European Federation for Medical Informatics – the Most Influential Promoter of Medical Informatics Development for the Past 45 Years

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ABSTRACT
Medical informatics, as much as it is a result of evolution as planned philosophy, have its roots in the history of information technology and medicine. Development of medical informatics started in the fifties of the 20th century. In the period after Second World War USA was the leading country in the field of Computer science and the leader in using the first computers in medicine and healthcare services. The development of information and communication technologies (ICT) during the last two decades of 20th century was particularly important for development of medical informatics, with great influence of Internet by medical professionals at every level of health care system. Comprehensive and essential contents on medical informatics, but also the aspects nurtured by the main „schools of Medical informatics” - Anglo-Saxon (Abbot, Anderson, etc.), French (Gremy, Remond, etc.), German (Reichertz) et al.), American (Collen, Green, et al.), Middle and East Europe (Dezelic, Masic, Zvarova, Naszlady, Mihalas, etc.), whose terms „Health Informatics” (Abbot) and „Medical Informatics” (Gremy and Reichertz) have entered the European and world medical literature. For those studying the subject or working in the field, the experiences of others who use Information and Communication Technologies (ICTs) for the better of health care can provide a necessary perspective. In promotion and spreading the knowledge and experiences of the medical informatics as scientific and academic discipline in the world, great impact was given by IMIA and its „branch associations” at every continent. But, most influential association became European Federation for Medical Informatics (EFMI), established on September 11th 1976 in Copenhagen with members of 10 national representatives (Barry Barber (UK), Antonio Perens de Talens (Italy), Francois Grémy (France), Rolf Hansen (Norway), Mogens Jorgensen (Denmark), Hans Peterson (Sweden), Peter Leo Reichertz (Germany), Jan Roukens (Netherlands), Jan van Egmond (Belgium) and Ilkka Vaananen (Finland) who adopted Statute of EFMI and other documents and prepared the first MIE Conference in Cambridge (UK) in 1978. Today EFMI represent leading European medical informatics professional organization representing 28 European countries and institutional members. EFMI is organized as a non-profit organization concerned with the theory and practice of Information Science and Technology within the Health and Health Sciences sector, in a European context. The goals set of EFMI are: a) To advance international co-operation and dissemination of information in Medical Informatics on a European basis; b) To promote high standards in the application of medical informatics; c) To promote research and development in medical informatics; d) To encourage high standards in education in medical informatics; and e) To function as the autonomous European Regional Council of IMIA. Author of this article described the facts about important events which EFMI, with contribution of national societies, members of EFMI, organized during 45 years of existence, including important facts about the influential medical informatics experts. Finally, author shortly described important facts about history of development of Health informatics in Bosnia and Herzegovina and South-Eastern Europe, including facts about his activities during long period of his participation in IMIA General Assembly and EFMI Council. There he was very actively involved in a lot of activities, including organization of 22nd MIE Conference in Sarajevo in 2009.

Keywords: Health/Medical/Biomedical informatics, International Medical Informatics Association (IMIA), European Federation for Medical Informatics (EFMI).
1. BACKGROUND

The European Federation for Medical Informatics (EFMI) (i-5) is the leading organisation in medical informatics in Europe and represents 28 countries. EFMI is organized as a nonprofit organisation concerned with the theory and practice of Information Science and Technology within Health and Health Science in a European context. All European countries are entitled to be represented in EFMI by a suitable Medical Informatics Society.

The term Medical informatics is used to include the whole spectrum of Health/Public health Informatics and all disciplines concerned with Health/Socialcare and Informatics (i-5).

