

The Sixth Annual
NIHR Imperial Patient Safety Translational
Research Centre
Annual Symposium



Thursday 29th November 2018
Royal Academy of Engineering

Event Programme



Foreword



I am pleased to welcome you to the Royal Academy of Engineering for the Sixth Annual NIHR Imperial Patient Safety Translational Research Centre (PSTRC) Symposium. In August 2017, the NIHR Imperial PSTRC began its second five-year cycle as a research centre devoted to developing the evidence necessary to deliver safer care. It has been an honour to lead our renewed PSTRC and a pleasure to work with my team at Imperial, and our colleagues in Manchester and Yorkshire, to explore new horizons for patient safety.

The aim of the NIHR Imperial PSTRC is to leverage research findings and embed them in healthcare practice to reduce harm and deliver safer care. We work along six research themes to address critical challenges in patient safety. Collectively these themes address safety at the patient level to improve diagnostics and avoid deterioration, and at the systems level to improve care across the

continuum, while partnering with patients and ensuring value for money.

At this year's Symposium we bring together the Directors of the three PSTRCs in a forum designed to share our experiences, showcase our successes and explore avenues for collaboration. I am continually encouraged by the vision of our researchers and the way our work focuses outward towards patients and other regions and health systems. This event will build on this vision and explore how we can promote the diffusion of safety innovations between the UK and low and middle income countries.

Furthermore, this event not only convenes experts from our own field, but it invites insights from other industries. Specifically, I look forward to hearing from Prof David Bates and Cal Leeming about how we can pre-empt emerging threats to patient safety through new innovations in cyber security and digital health.

We will also hear from leaders in the UK safety arena, including Baroness Dido Harding and Dr Aidan Fowler, and explore the intersection between the worlds of digital health and safety with input from Sarah Wilkinson and Will Smart.

Thank you for joining us for what promises to be a very interesting discussion and I hope what you will hear and see today will energise you to join us as we continue our exciting journey to improve the safety of care.

Note that the event will host a live Twitter feed and you are encouraged to join the debate using the hashtag #ImperialPSTRC2018 in your tweets.

Professor the Lord Ara Darzi

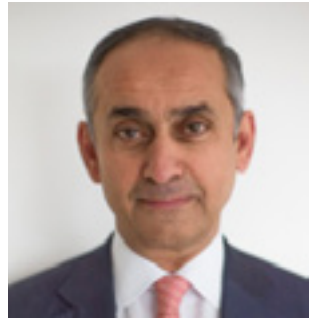
Director, The NIHR Imperial PSTRC



Conference Agenda

- 8:45- 9:15** REGISTRATION
- 9:15 - 9:20** **Moderator's introduction**
Shaun Lintern, Senior Patient Safety Correspondent, Health Service Journal (HSJ)
- 9:20 - 9:30** **Director's introduction**
Professor the Lord Ara Darzi, Director, NIHR Imperial PSTRC
- 9:30 - 10:10** **Keynote: Digital Health and Safety**
Professor David Bates, Professor of Health Policy and Management, Harvard T.H. Chan School of Public Health
- 10:10 - 10:50** **Keynote: Cybersecurity and Hacking**
Cal Leeming, Security Advisor & Founder, River Oakfield
- 10:50 - 11:20** TEA AND COFFEE BREAK
- 11:20 - 12:00** **Panel discussion**
Cybersecurity and Patient Safety
Chair: Professor the Lord Ara Darzi, Director, NIHR Imperial PSTRC
- Andrew Eland, Director of Engineering, Deep Mind
- Sarah Wilkinson, CEO, NHS Digital
- Will Smart, CIO, Health and Care in England
- 12:00 - 12:40** **Panel discussion**
Patient and Public Involvement and Engagement in Safety: Learning from Other Areas
Chair: Professor Rebecca Lawton, Director, NIHR Yorkshire and Humber PSTRC
- Delia Muir, PPI Lead, Leeds Institute of Clinical Trials Research, University of Leeds
- Zoë Stanton, Co-Founder and Managing Director, Uscreates
- Caroline Kalorkoti, Public representative
- 12:40 - 13:40** LUNCH BREAK
- 13:40 - 14:20** **Keynote: Cultivating Innovation in Patient Safety**
Baroness Dido Harding, Non-Executive Chair, NHS Improvement
- 14:20 - 15:00** **Panel discussion**
Patient Safety in Low and Middle Income Countries
Chair: Jeremy Laurance, Freelance Health Writer
- Dr Neelam Dhingra-Kumar, Coordinator, Patient Safety and Risk Management, World Health Organisation
- Professor Stephen Campbell, Director, NIHR Greater Manchester Primary Care PSTRC
- Professor Bryony Dean-Franklin, Director, Centre for Medication Safety and Service Quality
- 15:00 - 15:20** TEA AND COFFEE BREAK
- 15:20 - 16:00** **Keynote: Leading for Improvement in Patient Safety**
Dr Aidan Fowler, NHS National Director of Patient Safety
- 16:20 - 17:00** DRINKS RECEPTION

