

Journal of Innovation in Health Informatics: building on the 20-year history of a BCS Health peer review journal

Simon de Lusignan

University of Surrey, Guildford, UK
Editor-in-Chief Journal of Innovation in Health Informatics

ABSTRACT

After 20-years as *Informatics in Primary Care* the journal is renamed *Journal of Innovation in Health Informatics*. The title was carefully selected to reflect that:

- (1) informatics provides the opportunity to innovate rather than simply automates;
- (2) implementing informatics solutions often results in unintended consequences, and many implementations fail and benefits and innovations may go unrecognised;
- (3) health informatics is a boundary spanning discipline and is by its very nature likely to give rise to innovation.

Informatics is an innovative science, and informaticians need to innovate across professional and discipline boundaries.

JOURNAL OF INNOVATION IN HEALTH INFORMATICS

The new name for the BCS Health peer review journal is the *Journal of Innovation in Health Informatics*.¹ This new journal name reflects BCS Health's goals; these include promoting excellent and professionalism in health informatics and improving public awareness and confidence that informatics can enhance health.

This choice of name reflects key features of the discipline of health informatics:

- Health informatics is a science.
- Informatics provides the opportunity to innovate rather than simply automates.
- Implementing informatics solutions often results in unintended consequences. These unintended consequences often provide opportunities to innovate, and should not be missed. Success and failure in informatics projects are hard to call; this is particularly true in health.
- As a boundary-spanning discipline, it is by its very nature likely to give rise to innovation.

The journal builds on the 20 year history of *Informatics in Primary Care*. This journal started back in 1995 under the editorship of Sheila Teasdale; I took over as editor in 2008, with the journal becoming free-full-text-online and free-to-publish as part of the BCS's charitable mission in 2013.

Informatics as a science

Informatics can be characterised as either a science, be defined as a profession or have technology based definitions.² We have long advocated that informatics is defined as a scientific discipline,^{3,4} as this focusses the need for the development of theory and hypotheses. The latter should be tested through well-designed research to develop an evidence-base.

*Informatics is the scientific study of the use and processing of data, information and knowledge.*⁵

Informatics is not just automating data flow; it provides scope to innovate

Informatics is not just the transferring of tasks previously done on paper into computerised processes. It is recognising that, when this happens, there is scope for innovation based on the different ways the generated information can be used and the genesis of new products based on this information. This was a key observation of Zuboff in her landmark work *The Age of the Smart Machine*.⁶

The Clinical Practice Research Database (CPRD) and the Royal College of General Practitioners (RCGP) Research and Surveillance Centre (RSC) are examples of how routinely recorded health data are used for research and surveillance respectively.⁷ The latter is the biggest supplier of data to the UK assessment of flu vaccine effectiveness this year; this assessment suggests its effectiveness has been suboptimal.⁸

Informatics projects often end up with unintended consequences

Many informatics projects do not realise the benefits anticipated, and often have other unintended consequences. This has been a long recognised issue in health informatics.⁹ Implementations are often challenging, as we have seen within the NHS.¹⁰ There is an urgent need to learn how to innovate effectively, and learn the lessons from previous implementations.¹¹

Informatics and innovation as boundary-spanning phenomena

Finally, both informatics and innovation happen best when they span traditional discipline boundaries. Boundary-spanners are the people in an innovative system who have or adopt the role of linking an organisation's internal networks with external sources of information.¹² Much of the work in informatics is boundary-spanning. Many consider that health informatics spans:

- medical, health and social care;
- management science; and
- computing and information technology.

An effective informatics professional is one who can be involved in knowledge brokering between disciplines and across complex organisations.

The *Journal of Innovation in Health Informatics* is launched with this issue. The new name provides focus on what informatics is about, and what informaticians should aspire to be.

REFERENCES

1. BCS Health. <http://www.bcs.org/category/9373>.
2. Stagers N, Thompson CR. The evolution of definitions for nursing informatics: a critical analysis and revised definition. *J Am Med Inform Assoc*. 2002;9:255–61.
3. de Lusignan S. What is primary care informatics? *J Am Med Inform Assoc*. 2003 Jul-Aug;10(4):304–9.
4. Pigott K, de Lusignan S, Rapley A, Robinson J, Pritchard-Copley A. An informatics benchmarking statement. *Methods Inf Med*. 2007;46(4):394–8.
5. van Bemmel JH, Musen MA. *Handbook of Medical Informatics*. Heidelberg: Springer-Verlag, 1997.
6. Zuboff S. *In the Age of the Smart Machine: The Future of Work and Power*. New York: Basic Books, 1988.
7. Kousoulis AA, Rafi I, de Lusignan S. The CPRD and the RCGP: building on research success by enhancing benefits for patients and practices. *Br J Gen Pract*. 2015 Feb;65(631):54–5. doi: 10.3399/bjgp15X683353.
8. Pebody RG, Warburton F, Ellis J, Andrews N, Thompson C, von Wissmann B, Green HK, Cottrell S, Johnston J, de Lusignan S, Moore C, Gunson R, Robertson C, McMenamain J, Zambon M. Low effectiveness of seasonal influenza vaccine in preventing laboratory-confirmed influenza in primary care in the United Kingdom: 2014/15 mid-season results. *Euro Surveill*. 2015;20(5):pii=21025. <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21025>.
9. Ash JS, Berg M, Coiera E. Some unintended consequences of information technology in health care: the nature of patient care information system-related errors. *J Am Med Inform Assoc*. 2004 Mar-Apr;11(2):104–12.
10. Greenhalgh T, Stramer K, Bratan T, Byrne E, Russell J, Potts HW. Adoption and non-adoption of a shared electronic summary record in England: a mixed-method case study. *BMJ*. 2010 Jun 16;340:c3111. doi: 10.1136/bmj.c3111.
11. de Lusignan S, Krause P. The Hayes principles: learning from the national pilot of information technology and core generalisable theory in informatics. *Inform Prim Care*. 2010;18(2):73–7.
12. Tushman M. Special Boundary Roles in the Innovation Process. *Administrative Science Quarterly* 1977;22 (4):587–605. doi:10.2307/2392402. ISSN 0001-8392.