Development of Medical informatics started in the fifties of the 20th century. In the period after Second World War USA was the leading country in the field of Computer science and the leader of using the first computers in medicine and healthcare services. The development of information and communication technologies (ICTs) during the last two decades of 20th century was particularly important for development of Medical informatics, with great influence of Internet by medical professionals at every level of health care systems. Internet caused a new information revolution since medical information became available to the public and ceased to be in exclusive control of health professionals. The development and global spreading of ICT brought also new medical fields, interdisciplinary connected to medical informatics: telematics, telemedicine, teleeducation, and cyber-medicine. Auerbach L, USA, on behalf of the American Federation of Information Processing Societies sent in the year 1957 proposal to UNESCO to sponsor one international conference on Information Processing (IFIP). Already at that meeting 15 countries council meeting was held in Rome in June 1960 and that is founding point in the development of European National Societies for Medical Informatics and its Leaders (1-3). The first council meeting was held in Rome in June 1960 and that is the beginning of the International Federation for Information Processing (IFIP). Already at that meeting 15 countries were members: Belgium, Canada, Czechoslovakia, Denmark, Finland, Germany, Japan, The Netherlands, Spain, Sweden, Switzerland, the Union of Soviet Socialist Republics, United Kingdom and United States of America. Mr. Auerbach (USA) was elected as President, Professor Alwin Walter (Germany) was elected as Vice-president and Dr. Ambrose Speiser (Switzerland), Union of Socialist Republics was elected. (1-3. The first council meeting was held in Rome in June 1960 and that is the beginning of the International Federation for Information Processing (IFIP). Already at that meeting 15 countries were members: Belgium, Canada, Czechoslovakia, Denmark, Finland, Germany, Japan, The Netherlands, Spain, Sweden, Switzerland, the Union of Soviet Socialist Republics, United Kingdom and United States of America. Mr. Auerbach (USA) was elected as President, Professor Alwin Walter (Germany) was elected as Vice-president and Dr. Ambrose Speiser (Switzerland), Union of Socialist Republics was elected. (1-3. The first council meeting was held in Rome in June 1960 and that is the beginning of the International Federation for Information Processing (IFIP). Already at that meeting 15 countries were members: Belgium, Canada, Czechoslovakia, Denmark, Finland, Germany, Japan, The Netherlands, Spain, Sweden, Switzerland, the Union of Soviet Socialist Republics, United Kingdom and United States of America. Mr. Auerbach (USA) was elected as President, Professor Alwin Walter (Germany) was elected as Vice-president and Dr. Ambrose Speiser (Switzerland), Union of Socialist Republics was elected. (1-3.

European Federation for Health/Medical Informatics

DECLARATION OF INTENT

The Federation shall be constituted as a nonprofit organisation concerned with the theory and practice of Information Science and Technology within Health and Health Sciences in a European context.

We declare that the ten delegates here today from the ten National Societies shall constitute the preliminary Council of the Federation which they hereby exists.

Copenhagen, 11 September 1976

1976 – 1977: Antoine Remond (France)

1977 – 1981: Peter L. Reichertz (Germany)

1981 – 1983: Barry Barber (United Kingdom)

1984 – 1986: Francis Roger France (Belgium)

1987 – 1990: Rory O’Moore (Ireland)

1991 – 1992: Stellan Bengtsson (Sweden)

1993: Rolf Hansen (Norway)

1994 – 1995: John Bryant (United Kingdom)

1996 – 1997: Jean-Raoul Schêmer (Switzerland)

1998 – 1999: Attila Naszladay (Hungary)

2000 – 2002: Rolf Engelbrecht (Germany)

2002 – 2003: Assa Reichert (Israel)

2004 – 2005: Robert Baud (Switzerland)

2006 – 2008: George Mihalas (Romania)

2009 – 2010: Jacob Holtsjé (The Netherlands)

2011 – 2012: John Mantas (Greece)

2013 – 2014: Patrick Weber (Switzerland)

2015-2016: Anna Moein (Norway)

2017-2018: Christian Loos (Switzerland)

Lazarouia, Stocsci- Tricard (2019-2020), (Romania)

Catherine Chronaki (2021-), Greuca/Belgium

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zerland), was elected as secretary and treasurer. The work within IFIP was organized in Technical Committees (TC) and they in turn could have Working Groups (WG). Already in 1963 the first 3 were established: TC1 Glossary, TC2 Programming Languages and TC3 Education (4-9).