Speaker biographies



Professor the Lord Darzi of Denham
PC KBE FRS FMedSci HonFREng

Professor the Lord Ara Darzi is the Director of the NIHR Imperial Patient Safety Translational Research Centre and the Institute of Global Health Innovation at Imperial College London. He also holds the Paul Hamlyn Chair of Surgery at Imperial College London, and the Institute of Cancer Research and is Executive Chair of the World Innovation Summit for Health in Qatar. He is a Consultant Surgeon at Imperial College Hospital NHS Trust and the Royal Marsden NHS Trust. In 2002, he was knighted for his services in medicine and surgery, and was introduced to the United Kingdom's House of Lords as Professor the Lord Darzi of Denham in 2007.



Baroness Dido Harding
Non-Executive Chair, NHS Improvement

Baroness Dido Harding was appointed Non Executive Chair of NHS Improvement in October 2017. She is a non-executive director on The Court of The Bank of England and Chair of the Bank's Remuneration Committee. She was Chief Executive of TalkTalk Telecom Group PLC from 2010 to May 2017. Prior to TalkTalk, Dido was Sainsbury's convenience director, having been appointed to Sainsbury's operating board in March 2008. Dido joined Sainsbury's from Tesco PLC where she held a variety of senior roles both in the UK and international businesses. In August 2014 Dido was offered a Peerage and sits in the House of Lords as a Conservative Peer. She was appointed to the Economic Affairs Committee of the Lords in July 2017.



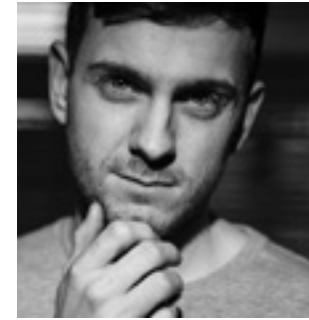
Professor David Bates
Professor of Health Policy and Management, Harvard T.H. Chan School of Public Health

Professor David Bates is an internationally renowned expert in patient safety, using information technology to improve clinical decision-making, quality-of-care, cost-effectiveness, and outcomes assessment in medical practice. A practicing general internist, David is Chief of the Division of General Internal Medicine and Primary Care at Brigham and Women's Hospital, Professor of Medicine at Harvard Medical School, and Professor of Health Policy and Management at the Harvard T. H. Chan School of Public Health, where he co-directs the Program in Clinical Effectiveness. He also serves as Medical Director of Clinical Quality and IS Analysis, Information Systems at Partners HealthCare System. David is a graduate of Stanford University and the Johns Hopkins School of Medicine.



Dr Aidan Fowler
NHS National Director of Patient Safety

Dr Aidan Fowler brings a wealth of knowledge and experience in patient safety and was appointed as NHS National Director of Patient Safety by NHS Improvement in July 2018. Reflecting the system-wide nature of the role, Aidan was also appointed as a Deputy Chief Medical Officer by the Chief Medical Officer and Department of Health and Social Care. He is a consultant surgeon by background and prior to joining Public Health Wales in September 2015, held director level roles at Worcestershire Health and Care NHS Trust and University Hospitals Bristol NHS Foundation Trust. This cross system role will see Aidan working closely with NHS England and the Chief Medical Officer.



