



IMIA Technology Assessment & Quality Development in Health Informatics - TAQD WG22 2020 Report

presented as part of the IMIA VP WG & SIGs report:

- IMIA Board Meeting, November 22, 2020,
- IMIA General Assembly Meeting, December 6, 2020

Andrew Georgiou, Co-Chair (2013 - 2020)

Farah Magrabi, Co-Chair (2013 - 2020)

Website: <https://imia-medinfo.org/wp/technology-assessment-quality-development-in-health-informatics/>

For the 2020 report please provide details on the following:

(Due to the COVID -19 pandemic, IMIA acknowledges that many functions were cancelled, delayed and disrupted from January 2020 to the end of June 2020)

1. **Brief Background- current mandate, historical background, etc.**

The strategic mission of the working group is:

- To promote the necessity of a systematic evaluation of health information systems during their whole life cycle as a precondition for the better support of patient care.
- To promote theory and practice of evaluation of health information systems, taking into account approaches from a variety of scientific fields.
- To develop and promote methods and tools to support the systematic evaluation of the effects of health information systems on structure, process and outcome of patient care, and to give feedback to system builders how to alter their systems to improve effectiveness and to avoid negative effects.
- To promote the use of an evidence-based approach as the only safe and ethical approach for implementing and promoting health informatics systems.

We are convinced that the evaluation of health information systems is essential to produce valid evidence to ensure safe and effective health information systems, and demands a combined, multi-disciplinary (or even trans-disciplinary) as well as multi-method approach. Therefore, the aims of the Working Group (WG) are:

- to foster discussion between experts from informatics, medical informatics, economics, health care, health services research, clinical epidemiology, biometry, psychology,

sociology, ethnography, organizational development, operations research and other evaluation fields, on an international level, and to encourage exchange on methodological issues between researchers from different traditions;

- to offer an opportunity to share knowledge with the aim of obtaining profitable cross-fertilization among different fields of expertise and especially between quantitative and qualitative research;
- to promote a combined research agenda to develop frameworks and toolkits for information systems evaluation, offering guidelines for an adequate combination of evaluation methods and tools;
- to discuss and clarify the networking needs for long-term evaluation research in medical informatics, and to promote combined research proposals at an international level.
- to raise awareness that health IT systems are not automatically safe or optimal, and indeed can engender risks, and therefore evaluation is an essential activity to protect patient safety and stimulate optimisation.
- to seek to engender and instil a culture of evidence-based health informatics and IT policy and implementation as an ethical essential.
- to engage with decision- and policy-making processes

2. Achievements - Events and projects conducted and publications completed

Following a plenary WG meeting at Medinfo in Lyon 2019 the WG has continued a series of discussions to strategically focus on a formal strategy and work program for the next three to five years. Our discussions have highlighted the need to broaden the reach and capacity of the WG by establishing a network that connects us up to like-minded collaborators, experts and champions. This approach will broaden our reach and expand our capacity. The need to adopt some strategic goals and use sub-groups to undertake its activities was also highlighted. To this end we have identified two areas for immediate focus.

- a. *Learning Health System:*** Our discussions have shown that a Learning Health System perspective provides a valuable and dynamic framework to take forward evaluation and the key concepts held by the Working Group (e.g. evidence-based health informatics, the role of theory etc.). Drs Magrabi, de Keizer and Medlock have formed a sub-group to develop the strategic orientation for our Working Groups.
- b. *Translational Impact:*** Having a translational impact has been a goal of our WG. Our strengths clearly lie in our academic expertise, methodological rigour and evidence-based approaches. But it is not an easy task given our limited resources, time constraints and geographical impediments. Nevertheless, there is a strong desire to continue to pursue opportunities to impact on policy and broaden our connections and capacity. Drs Scott, Rigby and Wong have formed a sub-group to develop ideas and perspectives in this area. This may take the form of grant funding opportunities, alliances or collaborations.

As with most face-to-face events this year, plans to use our MIE (Geneva) April 28 – May 1 workshop to present some key strategic ideas for discussion and feedback were disrupted. However, we have endeavoured to continue the work online. At this stage it is unclear if our plan to launch our strategic orientation to a larger forum in 2021 – possibly Medinfo in Australia or MIE 2021 is achievable.

Events and projects conducted and publications completed

Liaw S-T, **Georgiou A**, Marin H, Evaluation of digital health and information technology in primary care (Editorial) *International Journal of Medical Informatics* (Special issue) This was a joint effort between the Primary Care Informatics Working Group and the Technology Assessment and Quality Development Working Group in Health Informatics.

Wong ZSY, Siy B, Da Silva Lopes K, **Georgiou A**. Improving Patients' Medication Adherence and Outcomes in Nonhospital Settings Through eHealth: Systematic Review of Randomized Controlled Trials. *Journal of medical Internet research* 2020;**22**(8):e17015 doi: 10.2196/17015[published Online First: Epub Date]].

3. Describe WG/SIG Participation - Engagement and participation in IMIA and health informatics events and activities in the past year

We participated in discussions and contributed to the joint call for action from the working groups and special interest groups of IMIA for an evidence-based approach towards the deployment of digital health technologies during the current COVID-19 crisis. The call is entitled, "Evidence-based health informatics as the foundation for the COVID-19 response: a joint call for action to transform hopes and hypes into realities". The manuscript has been submitted to IJMI.

4. Provide details of the WG/SIG's Outreach - Recruitment and engagement of new members and target communities, publicity, and representation at major events and/or on social media.

We are committed to involving, mentoring, training and developing our future WG leaders. Two new members, Drs Kathrin Cresswell and Stephanie "Ace" Medlock were recruited. The WG aims to include experts from the Americas, Africa and the Middle East. Our strategic discussions will also focus on the establishment of robust and meaningful collaborations and the building of links with the health informatics communities of low and middle income countries.

4.a Current number of members: 13

4.b. List of WG/SIG members:

1. Elske Ammenwerth, Institute for Medical Informatics, UMIT TIROL - University for Health Sciences, Medical Informatics and Technology, Hall in Tyrol, Austria.
2. Jytte Brender Emeritus Associate Professor, Aalborg University, Denmark.
3. Kathrin Cresswell, Senior Lecturer, Usher Institute of Population Health Sciences and Informatics, The University of Edinburgh, UK.
4. Nicolette de Keizer Professor, Department of Medical Informatics, Academic Medical Center, Amsterdam, The Netherlands
5. Andrew Georgiou Professor, Centre for Health Systems & Safety Research, Australian Institute of Health Innovation, Macquarie University, Australia
6. Hannele Hyppönen Research Manager, National Institute for Health and Welfare, Finland
7. Farah Magrabi Associate Professor, Centre for Health Informatics, Australian Institute of Health Innovation, Macquarie University, Australia
8. Stephanie "Ace" Medlock, Assistant Professor, Department of Medical Informatics, Academic Medical Center, Amsterdam, The Netherlands
9. Pirkko Nykänen Professor emerita, Tampere University, Faculty for Information Technology and communication Sciences, Finland,
10. Mirela Prgomet Research Fellow, Centre for Health Systems & Safety Research, Australian

Institute of Health Innovation, Macquarie University, Australia

11. Michael Rigby Emeritus Professor of Health Information Strategy, Keele University, United Kingdom
12. Philip Scott Senior Lecturer in Information Systems, Centre for Healthcare Modelling & Informatics, University of Portsmouth, United Kingdom.
13. Zoie Shui-Yee Wong Associate Professor, Graduate School of Public Health, St. Luke's International University, OMURA Susumu & Mieko Memorial St. Luke's Center for Clinical Academia, Japan