science of patient safety, 2) conducting and managing research projects, and 3) ensuring that research findings are put into action to improve the safety of patient care and improve patient outcomes.

Each of these categories would include many different competencies and related content areas that would need to be covered. According to the background paper presented at the meeting, these could be conceived in the following manner: Understanding the science of patient safety requires knowledge of patient safety concepts and frameworks, knowledge of safety tools and techniques to understand why errors occur such as root cause analysis, and knowledge on how to improve safety in practice such as risk analysis and organizational change theory. Conducting and managing research projects requires the ability to ask the right research questions, engage patients in identifying what are important research priorities and outcomes, choosing the appropriate study design and methodology to address the research questions, knowing how to collect data, being able to analyze and interpret data, and managing the logistics of the research project, including applying for funding, preparing proposals for peer review and obtaining prior approval by ethics review committees. Finally, ensuring that research leads to action that improves patient safety requires knowledge and skills in change management, knowledge translation, communication, raising awareness and strategies for influencing policies and practice to make patients safer.

The working group members considered that the background paper presented was an excellent first step, and that further work would be needed to agree on the core competencies, to determine how they apply to addressing specific patient safety research questions, to suggest how these could be tailored and what additional methods and tools
would be needed for different contexts and settings, and finally, to further elaborate their scope and implications for training programmes.

2b. How should education and training be delivered?

Although there are many different models for education and training, it was largely agreed that building research capacity is a long term process that requires sustained efforts, both in terms of formal training opportunities, but more importantly, in terms of providing a nurturing environment for trainees to continue to develop their knowledge and skills by being involved in conducting research. Therefore, to train researchers successfully, training needs to be integrated and adapted to practical research projects. It is a process of learning by doing which takes time to gain practical experience.

Research trainees must therefore be actively engaged in working on their own research projects and require ongoing supervision, mentorship and support. This project-based **hands-on learning** may be preceded by or interspersed with more didactic coursework to acquire the **theoretical foundation** in both the content area and the research methods required to do good research.

As a result, the successful delivery of training programmes needs to contemplate the provision of both aspects, the formal and theoretical training and the supportive environment to conduct research with sufficient mentorship and guidance. Advancing the provision of training may require the development of new course materials, or the adaptation of existing course materials, for providing the theoretical foundation (including online courses, face-to-face workshops, degree programs or other types of training opportunities). In addition, it would also be necessary to identify potential mentors to support trainees in actively learning through their involvement in carrying out a research project.

Facilitating supportive environments for research, especially in developing and transitional countries is an important challenge that needs to be considered. This requires raising awareness of the importance of research for improving patient safety, providing researchers with sufficient protected time to do research, ensuring sustainable funding
mechanisms for research, as well as developing career paths and opportunities for recognition and advancement for researchers.

The working group members agreed that the background paper presented was an excellent first step, and that further work would be needed to agree on the optimal strategies that can be used to deliver patient safety research training, to suggest how these could be tailored to different contexts and settings, and to identify potential partners and mentors for the delivery of patient safety research training.

2c. Who should be the priority target audience for education and training?

The primary focus education and training in patient safety research is to strengthen capacity in developing and transitional countries. A secondary aim is to also provide guidance for capacity strengthening in more developed countries. Therefore, there are many potential audiences that could be targeted for education and training. These could include policy/management scientists, clinician scientists, basic and advanced researchers, but also clinicians with an interest in research, Ministry officials, or others.

Depending on the target audience and which competencies they already possess, the strategies for education and training will need to be adapted. To promote research which is likely to influence policies and practices that will improve patient outcomes, education and training could be carried out in several phases. In the first instance, it was considered more effective to target individuals or existing teams with previous research experience (to avoid starting from the very beginning in training up researchers) and ideally who also work in health care delivery and/or policy settings (which increases their ability to influence change in practice). The group considered that these individuals could more easily become leaders in patient safety research, and could then teach and mentor early to mid-career researchers, building up their competencies, and in this way develop strong interdisciplinary research teams focusing on applied patient safety research. Other training phases may contemplate different target audiences, depending on resource availability and training capacity. Sustaining capacity is more likely when researchers belong to dedicated research teams that provide ongoing mentorship and support.
2d. How to evaluate success of education and training in patient safety research?

The group discussed the criteria for evaluating the success of education and training in patient safety research. Since the goal of education and training is to create more research and researchers able to influence action that improves patient outcomes, it was considered that these distal endpoints would be important measures of success. However, it is often difficult to determine whether there is a direct link between research findings and these distal outcomes, as well as a significant time lag. For this reason, it was suggested that certain intermediate process indicators such as an increase in the adoption of safer health care practices or a greater number of policies aimed at improving safety could also be important measures of success.

There was wide agreement that education and training in patient safety research is not intended to produce research for the sake of research, therefore number of publications in peer-reviewed journals was not considered the most important measure of success, nor would that capture much of the research undertaken in developing and transitional countries. Nonetheless, it was considered that certain structure and process indicators would be useful measures of success. These include the total number of training courses or degree programs in patient safety research, the number new trainees who are trained and the number of existing researchers whose capacity was strengthened, the number of patient safety research projects completed by trainees, the number of projects with the potential to influence practice, and the number where findings were implemented to improve the safety of care.

3. Next steps for the Education and Training Project

The deliverables for the Education and Training in Patient Safety Research Project will be produced using a multi-phase approach. The first phase of work will involve: (1) a gap analysis to identify resources and competencies in existing systems and structures for education and training, including potential partners and mentors. Building on the work of the background papers, the first phase of work will also (2) establish the core
competencies and content areas required by patient safety researchers, as well as a (3) develop a roadmap of key strategies for delivery and scaling-up of education and training.

The main conclusions, resources and strategies contained in the three inter-related deliverables listed above will be integrated into a practical guide that can be used by academic and research institutions with an interest in developing training programmes for patient safety research. The group expected that a first draft of the practical guide will be shared by the fall of 2008.

Complementary to these activities, the group will also be engaged in developing materials for raising awareness of the importance of patient safety research and generating interest in training, which will then be piloted with existing networks of healthcare professionals, administrators and policy-makers.

The next phase of the project will involve putting into action the roadmap for delivery of education and training to ensure that there is widespread dissemination and uptake of the core competencies as the foundation for patient safety research training. Therefore, there are plans to build partnerships with individual mentors, as well as with academic and research institutions and networks, with the intention to develop and pilot training programs for patient safety research that are tailored to their local settings.
For more information, please contact Anne Andermann at andermanna@who.int.

Thank you very much for your support of this initiative.