Cal Leeming
Security Advisor & Founder, River Oakfield

This is a man driven by a relentless passion for technology. After a nefarious start where his natural curiosity and obsession to understand how things work led him astray, Cal Leeming was discovered by investors who immersed him into the world of start-ups. Now in his early 30s, Cal is one of the most sought-after experts in security and tech. He's a co-founder of several successful start-ups, including The Zebra and PixelMags, and boasts an impressive portfolio of clients including Bank of England, Barclaycard and Vodafone. As a regular media figure, Cal recently featured on BBC Horizon's hard-hitting documentary about cyber-attacks on the UK's National Health Service, otherwise known as "The Day the NHS Stopped". Today Cal is the founder of River Oakfield who provide tailored cybersecurity solutions for private clients and enterprises.



Shaun Lintern
Senior Patient Safety Correspondent, Health Service Journal (HSJ)

Shaun Lintern is a bureau chief for the HSJ with national focus on patient safety and quality of care. He leads a team of journalists looking at care quality and regulation in the NHS and he specialises in carrying out investigative journalism. Shaun has been a journalist for 17 years, and helped expose the Mid Staffordshire care scandal while working as a local reporter in the West Midlands. He attended most days of the Francis inquiry, and also gave evidence as a witness. He has since been involved in multiple inquiries into NHS poor care and believes journalism has a role to play in holding a mirror to the NHS to help force relentless improvement in care quality.



Sarah Wilkinson
CEO, NHS Digital

Sarah Wilkinson, an Imperial alumnus, became NHS Digital's chief executive in August 2017. She previously worked as Chief Information Officer at the Home Office with responsibility for the delivery of all technology services for counter terrorism, the UK border, visas and immigration, and asylum and policing. Before joining the Home Office, Sarah spent 23 years in financial services and held chief information officer roles at Credit Suisse, UBS, Deutsche Bank and Lehman Brothers. Her earlier career consisted of various roles in the IT and Risk departments in these organisations. Sarah is a non-executive director at NatWest Markets, a member of the Audit, Risk and Compliance Committee of Kings College London, and a member of the advisory boards of the Department of Computing at Imperial College London and the Institute of Mathematics at the University of Oxford.



Andrew Eland
Director of Engineering, Deep Mind

Andrew Eland leads Deep Mind's team of software engineers bringing cutting-edge technology to NHS partners. He's one of the world's most experienced mobile engineers, having led the teams behind Google Maps for Android and iPhone, one of the most downloaded apps of all time. "I think my favourite part of the job is hearing feedback from clinicians about how much they like using the Streams application we're building."



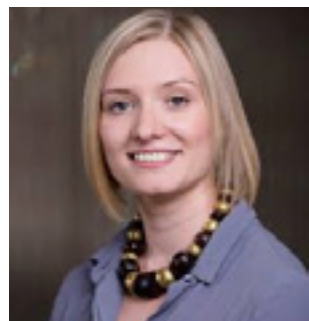
Will Smart
CIO, Health and Care in England

Will Smart is the Chief Information Officer (CIO) for Health and Care in England. A joint appointment between NHS England and NHS Improvement, Will is responsible for providing strategic leadership across the whole of the NHS to ensure that the opportunities that digital technologies offer are fully exploited to improve the experience of patients and carers in their interactions with health and social care; the outcomes for patients; and improved efficiencies in how care is delivered. Prior to taking up this role, Will was Chief Information Officer at the Royal Free London NHS Foundation Trust for six years. He first worked in the NHS in Wales and Northern Ireland during his placement year from university, before taking up an analytics role at St. Mary's NHS Trust in London on graduation.



Professor Rebecca Lawton
Director, NIHR Yorkshire and Humber PSTRC

Professor Rebecca Lawton is Professor in Psychology of Healthcare at the University of Leeds. Rebecca is lead for the Yorkshire Quality and Safety Research Group and the Director of the Yorkshire and Humber Patient Safety Translational Research Centre. Rebecca is also academic director for the Academic Health Sciences Network, Improvement Academy in Yorkshire and Humber and she leads a programme of research on evidence based transformation within the NHS as part of the Yorkshire and Humber CLAHRC.



Delia Muir
PPI Lead, Leeds Institute of Clinical Trials Research, University of Leeds

Delia Muir is a Wellcome Trust Engagement Fellow and the Patient and Public Involvement (PPI) Lead at Leeds Institute of Clinical Trials Research (LICTR). Delia's interest in patient safety comes primarily from her work with the Pressure Ulcer Research Service User Network (PURSUN), a network of people with personal experience of pressure ulcers or managing pressure ulcer risk. She has a background in the arts and is interested in creative ways of facilitating PPI.