New established Working Group was TC4 - Health Care and Biomedical Research, established with Professor Francois Gremy (France) in 1967. He was elected as Chairman and J. M. Forsythe (United Kingdom) was elected as Secretary. The first Working group (WG1) was Education of Medical and Paramedical Personnel. In 1973 Jan Roukens (Holland) was elected as Chair and he chaired this WG until the date when the TC ended and the new International Medical Informatics Association (IMIA) was accepted by IFIP in 1980. Many member countries of TC 4 wanted more freedom from IFIP and that resulted in that TC4 got the status of Special Interest Group and to organize the first World Congress of Medical Informatics (MEDINFO) in parallel with the IFIP Congress in Stockholm, Sweden in 1974. The Second MEDINFO congress was organized in Toronto, Canada in 1977. In 1980 IMIA became independent Medical informatics association from IFIP. The inaugurate meeting took place on May 11, 1979 in Salle Capituami, Paris with speeches of Professor Bailey (WHO representative), Professor Bobillier, President of IFIP, Professor Francois Gremy (Paris) and Dr. Jan Roukens (Holland) as Chair of TC4. At the General assembly meeting the following new board was elected: Dr. David Shires (USA) as President, Dr. Hans Peterson (Sweden) as Vice-president and Chair By-Laws Committee, William Abbott, (UK) was Secretary, Dr. Shigekoto Kaihara (Japan) was Chair Newsletter Committee and Professor Peter Reichertz (Federal Republic

Figure 3. Cover pages of the EFMI Proceedings of the MIE Conferences from 1978 until 2020
Germany) was Chair of Publication Committee.

One year after the MEDINFO Congress in Stockholm (1974) (Chair of SPC was Professor John Anderson, UK), several European Medical informatics societies started with establishing of European Federation for Medical Informatics (EFMI). There were three persons that in 1975 had the first discussions and they were Jan Roukens (Holland), Jan van Egmond (Belgium) and Mogens Jorgensen (Denmark). They started to write Statute and discuss these with a few other interested representatives from other European countries. These persons were called the Preliminary Executive Group (PEG) and they held a meeting in Paris in June, 1976, where they decided to invite all known European societies to be represented at a constituent meeting of the Federation of the European Medical Informatics Societies. It was proposed that one delegate with voting right from each Society be present in Copenhagen on September 10 and 11, 1976.

2. ESTABLISHMENT OF EFMI

On September 10-11, 1976 in Copenhagen at the Office for Europe of the World Health Organization, hosted by M. Sedeuilh and Albert Weber, representatives of ten national Medical informatics societies (Barry Barber (UK), Antonio Perena de Talens (Italy), Francois Grémy (France), Rolf Hansen (Norway), Mogens Jørgensen (Denmark), Hans Peterson (Sweden), Peter Leo Reichertz (Germany), Jan Roukens (Holland), Jan van Egmond (Belgium) and Ilkka Vaananen (Finland) adopted the Statute of the European Federation for Medical Informatics (EFMI) (Figure 1).

As the first Presidency of EFMI (Executive board) were elected: Antoine Remond (France), as a chairman, Barry Barber (UK), as secretary and Peter Leo Reichertz (FR Germany), as treasurer (1, 2).

The objectives of EFMI are (1-5):

a) advance international co-operation and dissemination of information;

b) promote research and development;

c) promote high standards in the application;

d) encourage high standards in education in this field;

e) EFMI publishes scientific papers from its conferences in EFMI official journals.

Today EFMI is the leading nonprofit organization in biomedical and health informatics in Europe. EFMI comprises 28 national societies and includes an exceptional network of experts and stakeholders in health, care, IT and its societal dimensions; supported by 14 topic working groups ranging from human factors, to security and translational health informatics (5). EFMI has two governing bodies: FMI Executive Board (President, Vice-President WGs, Vice-President IMIA, Secretary, Treasurer, Executive officer, Publication officer, Institutional members officer) and the EFMI Council. Council members represent national societies and WGs. Former Presidents of EFMI during past 45 years are presented in Figure 2.

