

Characterising the nature of primary care patient safety incident reports in the England and Wales National Reporting and Learning System: a mixed-methods agenda-setting study for general practice

Andrew Carson-Stevens,^{1,2,3*} Peter Hibbert,⁴
Huw Williams,¹ Huw Prosser Evans,¹ Alison Cooper,¹
Philippa Rees,¹ Anita Deakin,⁵ Emma Shiels,¹
Russell Gibson,¹ Amy Butlin,¹ Ben Carter,⁶
Donna Luff,⁷ Gareth Parry,^{7,8} Meredith Makeham,⁴
Paul McEnhill,¹ Hope Olivia Ward,¹
Raymond Samuriwo,^{1,9} Anthony Avery,¹⁰
Antony Chuter,¹¹ Liam Donaldson,¹² Sharon Mayor,¹³
Sukhmeet Panesar,¹⁴ Aziz Sheikh,^{7,15} Fiona Wood¹
and Adrian Edwards^{1,2}

¹Primary Care Patient Safety (PISA) Research Group, Division of Population Medicine, Cardiff University, Cardiff, UK

²Wales Primary and Emergency Care (PRIME) Research Centre, Cardiff University, Cardiff, UK

³Department of Family Practice, University of British Columbia, Vancouver, BC, Canada

⁴Australian Institute for Health Innovation (AIHI), Macquarie University, Sydney, NSW, Australia

⁵Australian Patient Safety Foundation, University of South Australia, Adelaide, SA, Australia

⁶Centre for Medical Education, Cardiff University, Cardiff, UK

⁷Harvard Medical School, Harvard University, Boston, MA, USA

⁸Institute for Healthcare Improvement (IHI), Cambridge, MA, USA

⁹School of Healthcare Sciences, Cardiff University, Cardiff, UK

¹⁰Division of Primary Care, University of Nottingham, Nottingham, UK

¹¹Independent patient

¹²Department of Surgery and Cancer, Imperial College London, London, UK

¹³Division of Population Medicine, Cardiff University, Cardiff, UK

¹⁴Department of Medicine, Baylor College of Medicine, Houston, TX, USA

¹⁵Centre for Medical Informatics, University of Edinburgh, Edinburgh, UK

*Corresponding author

Declared competing interests of authors: Sir Liam Donaldson was the chairperson of the National Patient Safety Agency (NPSA) (2010–12) and is currently involved in the programme of research associated with the National Reporting and Learning System (NRLS). He is also the World Health Organization's patient safety envoy. Sukhmeet Panesar is a former clinical adviser at the National Patient Safety Agency (2008–10), a former special adviser to Sir Liam Donaldson (2010–12) and a former academic clinical fellow at Imperial College London working for the NRLS research programme. Peter Hibbert has undertaken paid consultancy with Power Health Solutions (PHS), St Vincent's Health Australia and for the Australian Commission on Safety and Quality in Health Care, all regarding incident reporting. Amy Butlin obtained a Cardiff University Research Opportunities (CUROP) scholarship to undertake this work. Gareth Parry received funding to attend the Advisory Group Meetings.

Published September 2016

DOI: 10.3310/hsdr04270

Plain English summary

Characterising patient safety incident reports

Health Services and Delivery Research 2016; Vol. 4: No. 27

DOI: 10.3310/hsdr04270

NIHR Journals Library www.journalslibrary.nihr.ac.uk

Plain English summary

Unsafe health care can result in harm to patients. Despite the fact that the majority of health-care interactions occur in community settings, most research has been in hospital settings; therefore, very little is known about patient safety in primary care. In 2003, a database called the National Reporting and Learning System was established to generate learning from safety incidents and it now contains over 40,000 reports from general practice that have never been analysed.

We developed methods to identify the most frequent and most harmful patient safety incidents, from all reports describing severe harm or death outcomes ($n = 1199$) and a random sample of 12,500 non-fatal reports. Four doctors and one nurse read the free-text descriptions in each report and described the incident type, potential contributory factors, level of harm severity and incident outcomes.

Communication-related errors were the most frequently reported safety incidents, and failures of diagnosis and assessment contained the highest proportion of reported serious harms. We recommend four areas of work to support safer health-care delivery for patients (1) supporting health-care professionals (HCPs) to improve the content of future reports for local and national learning purposes; (2) developing information technology systems to enable better communication between HCPs within and between care settings; (3) supporting HCPs to explore ways of identifying vulnerable patients at risk of deterioration in the community; and (4) realising how patients can work with HCPs to help prevent future safety incidents.

