

Informatics for Health 2017: Advancing both science and practice

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Abstract

Introduction: The *Informatics for Health* congress, 24-26 April 2017, in Manchester, UK, brought together the Medical Informatics Europe (MIE) conference and the Farr Institute International Conference. This special issue of the *Journal of Innovation in Health Informatics* contains 113 presentation abstracts and 149 poster abstracts from the congress. **Discussion:** The twin programmes of “Big Data” and “Digital Health” are not always joined up by coherent policy and investment priorities. Substantial global investment in health IT and data science has led to sound progress but highly variable outcomes. Society needs an approach that brings together the science and the practice of health informatics. The goal is multi-level Learning Health Systems that consume and intelligently act upon both patient data and organizational intervention outcomes. **Conclusions:** *Informatics for Health* demonstrated the art of the possible, seen in the breadth and depth of our contributions. We call upon policy makers, research funders and programme leaders to learn from this joined-up approach.

Introduction

The *Informatics for Health* congress, 24-26 April 2017, in Manchester, UK, brought together the Medical Informatics Europe (MIE) conference and the Farr Institute International Conference. The conference was supported by the British Computer Society (BCS), as the national member body of the European Federation of Medical Informatics (EFMI).

Informatics for Health had the overarching theme of “Connected citizen-led wellness and population health” and five major subject tracks, each with a list of specific topic areas: (1) connected and digital health; (2) health data science; (3) human, organisational, and social aspects; (4) knowledge management; and (5) quality, safety and patient outcomes. Although health data science constituted 42% of submissions, as would be expected from the Farr community, the totality of contributions was quite evenly distributed across the sub-topics. The conference accepted a total of 535 submissions, a mixture of full papers, presentation abstracts,

poster abstracts, demonstrations, panels and workshops. 118 full papers are published in the main proceedings [1]. This special issue of the open access *Journal of Innovation in Health Informatics* contains 113 presentation abstracts and 149 poster abstracts from the conference. Please follow the citation guidance given below.

Discussion

Digital technology offers enticing prospects: not only making frontline healthcare delivery better and safer, but producing high-quality, high-volume routine data as part of normal care provision. The ultimate vision is to build Learning Health Systems, where there is a virtuous circle of data-driven improvements to individual patient healthcare, service management and population health planning. Consequently, the last decade has witnessed huge investments in bio-health data science driven by the “Big Data” revolution, both in the UK and elsewhere. Separately, governments and care providers around the world are spending billions on health IT to deliver “Digital Health”.

Despite the obvious interdependency, the twin programmes of “Big Data” and “Digital Health” are not always joined up by coherent policy and investment priorities. The reality of many frontline care services was summed up well by the Richmond Group [2]: although there is “huge potential that better use of healthcare data can unlock”, it is “currently being achieved in spite of the system, rather than because of it”. The scale of required change in healthcare services is formidable: the Wachter review of health IT in England [3] highlighted that implementing digital health is “one of the most complex, adaptive changes in the history of healthcare, and perhaps of any industry”. Issues with the quality of the “Big Data” and how to extract actionable information from it were recurring themes in our conference contributions. Resolving data quality at source is essential to unlock the transformative potential of routinely-collected information.

Conclusions

Society needs an approach that joins up the science and the practice of health informatics, calling for thinking that is evidence-based and whole-system orientated. *Informatics for Health* contributed to that aim by bringing together academics, clinicians and industry from Europe and further afield via the EFMI and Farr communities.

Informatics for Health showcased the latest discoveries, innovations and evaluations in health informatics science and practice. As pressures on health and care systems increase with our ageing populations, policy makers, research funders and programme leaders would do well to understand and embrace the implications of the goal of Learning Health Systems – requiring the full spectrum of health informatics expertise in a joined-up approach.

Note: Please cite abstracts as: [Author surname, initials] [Abstract no.] in Scott, P. J. et al. (2017). *Informatics for Health 2017: Advancing both science and practice*, *J Innov Health Inform*, 24(1).

References

- [1] Randell, R. et al. (2017). *Informatics for Health: Connected citizen-led wellness and population health*. *Stud Health Technol Inform*, volume 235.

- [2] The Richmond Group of Charities. (2017) My data, my care. How better use of data improves health and wellbeing.
https://richmondgroupofcharities.org.uk/sites/default/files/lr_5233_richmond_group_my_data_my_care_report.pdf
- [3] Wachter, R. et al. (2016) Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England.
<https://www.gov.uk/government/publications/using-information-technology-to-improve-the-nhs>