

An Abridged History of Medical Informatics Education in Europe

Arie Hasman¹, John Mamas², Tatyana Zarubina³

¹Department of Medical Informatics, Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands²

³Health Informatics Laboratory, University of Athens, Greece²

³Department of Medical Cybernetics and Informatics, Pirogov Russian National Research Medical University, Moscow, Russia³

Corresponding author: Arie Hasman, Department of Medical Informatics, Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands

Review

ABSTRACT

This contribution presents the development of medical informatics education in Europe. It does not discuss all developments that took place. Rather it discerns several themes that indicate the progress in the field, starting from the initiation phase to the final quality control phase.

Key words: Medical informatics, education, EFMI, WG1.

1. INTRODUCTION

The history of medical informatics is relatively short. The field started in the fifties of the last century. EFMI was established in 1976 and educational programs in medical informatics in Europe were not introduced much earlier. We were asked to sketch the history of medical informatics education in Europe. Different names with sometimes (slightly) different meanings have been suggested for our field of medical informatics. We will use the terms medical informatics, biomedical informatics and health informatics in this contribution interchangeably as umbrella terms.

When we started writing, we realized that we were not fully aware of all educational developments that took place in other European countries other than our own. That is why we called our contribution an abridged history with apologies that we probably do not refer to all important developments. On the other hand, we also realized that writing such a history does not mean that all developments have to be traced back and be mentioned. It is more important to look for trends that can be inferred from the various developments and to provide examples of those trends. That is what we have done in the following where we distinguish five different themes.

The questions whether medical informatics is a discipline separate from informatics or even whether it is a scientific discipline and whether it is necessary to develop specialized curricula for this field have often been posed. Especially in the beginning much of the research carried out by medical informaticians focused on the development of systems, like for example hospital information systems, departmental systems, database systems, signal and image processing systems and expert systems. These systems had as goal to support physicians and nurses in their work. Later on questions about the quality of the systems and the general design principles

on which they have to be based became more important. It was also realized that a technically perfect system does not warrant that such a system will be automatically accepted in practice. Since the implementation of an information system is a process of mutual transformation, the organization and the technology transform each other during the implementation process. Therefore, also sociological aspects play an important role and should be taken into account.

Medical informatics was considered by some as computer science applied to medicine, others were of the opinion that medical informatics was more than computer science and medicine together (because the body of knowledge in medical informatics also contained knowledge coming from a number of other disciplines like epidemiology, cognitive psychology, sociology, biostatistics, etc.) and therefore, they considered it as a medical discipline closely linked to but separate from informatics. However, in both views education in medical informatics would lead to graduates that were medical informatics professionals and not medical professionals (although some of these new professionals could initially have been educated as a medical specialist). Also, in order to be accepted by physicians, medical informatics specialists should be educated at an academic level.

Medical informatics is both an engineering discipline (design and development of information systems for example) and an applied science (aspects related to information science). Since medicine and healthcare are the domains of study of medical informatics, studies in medical informatics can lead to new knowledge that is pertinent to these domains. But the research outcomes are always about the computational and informational aspects of medicine and healthcare and therefore, also contribute to the field of medical informatics.

Health And Medical Informatics Education In Europe

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