NIHR | Yorkshire and Humber Patient Safety Translational Research Centre

NHS National Institute for Health Research

Digital Innovation Theme

Theoretical and practical foundations of safety informatics: Workshop programme proposal

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Aim

The NIHR Yorkshire and Humber Patient Safety Translational Research Centre (YH-PSTRC) Digital Innovations Theme are leading a programme of workshops to explore the interaction between emerging digital health technologies and patient safety. These workshops are aimed at developing a stronger, multidisciplinary framework for safety informatics.

Design of the Workshops

We will conduct a series of six workshops over an 18 month period. We will collaborate initially with a core team of experts in safety informatics, invited from established leading Patient Safety Research Centres in the UK, and then engage with national expertise and the international community of digital health researchers and practitioners. The workshops will feature a full-day programme with attendance by invitation only, hosted by participating Research Centres. The format will include presentations by invited subject-matter experts, followed by group discussion and consensus building to identify evidence gaps and develop theory to support future research and development. We will aim to publish the outputs from the workshops in peer-reviewed academic journals.

Workshop themes and subject-matter domains

Understanding the issues involved in the interaction between emerging digital technologies and patient safety requires a multidisciplinary perspective in order to identify and develop potentially valuable research themes. We propose four initial themes for discussion, though new ones may emerge from the early workshops:

1) The novel challenges that new and emerging digital technologies pose for patient safety
2) The implications of contemporary safety theory (Safety-I and Safety-II) for digital innovation
3) Sociotechnical evaluation of digital technologies and their implementation for safe and reliable care
4) Digital technologies for improving patient safety

In terms of the expertise we wish to bring to bear upon these themes, we propose to engage the following core subject-matter domains through network membership:

- Software engineering testing
- Learning health systems
- Health informatics theory
- Technology and risk acceptance
- Human factors and implementation science

Outputs

Our objective is to provide a robust academic appraisal of the evidence base and subject-matter expertise to produce key position papers and research agenda papers that define the field of safety informatics and serve as a platform for future research and development. We will additionally use our existing patient & public involvement and engagement (PPI&E) networks to engage public opinion on digital innovations in healthcare and use it to inform our outputs. The findings from this work will be reported on the YH-PSTRC website, in peer-reviewed academic publications and to NIHR as part of the annual report for our funding body and dissemination of findings via PSTRC networks. Once established, we will open the discussion to the broader digital health community by running themed sessions at major international conferences and meetings.