Zoë Stanton
Co-Founder and Managing Director, Uscreates

Zoë Stanton is co-founder and Studio Director of Uscreates, a human centred design agency specialising in health and wellbeing. Uscreates have spent the last 13 years working to ensure people are at the heart of change that impacts their health and wellbeing. Zoë has led work to involve people in the transformation of primary care, cancer services, sexual health services, prevention and urgent care. Recently, Uscreates has joined FutureGov with a mission to design public services for the 21st Century ensuring people are at the heart of design.



Caroline Kalorkoti
Public Representative

Caroline Kalorkoti has most recently been involved as a public member/co-researcher on a patient safety mental health study with Imperial College London. Additionally, she works for a prison charity in Westminster, and she studies Social Sciences at The Open University. She also volunteers as a Young Ambassador for Beat, and she is a trustee and peer support volunteer for Hearts & Minds. In her free time, she enjoys spending time with her husband, teaching herself computer coding, and going to the theatre.



Jeremy Laurance
Freelance Health Writer

Jeremy Laurance is an award-winning freelance health writer. He was Health Editor of The Independent from 1997 to 2013 and Health Correspondent of the The Times from 1991 to 1997. He also worked for the Sunday Times and Sunday Correspondent and has written freelance for most national newspapers and many magazines. He was named Specialist Writer of the Year in the 2011 British Press Awards and was awarded the President's Medal of the Royal College of Psychiatrists in 2012. He is the author of Pure Madness: How fear drives the mental health system (Routledge, 2003). Jeremy has trained science and health journalists in Africa, India and the Caribbean. His landmark series on AIDS prevention in five African countries, published in the Independent to mark World AIDS Day in 2013, was aided by the Gates Foundation.



Dr Neelam Dhingra-Kumar
Coordinator, Patient Safety and Risk Management, Service Delivery and Safety, World Health Organisation

Dr Neelam Dhingra-Kumar leads WHO's efforts at providing strategic leadership on patient safety and risk management within the context of improving people-centered integrated health services delivery and universal health coverage. Dr Dhingra coordinates WHO's work for improving patient safety and managing risks in health care, including Global Patient Safety Challenge on medication safety; leadership; safety culture; education and training; patient safety standards, assessments, research and measurement; Global Patient Safety Network and Global Patient Safety Collaborative and much more. Since joining WHO in 2000, Dr Dhingra has been providing strategic leadership and facilitating multi-country support for strengthening blood transfusion services.



Professor Stephen Campbell
Director, NIHR Greater Manchester Primary Care PSTRC

Professor Stephen Campbell is a Professor of Primary Care Research in the Centre for Primary Care in the School of Health Sciences at the University of Manchester. He is Director of the NIHR Greater Manchester Patient Safety Translational Research Centre. Stephen is a health services researcher and, using a range of health services research methodologies, published extensively on the quality of care and patient safety in general practice and primary (health) care, transitional care settings and the development and evaluation of national quality improvement strategies. He teaches Primary Health Care on the Manchester MPH, which has a focus on health care systems internationally.



Professor Bryony Dean Franklin
Director, Centre for Medication Safety and Service Quality

Professor Bryony Dean Franklin is Professor of Medication Safety at UCL School of Pharmacy, Executive Lead Pharmacist (Research) at Imperial College Healthcare NHS Trust, and Director of the Centre for Medication Safety and Service Quality (CMSSQ) which is a joint research unit between Imperial College Healthcare NHS Trust and UCL School of Pharmacy. She is a theme lead within the National Institute for Health Research (NIHR) Imperial Patient Safety Translational Research Centre with a focus on medication safety and the use of technology to support patient safety, and Senior Editor at the journal BMJ Quality and Safety. She is co-author of the international textbook "Safety in Medication Use" and has worked on medication safety projects in various countries including Brazil and the Middle East.

