Editorial

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This special issue of Swiss Medical Informatics (SMI N° 64) brings together the best articles submitted to the 21st Congress of the Swiss Society for Medical Informatics (SGMI-SSIM). The congress took place in Sierre (Valais) at the University of Applied Sciences Western Switzerland (HES SO) from 5–6 June 2008, and featured 4 invited presentations, 19 oral scientific presentations and 6 scientific posters.

In total, 27 papers were submitted and reviewed by the scientific programme committee on the basis of novelty of approach and technical quality of presentation. From this evaluation process the best eight papers were selected for the present special issue covering a wide range of subjects from the field of medical informatics. Two other papers were added for their practical interest to SGMI-SSIM members, bringing the total up to ten papers.

Two articles deal with financial analysis of hospital data [1, 2] and two with image management and storage [3, 4], partly in the context of diagnostic aid. The patient record is traditionally well represented at these conferences, from access models for research [5] to patient identification [6]. Finally, two articles on specific diseases or disease categories are presented [7, 8]. The articles additionally selected describe practical approaches, one to the choice of an integrated electronic patient record at the Inselspital Berne [9], and the other on context-navigated search inside a clinical patient record [10].

In the first article [1] Rodolphe Meyer describes an extensive analysis of data on hospitals to define models measuring the impact of particular information and communication technologies on hospital productivity. This paper also received the award for the best scientific contribution to the conference.

Alexandre Gnaegi [2] then describes a project on data mining within attributes of a hospital's data warehouse in order to estimate income for released but not fully coded patients. The goal is to estimate the income for cases that have left the hospital within a reporting period but have not been fully coded. Off-the-shelf data mining tools have markedly increased the precision of such estimations for the Valais hospital network.

Mechthild Uesback [3] describes the introduc-tion of a PACS in Zürich University Hospital from 2004–2007. The results were major space savings and financial gains, with optimisation of workflows engendering a more productive work environment.

Adrien Depeursinge then presents a diagnostic aid tool for emergency radiology [4] in the diagnosis of interstitial lung diseases. The tool analyses the texture of the lung tissue in CT images to classify it into healthy and several abnormal tissues. Clinical data are also taken into account since age or environmental factors can significantly change the lung texture properties.

Jimison Iavindrasana's article [5] reports on a framework for data access to a life clinical record with all its security constraints. The context is the EU project AneurIST whose aim is to improve the treatment and understanding of cerebral aneurysms.

Tobias Mettler [6] then presents an approach to patient identification and tracking in a process-oriented manner. A global view of the identification process across organisations focused on the patient can significantly improve identification.

Marc Oertle [7] describes another diagnostic aid tool which targets patients with chronic heart failure and implements evidence-based medicine using information and communication technologies. The goal is standardisation of the care process to reduce variability in treatment.

Christina Lovis [8] then outlines another European Union-funded project also targeting a particular group of diseases: nosocomial infections. The goal of this project is to develop new ways of fighting antibiotic resistances of bacteria by analysing large amounts of routine clinical data. The outcome of this project is expected to be IT-biotics, IT technology to fight bacteria.

Oliver Handgrätiger [9] describes, in the setting of the Inselspital Bern, the process of selecting a new electronic patient record covering all medical specialties and partners in the hospital, and outlines the criteria for selecting a particular solution. The effort to obtain each criterion with its discriminative power is then described. This practical and detailed approach should be useful for other hospitals as well.

In the last article of this issue, Ela Bielecki [10] presents Solothurn hospital's project for

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improved navigation of a single patient's data. A context-oriented approach presents a comprehensive overview of patient data and reduces time spent on searching in the patient record. Overall, the 21st Annual Congress of the Swiss Society for Medical Informatics offered a high quality scientific programme and prompted lively discussion among the participants. eHealth is an important factor in Switzerland and Europe, and will most probably remain it for years to come in a medical field in the process of major change. Most larger hospitals have now become more or less fully digital, and this process will become equally important for small hospitals and medical practices.

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