3. EFMI WORKING GROUPS

EFMI has a long tradition in working groups (WG) which are organising and supporting events and projects on a European basis but also worldwide in close co-operation with national and international WGs and institutions. EFMI Working Groups are: EDU – Education, EHR – Electronic Health Records, EVAL – Assessment of Health Information Systems, HIIC – Health Informatics for Interregional Cooperation, HIME – Health Information Management Europe, HOFMI – Human and Organisational Factors of Medical Informatics, IDES – Information and Decision Support in Biomedicine and Health Care, LIFOS – Libre/Free and Open Source Software, NI – Nursing Informatics, PCI – Primary Health Care Informatics, PPD – Personal Portable Devices, SSE – Security, Safety and Ethics, MIP – Medical Image Processing, THI – Translational Health Informatics, CHD – Citizen and Health Data, and yEFMI – Young EFMI.

4. EFMI MIE AND EFMI STC CONFERENCES

To advance its mission, EFMI started organizing the Medical Informatics Europe Conference (MIE) in 1978. So far 31 MIEs have been organized by EFMI (Figure 3): Cambridge (1978), Berlin (1979), Toulouse (1981), Dublin (1982), Brussels (1984), Helsinki (1985), Rome (1987), Oslo (1988), Glasgow (1990), Vienna (1991), Jerusalem (1995), Lisbon (1994), Copenhagen (1996), Thessaloniki (1997), Ljubljana (1999), Hanover (2000), Budapest (2002), Saint Malo (2003), Geneva (2005), Maastricht (2006), Gothenburg (2008), Sarajevo (2009), Oslo (2011), Pisa (2012), Istanbul (2014), Madrid (2015), Munich (2016), Manchester (2017), Gothenburg (2018), Geneva (2020) was cancelled due to the COVID-19 pandemic, and Athens (2021).

EFMI Special Topic Conferences (STC) are typically 2-day events organized by member societies with 100+ participants in conjunction with their annual meeting, on a topic.
defined by the member society, and relevant EFMI Working
groups are engaged for the content. EFMI Council and Board
meetings are hosted by the STC. Past STC conferences took
place in: Bucharest (2001), Nicosia (2002), Rome (2003), Mu-
nich (2004), Athens (2005), Timisoara (2006), Brijuni (2007),
London (2008), Antalya (2009), Reykjavik (2010), Lasko (2011),
Moscow (2012), Prague (2013), Budapest (2014), Paris (2016),
Tel Aviv (2017), Zagreb (2018), Kuopio (2020). STC 2021 is
planned to be organized in Sevilla (Spain). In retrospect, the
MIE congresses has always been a great motivation for med-

ical informaticians, both scientists and health professionals.
They are recognizing them as places most favorable for the
presentation of own work, for exchange of ideas with col-
leagues and for learning what is new in Medical informatics
in Europe and the world.

5. EFMI PUBLICATIONS
The most important EFMI publication, indexed in Medi-
line is Studies in Health Technology and Informatics, which
publishes papers presented at MIE Conferences. EFMI also
publishes several sub-specialty official journals covering the
spectrum of medical informatics subdisciplines. Currently,
EFMI has three officially endorsed general journals (Figure 4),
Methods of Information in Medicine, International Journal
of Medical Informatics and Acta Informatica Medica. Until
the year 2020 official journal of EFMI was also International
Journal of Biomedical Informatics (EJBI), but excluded this
year. From the year 2020 EFMI started to publish EFMI Inside
magazine. Through its work, EFMI provides leadership and
expertise to the multidisciplinary, health IT community and
to policy makers, enables the transformation of healthcare in
accord with the world-wide vision of improving the health
of the world population (9-12). EFMI is constantly striving to
further the services it provides to its members and the infor-
matics community in general by promoting free interaction
among and between its member network and the bio-med-
ical and health informatics community at large.

