One-page summary of our intended publication

# Introduction

\*Introduce PSTRCs and their mission

The Centres’ mission is to bring theory into practice for the benefit of patient safety. Members of the centre are aware that there is currently unified body for patient safety theory. As a results, the Centres have agreed to collaborate on a series of workshops to explore the gaps in evidence and theory, and how best to address it. To this end we have organised a series of workshops each of which will produce a paper to engage with the wider readership.

# The type of paper.

The type of publication intended from the first workshop is a viewpoint article in which we present the need for theoretical and practical foundations in patient safety, introduce Safety Informatics and its relevance to healthcare delivery, and present our views on types of patient-safety challenges that might arise from the use of new and emerging health information technologies.

# What we did in the workshop.

A national, expert, consensus-building collaboration was begun in April 2020 to provide a robust academic appraisal of the evidence base and subject-matter expertise relating to novel patient-safety challenges of new and emerging health information technologies. The collaboration was the first in a series led by the National Institute for Health Research Patient Safety Translational Research Centres from both Yorkshire and Humber, and Greater Manchester, UK; the proposal for the workshop is available at <*link to GitHub source*>.

In the first workshop, a set of new and emerging health information technologies were collated by the main author following a scoping review of the academic, commercial and grey literature relating to health information technology. These technologies provided the substrate for breakout discussions about the patient-safety challenges that might arise from use of these technologies, alone and in conjunction with existing, new and emerging technologies. The suggested challenges were then sorted into classes of challenges for succinct presentation in this publication.

# What came from the workshop?

The primary planned deliverable from the collaboration series was a set of publications that begin to define the field of Safety Informatics and serve as a platform for future research and development. From the first workshop, the collaborative produced a set of classes of patient-safety challenges likely to result from the use of new and emerging technologies. We also presented techniques, theories, approaches and frameworks that can help to address the patient-safety challenges identified.

# What kind of recommendations we are likely to make.

We will highlight the need for research in the synthetic domain of Safety Informatics, which connects safety science, health science and digital innovation. We will recommend a set of techniques, theories, approaches and frameworks that can help to address the patient-safety challenges identified by the collaborative. These include the use of safety cases for prospective evaluation of safety; developments in approaches to regulation and standards; dynamic and causal modelling; automated methods to evaluate data quality; and a Human-Factors approach for evaluating technologies.

# For whom is the paper?

Our publication is intended for decision makers, developers and users of health information technology.

\*Why?