Health IT Evaluation
in Health Informatics Curricula:
International Overview and
Recommendations

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Abstract To guarantee that health IT evaluation studies are conducted in accordance with highest scientific and professional standards, well-trained health informatics experts are needed. In this workshop jointly organized by the EFMI, IMIA and AMIA Working Groups on Health IT Evaluation and the EFMI Working Group on Education in Health Informatics, we will explore what is taught nowadays in selected health IT evaluation courses in different countries. We will then discuss and develop recommendations for the core content of health IT evaluation courses.

Keywords. Health informatics, health informatics education, evaluation and assessment, health informatics curricula, recommendations

Introduction of the topic

High-quality and efficient health care seems not possible nowadays without the support of information technology (IT). Health IT has shown to be beneficial for quality and efficiency of clinical processes and health outcome, morbidity, mortality and costs. To verify that these benefits are forthcoming and no unintended side effects of health IT are obtained, systematic evaluation studies – both formative and summative – of health IT are needed. The need for systematic evaluation is reinforced by recent European regulations that require that all medical products (and this includes certain types of clinical software) need to undergo clinical evaluation.

To guarantee that health IT evaluation studies are conducted in accordance with highest scientific and professional standards, well-trained health informatics experts are needed. The recently updated recommendations on health informatics education of IMIA, the International Medical Informatics Association, recommend that the

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topic "evaluation and assessment of information systems" should be part of all curricula for health informatics specialists. These IMIA recommendations identify some exemplary content for such training ("study design, selection and triangulation of quantitative and qualitative methods, outcome and impact evaluation, economic evaluation, unintended consequences, systematic reviews and meta-analysis, evidence-based health informatics"), but give no further details. Indeed, no recommendations exist on what should be taught in health IT evaluation as part of health informatics curricula.

In this workshop, we will explore what is taught nowadays in selected health IT evaluation courses in different countries, and will then discuss recommended core content. The expected audience is:

- All teachers at university level that give courses on health IT evaluation
- All teachers that are interested to start a course on health IT evaluation
- All practitioners interested to learn what is core content within health IT evaluation education
- All colleagues interested in raising the quality of health IT evaluation education.

This workshop is organized by the Working Group "Assessment of Health Information Systems" (http://iig.umit.at/efmi) of EFMI, the Working Group "Technology Assessment and Quality Development" of IMIA, the Working Group "Evaluation" of AMIA and the Working Group "Education in Health Informatics" of EFMI. The duration of the workshop is 90 minutes.

1. Aim of the discussion

The aim of the workshop is as follows:

1. To generate a structured overview on what is taught nowadays in selected health IT evaluation courses. Overlapping and specific content in different health IT evaluation courses will be compared and contrasted.
2. To start a discussion on recommended core content of health IT evaluation courses.

2. Speakers

The following participants agreed to present their health IT evaluation course in the workshop (in alphabetic order) as part of the group work:

- Prof. Elske **Ammenwerth**, University UMIT, Austria
- Prof. Regis **Beuscart**, University of Lille, France
- Dr. Damian **Borbolla**, Hospital Italiano de Buenos Aires, Argentina
- Prof. George **Demiris**, University of Washington, United Sates
- Assoc.Prof. Dr. Eric **Eisenstein**, Duke University, United States
- Assoc.Prof. Andrew **Georgiou**, Univ. of New South Wales, Australia
- Assoc. Prof. Nicolet **de Keizer**, Academic Medical Center, the Netherlands
- Prof. Sabine **Koch** & Vasilis **Hervatis**, Karolinska Institute, Sweden
- Prof. John **Mantas**, University of Athens, Greece

- Prof. Christian **Nohr**, Aalborg University, Denmark
- Assoc.Prof. Charlene **Weir**, University of Utah, United States

3. Workshop organization

0-10 min.	Moderator	Introduction to background, objectives and organization of the workshop, and speakers
10-50 min.	Work in 4 – 5 small groups	In order to facilitate the integration of the audience, **small groups of two speakers each will be formed**. Each member of the audience can decide which group he/she wants to join. Working plan for each group is a follows: 1. Both speakers shortly **present** in their groups intended audience of the course, **learning objectives** (in relation to Bloom or Dublin descriptors), **structure and content**, learning activities and teaching material of his/her health IT evaluation course. The speakers will prepare a **one-page hand-out** for this. A **template** for this will be prepared and distributed to all speakers well before the conference. 2. The group engages a discussion on **similarities and differences** of both courses. The group discusses whether they are able to identify **recommended core content** of a health IT evaluation course, taking into account learning objectives and intended participants. 3. The group prepares some slides, **summarizing the results** of the discussion on recommended content.
50-80 min.	Group speakers	Groups present the outcome of their discussion. Summary of group discussions – similarities and differences of the chosen approaches and course content. Discussion and conclusion on recommended core content.
80-90 min.	Moderator	Conclusion: Next steps for developing a recommendation

4. Expected results

A structured overview on content of health IT evaluation courses in several master programmes will be available. The audience will thus have the chance to learn about different approaches to health IT evaluation education.

In addition, first ideas for recommendations for core content of health IT evaluation courses will be developed. Depending on the outcomes of the workshop, it is planned to use them as basis to develop recommendations for health IT evaluation courses in a consensus-based process lead by EFMI WG Evaluation and to publish it in an international health informatics journal.