Health Services and Delivery Research

ISSN 2050-4349 (Print)

ISSN 2050-4357 (Online)

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: nihredit@southampton.ac.uk

The full HS&DR archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hsdr. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the *Health Services and Delivery Research* journal

Reports are published in *Health Services and Delivery Research* (HS&DR) if (1) they have resulted from work for the HS&DR programme or programmes which preceded the HS&DR programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

HS&DR programme

The Health Services and Delivery Research (HS&DR) programme, part of the National Institute for Health Research (NIHR), was established to fund a broad range of research. It combines the strengths and contributions of two previous NIHR research programmes: the Health Services Research (HSR) programme and the Service Delivery and Organisation (SDO) programme, which were merged in January 2012.

The HS&DR programme aims to produce rigorous and relevant evidence on the quality, access and organisation of health services including costs and outcomes, as well as research on implementation. The programme will enhance the strategic focus on research that matters to the NHS and is keen to support ambitious evaluative research to improve health services.

For more information about the HS&DR programme please visit the website: <http://www.nets.nihr.ac.uk/programmes/hsdr>

This report

The research reported in this issue of the journal was funded by the HS&DR programme or one of its preceding programmes as project number 12/64/118. The contractual start date was in December 2013. The final report began editorial review in June 2015 and was accepted for publication in March 2016. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HS&DR editors and production house have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the final report document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HS&DR programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HS&DR programme or the Department of Health.

© Queen's Printer and Controller of HMSO 2016. This work was produced by Carson-Stevens *et al.* under the terms of a commissioning contract issued by the Secretary of State for Health. This issue may be freely reproduced for the purposes of private research and study and extracts (or indeed, the full report) may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising. Applications for commercial reproduction should be addressed to: NIHR Journals Library, National Institute for Health Research, Evaluation, Trials and Studies Coordinating Centre, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).

Health Services and Delivery Research Editor-in-Chief

Professor Jo Rycroft-Malone Professor of Health Services and Implementation Research, Bangor University, UK

NIHR Journals Library Editor-in-Chief

Professor Tom Walley Director, NIHR Evaluation, Trials and Studies and Director of the EME Programme, UK

NIHR Journals Library Editors

Professor Ken Stein Chair of HTA Editorial Board and Professor of Public Health, University of Exeter Medical School, UK

Professor Andree Le May Chair of NIHR Journals Library Editorial Group (EME, HS&DR, PGfAR, PHR journals)

Dr Martin Ashton-Key Consultant in Public Health Medicine/Consultant Advisor, NETSCC, UK

Professor Matthias Beck Chair in Public Sector Management and Subject Leader (Management Group), Queen's University Management School, Queen's University Belfast, UK

Professor Aileen Clarke Professor of Public Health and Health Services Research, Warwick Medical School, University of Warwick, UK

Dr Tessa Crilly Director, Crystal Blue Consulting Ltd, UK

Dr Eugenia Cronin Senior Scientific Advisor, Wessex Institute, UK

Ms Tara Lamont Scientific Advisor, NETSCC, UK

Professor Elaine McColl Director, Newcastle Clinical Trials Unit, Institute of Health and Society, Newcastle University, UK

Professor William McGuire Professor of Child Health, Hull York Medical School, University of York, UK

Professor Geoffrey Meads Professor of Health Sciences Research, Health and Wellbeing Research and Development Group, University of Winchester, UK

Professor John Norrie Health Services Research Unit, University of Aberdeen, UK

Professor John Powell Consultant Clinical Adviser, National Institute for Health and Care Excellence (NICE), UK

Professor James Raftery Professor of Health Technology Assessment, Wessex Institute, Faculty of Medicine, University of Southampton, UK

Dr Rob Riemsma Reviews Manager, Kleijnen Systematic Reviews Ltd, UK

Professor Helen Roberts Professor of Child Health Research, UCL Institute of Child Health, UK

Professor Jonathan Ross Professor of Sexual Health and HIV, University Hospital Birmingham, UK

Professor Helen Snooks Professor of Health Services Research, Institute of Life Science, College of Medicine, Swansea University, UK

Professor Jim Thornton Professor of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, University of Nottingham, UK

Professor Martin Underwood Director, Warwick Clinical Trials Unit, Warwick Medical School, University of Warwick, UK

Please visit the website for a list of members of the NIHR Journals Library Board:
www.journalslibrary.nihr.ac.uk/about/editors

Editorial contact: nihredit@southampton.ac.uk