6. EFMI HONORARY FELLOWS
During past period EFMI Council has been elected 31 Fel-
loows as most influential Medical informatics experts for
their contribution in development of this academic and sci-
entific field (5).
In alphabetical order EFMI Honorary Fellows are (Figure
5): Abbot "Bud" William (United Kingdom), Andersen Stig
Kjaer (Denmark), Anderson John (United Kingdom), Barber
Barry (United Kingdom), Baud Robert (Switzerland), Blobel
Bernd (Germany), Bryden John (Scotland, UK), Engelbrecht

Figure 5. Honorary Fellows of the European Federation for Medical Informatics (EFMI) - 1976-2021
Rolf (Germany), Gell Günther (Austria), Grenyi Francois (France), Hansen Rolf (Norway), Hasman Arie (The Netherlands), Holdijk Jacob (The Netherlands), Jorgensen Mogens (Denmark), Mantis John (Greece), Masic Izet (Bosnia and Herzegovina), McNair Peter (Denmark), Mihalas George (Romania), Moen Anne (Norway), Nordberg Ragnar (Sweden), O’Moore Rory (Ireland), Peterson Hans (Sweden), Reichert Assa (Israel), Reichertz Leo Peter (Federal Republic of Germany), Remond Antoine (France), Roger France Francis (Belgium), Rossing Niels (Denmark), Scherrer Jean-Raoul (Switzerland), Wagner Gustav (Germany), Weber Albert (Switzerland) and Zvárová Jana (Czech Republic) (3, 4).

7. EFMI AWARDS

In the year 2015, during MIE conference in Madrid, the EFMI Council approved the establishment of a Medical Informatics Award of Excellence named “Leo Peter Reichertz Young Scientist’s Award” and “Rolf Hansen Memorial Award” to be given to an individual, whose personal commitment and dedication to medical informatics has made a lasting contribution to medicine and healthcare through her or his achievements in research, education, development or applications in the field of medical informatics. Also, during MIE conferences Mantas’ Prize for Best Paper on Education in Biomedical and Health Informatics is giving to presenter for “Outstanding paper about Education in Biomedical and Health Informatics”.

8. FORTY FIVE YEARS OF THE DEVELOPMENT OF MEDICAL INFORMATICS IN BOSNIA AND HERZEGOVINA (BH)

From the 1974 automatic analysis of health data in health care institutions in Bosnia and Herzegovina was introduced gradually thanks to the engagement of Fuad Sacirbegovic, director of Department for Statistics of the Federal Public Health Institute, Serstnev, whose heritage is on the same position. From 1977 Institute has published annual reviews and summary health statistics reports in BiH and utilization of health capacities under the title “Network, capacities and services of health institutions in BiH”.

Initiation, development and implementation of some in-
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MIE2005 - Geneva

