Professor Farah Magrabi

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Research Career Summary

My research seeks to investigate the safety and effectiveness of digital technologies in healthcare. I have 20 years of experience in academia and am internationally recognised as a leader in the safety of digital health. I have specific expertise in using quantitative and qualitative methods to evaluate the safety and effectiveness of clinical and consumer technologies, including artificial intelligence (AI) and decision-support.

My research was the first to systematically examine the nature and extent of IT-related adverse events, including risks associated with digital health. My team published the world's first analysis of IT-related patient safety incidents, followed up by similar studies on US Food and Drug Administration (FDA) data. This critical work heavily influenced the US Institute of Medicine (IOM) on digital health safety, and government immediately accepted its recommendations for strict oversight of IT and a movement towards its accreditation.

My incident classification system is the de facto international standard for the surveillance and analysis of IT incidents. It has been adopted by ISO, the International Organization for Standardization (ISO/TS 20405), and has been used to examine many thousands of incidents by governments in the USA, UK and Canada. I was also invited by the National Health Service (NHS) in England to analyse all their IT incidents over 6 years. I am an inaugural recipient of the Sax Institute Research Action Award, a prestigious Australian award, for the international impact of my research on policy and practice to improve digital health safety (2015), and Telstra Health's Brilliant Women in Digital Health award (2021).

Education and Qualifications

2021	**The International Academy of Health Sciences Informatics** Elected to Fellow for substantial achievements, with international impact, in biomedical and health informatics.
2020	**The American College of Health Informatics** Elected to Fellow for significant and sustained contributions to the field
2015	**The Australasian College of Health Informatics** Admitted as Fellow for distinguished contributions to the field
2003	**The University of New South Wales** Graduate School of Biomedical Engineering Admitted to the degree of Doctor of Philosophy
1997	**University of Auckland, New Zealand** Bachelor of Engineering (Electrical & Electronics Engineering) Graduated with First Class Honours

Career Chronology

Jan 2022–present	**Macquarie University** **Centre for Health Informatics, Australian Institute of Health Innovation** *Professor & Leader* - Patient Safety Informatics Program
Nov 2014–Dec 2021	**Macquarie University** **Centre for Health Informatics, Australian Institute of Health Innovation** *Associate Professor & Leader* - Patient Safety Informatics Program
Sep 2007–Oct 2014	**The University of New South Wales** **Centre for Health Informatics, Australian Institute of Health Innovation** *Senior Research Fellow & Leader* - Patient Safety Informatics Program

Grants

I have been awarded AU$8.8M in external competitive research funds. This includes Australian Research Council Discovery funding as the sole Chief Investigator (CI) to initiate my IT safety program in 2007. I subsequently received two Australian National Health and Medical Research Council Projects as the lead CI; and two National Centres of Research Excellence as CIF leading the stream in patient safety (2012-2016, 2018-2022).

Publications

I have authored > 115 publications including 72 international journal articles; 21 full-papers in peak international and national conference proceedings; 1 book; 4 book sections; and 15 research reports to government agencies and industry. My papers appear in the top medical informatics journals – *JAMIA, J Biomed Inform, App Clin Inform, Int J of Med Infor* and *J Med Internet Res*. The quality of my research is demonstrated by it being selected for the *International Medical Informatics Association's Yearbook* in 2009, 2011, 2013 and 2020, four of my journal articles were selected as exemplar best papers from those years. In total, my papers have been cited 3306 times, have an h-index of 32 with an i10-index of 64. My Field-Weighted Citation Impact (FWCI) is 1.79 (SciVal: 2016 to >2022) indicating that my research has been cited 79% more than expected according to the global average.

Consultancies

Since 2009, I have undertaken 11 consultancies (worth>$1.1M) working with the Federal and State Health departments, and a range of stakeholders, including the Australian Commission on Safety and Quality in Health Care, the Digital Health Agency, the Royal Australian College of General Practitioners, the Australian Patient Safety Foundation, healthdirect (Australia's national public health information service) and Telstra Health.

Contributions to Practice

I provide expertise and consult for the Australian Federal and State health departments and a range of agencies in the health sector. I have consulted for the Australian Digital Health Agency, reviewing their safety processes leading to governance measures for Australia's digital health record. I regularly provide my expertise to the Quality and Safety Commission to undertake clinical safety reviews of the digital health record. I have reviewed the analyses of IT incidents undertaken by government departments and patient safety agencies in the USA and the UK including the ECRI Institute, Pennsylvania Patient Safety Authority, the National Health Service in Wales.

Professional Contributions

2013–present	**Co-chair, International Medical Informatics Association (IMIA) WG on Technology Assessment & Quality Development in Health Informatics** The 1st non-European to hold the role. Under my leadership we were awarded WG of the Year (2014, 2015), and promote evaluation recommendations e.g. for AI (2019), COVID-19 tools (2021).
2019–present	**Co-chair, Australian Alliance for Artificial Intelligence in Healthcare (AAAiH) WG on Safety, Quality and Ethics** With no nationally coordinated policy development for clinical AI safety, I lobbied for and established this working group within AAAiH which has over 100 member organisations. I became, and remain, the co-chair of the group. This position permits me to collaboratively shape and set the national research and policy agenda for AI safety and ethics.
2020–present	**Associate Editor, Journal of the American Medical Informatics Association (JAMIA)** The top field journal in medical informatics and use this platform to highlight emerging challenges e.g. through special focus issues on Patient Safety (2017) and Climate Change (2022).