Poster sessions

Plugging in the safety gaps: an exploration of patients' attitudes towards an integrative approach to gathering safety information via Electronic Health Records

Abigail Albutt, Gemma Louch, Katy Shire and Jane O'Hara

Young Children's contacts in primary care within 3 days of an admission to hospital with meningitis: a descriptive study

Elizabeth Cecil, Alex Bottle, Sonia Saxena and Paul Aylin

Markov Multiscale Community Detection: a novel method to define catchment areas in secondary care in England

Jonathan Clarke, Mauricio Barahona and Ara Darzi

What is an 'Expert Patient'? An interview study with patients, clinicians, and policymakers

Katelyn Smalley, Lisa Aufegger, Kelsey Flott, Erik Mayer and Ara Darzi

How do NHS staff respond to online patient feedback? A typology of responses published on Care Opinion

Lauren Ramsey, Rebecca Lawton, Jane O'Hara, Laura Sheard and James Munro

Measuring transitions of care in patients with inflammatory bowel disease in NHS England: the first step to improving continuity of care

Leigh Warren, Jonathan Clarke, Sonal Arora, Naila Arebi, Mauricio Barahona and Ara Darzi

Involving young people with past mental health difficulties as co-researchers: reflections on conducting interviews and data analysis in patient safety research

Lindsay Dewa, Jack Jaques, Caroline Kalorkoti, Anna Lawrence-Jones and Paul Aylin

Understanding health management and safety decisions using signal processing and machine learning

Lisa Aufegger, Colin Bicknell, Emma Soane, Hutan Ashrafian and Ara Darzi

Patients' ability to understand health information and identify potential errors

Lisa Freise, Ana Luisa Neves, Ara Darzi and Erik Mayer

Patient feedback on the use of light weight wearable sensors and digital alerting

Meera Joshi, Hutan Ashrafian, Stephanie Archer, Sonal Arora, Richard Kwasnicki, Sadia Khan, Graham Cooke and Ara Darzi

The cost of inconsistency: consultant transitions of care in emergency general surgery in England

Ola Markiewicz, Jonathan Clarke, Leigh Warren and Ara Darzi

Developing machine learning algorithms to predict sentiment and themes from free-text patient experience data

Mustafa Khanbhai, Joshua Symons, Stephanie Harrison-White, Dave Manton, Kelsey Flott, Ara Darzi, Bob Klaber and Erik Mayer

An analysis of patient experiences of transitions of care and continuity using Natural Language Processing

Mustafa Khanbhai and Leigh Warren

Medication errors during simulated paediatric resuscitations: a prospective, observational Human Reliability Analysis

Nicholas Appelbaum, Calandra Feather, Jonathan Clarke, Bryony Dean Franklin, Ruchi Sinha, Ian Maconochie and Ara Darzi

Reorganisation of stroke care and impact on mortality in patients admitted during weekends: a national descriptive study based on administrative data

Violeta Balinskaite, Alex Bottle, Louise Shaw, Azeem Majeed, Paul Aylin

Imperial NIHR PSTRC Leadership



Theme 1:
Safer systems across the transition of care

Lead: Professor the Lord Darzi of Denham

This theme aims to create safer systems for patients as they move along their care pathway.



Theme 2:
Partnering with patients for safer care

Lead: Mr Erik Mayer

This theme aims to support more active, and safe, involvement of patients in their own care.



Theme 3:
Avoiding deteriorating in patients with complex needs

Lead: Professor Paul Aylin

This theme aims to identify deteriorating patients and ensure timely and appropriate clinical response.



Theme 4:
Enhancing the safety of medication and technology

Lead: Professor Bryony Dean Franklin

This theme aims to build on existing knowledge about medication error and create new evidence on the potential benefits and risks of technology.



Theme 5:
Improving diagnostic accuracy and decision-making

Lead: Dr Olga Kostopoulou

This theme aims to tackle the challenges related to diagnosis and decision making in primary care and in peri-operative situations.



Theme 6:
Ensuring value for money in patient safety

Lead: Professor Elias Mossialos

This theme aims to better understand the economic burden of avoidable harm and generate evidence on the cost-effectiveness of safety-related initiatives.

The NIHR Imperial Patient Safety Translational Research Centre (NIHR Imperial PSTRC) is a collaboration between Imperial College London and Imperial College Healthcare NHS Trust

Get in touch

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Visit our website at:

www.imperial.ac.uk/patient-safety-translational-research-centre



Join the debate

Follow the event on Twitter
using the hashtag #ImperialPSTRC2018

@Imperial_PSTRC