MIE2006 - Maastricht

MIE2008 - Goteborg

MIE2008 - Galadinner

MIE2008 - Goteborg best memories

MIE2009 - Goteborg

Geneva MIE2005

MIE2008 - Vitals - Goteborg

MIE2005 - Geneva

MIE2006 - Maastricht

MIE2008 - Goteborg

MIE2008 - Vitals - Goteborg

MIE2009 - Galadinner

MIE2008 – Goteborg

MIE2006 - Maastricht Council Dinner

MIE2008 - Goteborg best memories
informatics activities, such as automatic manipulation of health data and intensive use of information technologies for the need of diagnostics, therapy and patient rehabilitation on the all levels of healthcare in BiH health system started to be solved systematically in the end of seventies and in beginning of eighties. Crucial decision at state level was in 1981, when BiH government brought decision to start with work on the project „Development of BiH Health Information System – HISBiH”. Before the project, the study/analysis „Social-economical position of the health system in BiH” was conducted. Based on that BiH Parliament approved preparation of appropriate project which should have made possible modernization of the information system of health care. Basically, this project should modernize and create automatic, well developed and functional health statistics system in Bosnia and Herzegovina which was part of also well organized (centralized) Yugoslavian health statistics system lead by the State Public Health Institute in Belgrade. Project „Development of information system of health care in BiH within circumstances of electronic data manipulation” was approved by Executive Board of Association of healthcare communities BiH (National Committee with multidisciplinary members: MDs, statisticians, electro and mechanical engineers, economists and was chaired by myself). In 1985, after positive assessments, the revisions of the project were adopted and its implementation began after financial funds were ensured. Implementation started in 1986 and it was planned to be Concept of centralization of data manipulation in the architecture proposed in HIS BiH project (central host and analysis in Sarajevo, regional analysis in eight centers in BiH and local in 109 municipalities) but it has never been finalized and failed. The true is that some of designed activities were started on institutional level, but never reached finish as Clinical information system of the University Clinical Center in Sarajevo, which was one of the biggest projects in area of development and construction of Health Information Systems. Unfortunately, during wartime 1992-1995 in BiH in regard to the procurement of hardware and production of software applications has never been completed and implemented in practice. As young physician, who was graduated at Faculty of medicine at University of Sarajevo in the same year when EFMI was established (1976) I have been involved in project for revision of official system of medical documentation of current Health Statistical System in BiH, as a part of Federal Health Statistical System regulated on national level by Federal Government in Belgrade. The system was recognizable in Europe with its structure, content, organization and utility with very well designed „information flow” of medical data at every level of health care service (collecting, processing, evaluation, storage, using for decision making, etc.) in family practice, out-patients’ clinics, general and special hospitals and university clinics. The time from primary collected data at every working place in health care system until final storage at in Department for statistics of WHO in Geneva was less than one year, it means it was very prompt and useful method and way for decision makers. But it was very huge and „paper based oriented” and health professionals were very occupied with data collecting and processing. We need to mention that one of founders of WHO and the first President of General Assembly of WHO in 1948 was Academician Andrija Stampar from our country and several directors of Department for Statistics and Informatics of WHO were professors from former Yugoslavia (most of them Pubic health experts).

My interest for this part of science started in 1979 when I, for the first time, visited Department for Community medicine at London School of Hygiene and Tropical Medicine (LSHTM) in London and recognized myself in that field of Family and Social medicine. During the 1981/1982, as part of my specialization, I spent at that school six months Extended Courses of Medical Statistics and Computer Sciences. Before London, I also spent one month at University in Moscow at famous Visnjevski Institute for Research and received there my first experiences about computers use for health care protection and medical education (the first visit in 1975 and second visit in 1989), when I visited academicians Lisycyn and Gasparyan, recognizable persons in the health informatics and Cybernetics fields in Former Soviet Union. In that time University in Moscow produced „Vrach Kibernetics” (Doctor of Cybernetics), special medical occupation for health care informaticians. Education in Moscow and London defined my interest and occupation with Health informatics in Primary health Care and Family medicine and my Master and Doctoral thesis I earned in that field (Figures 6 and 8).
These are already mentioned facts which I published in interview with Professor Dezelic and explained important events regarding establishing and implementation of Health Informatics in Former Yugoslavia, but also in South-East Europe. I must describe some important points about development of Medical informatics and influence of our influential persons, not only from former Yugoslavia, because in the past very few experts in this field were mentioned as important persons who created strategy, tactic and operational activities in all kinds of Health and Medical informatics, not only in the Europe, even worldwide.

Unfortunately, not so many of them became engaged in managing structure of EFMI and IMIA in the past (as presidents of IMIA or EFMI) besides very hard and effective influence of those associations. But, readers need to know that our students of Biomedical faculties have possibilities to learn the same subjects and contents of Health informatics at Universities in former Yugoslavia as in US, UK, Germany, France, etc. because in that time we have had one of the best educational system in the world, also one of the best organized health care system in the world, which produced very qualitative products in all kind of industry, economy, education, etc. especially in Africa and Middle East, educated students from undeveloped countries, because president of former Yugoslavia, Tito chaired more than 100 countries (The Nonaligned Movement/The Block of Independent Countries). Interesting fact is that in 1984, EnergoInvest Company in Sarajevo produced computers (IRIS 16 and IRIS 32), led by Academician Bozo Matic and his team (he was Director of EnergoInvest company, also, President of Academy of Sciences and Arts of BiH, and Rector of Sarajevo University) where his team of experts in 1977 worked on projects on biological robotics and produced "biological prosthesis", etc.

One of my projects was creating "Family Registration Card" as "Medical Record Linkage" in Primary healthcare system for collection and depositing "minimal data sets" on electronic cards, as optimum of data processing and storage medical data for quality assessment outcomes of MDs work in Primary Healthcare System protection (all data about one patient stored at one place and the stored data must be kept by family practitioner). It was my project to establish the first Local Information System in BiH for Family medicine practice. Unfortunately, war in our country (1992-1995) stopped all those projects.

For education of Medical informatics subject, academician professor Dezelic (1931-), as pioneer of Medical informatics in former South-East Europe, established almost all Cathedras at universities in former Yugoslavia, From such formulations it clearly follows that the terms „Medical informatics“ and „Health informatics“ were considered synonymous, but in the former Yugoslavia areas (with a socialist society organization, in which there was no private medical practice) the adjective „health“ was preferred. With the appearance of the international associations, IMIA and EFMI, the name Medical Informatics finally prevailed in our country (recommendations by IMIA experts of WG for education).

Gjuro Dezelic and three other professors: Stefan Adamic in Slovenia, Rajko Vukasinovic in Serbia and Izet Masic in Bosnia and Herzegovina in the late ’80s of the last century formed Yugoslav Association of Medical informatics (YAMI) in 1989 in Osijek (Croatia) by the Republic Societies for Medical Informatics in Bosnia and Herzegovina, Croatia and Slovenia, and the Section for Medical Informatics within the Serbian Medical Society (1, 5-8). It was decided that the headquarters of YAMI would be in Zagreb, and Professor Dezelic was elected as president. Association for Medical Informatics - YAMI. YAMI organized the First MI Congress in Belgrade in 1990 (Figures 7 and 9) with an impressive participation of over 500 participants. This scientific meeting of MI left positive effects on the later development of MI in Europe and the World (11).

At the time of the 1990 MIE Congress in Glasgow at a meeting of the EFMI Council and the IMIA Annual Assembly, YAMI was admitted to the membership of both international medical informatics organizations, but this did not last long. Already at that time, Yugoslavia entered a period of political unrest that led to its disintegration. It should be noted here that after the wars against Slovenia and Croatia in September 1991, both MI associations - Slovenian and Croatian - withdrew from YAMI, followed by the MI association of Bosnia and Herzegovina a few months later. After the Republic of Croatia and other republics of the former Socialist Federative Republic of Yugoslavia (SRJ) were internationally recognized in January 1992 and became members of the UN in May of the same year, the conditions were met for medical informatics associations of the former three Yugoslav republics - Bosnia and Herzegovina, Croatia and Slovenia - to become members of IMIA and EFMI. This happened during the 1992 MEDINFO Congress in Geneva (7), but officially accepted Izet Masic as national representative of Bosnia and Herzegovina at EFMI Council in Lisbon, Portugal, during MIE ’94 Conference (Figure 10).

The worst time was for the Medical Informatics Society of
worldwide, have had great influence on the development of Biomedicine as a science and as a academic discipline, especially to improve quality of the healthcare protection of population on every level of health care systems and and in every country in the world.

9. CONCLUSION

Health (medical) informatics as separate scientific discipline began to be effective in academic institutions in the end of seventies by presentation of actual accomplishments in this area in under and postgraduate education at biomedical faculties. During past forty five years of existing EFMI, as leader in the field of Medical informatics in Europe and worldwide, have had great influence on the development of EFMI Council who helped to make this article more informative and illustrative, especially to Gjuro Dezelic, Jacob Hofdijk, George Mihalas, Catherine Chronaki and John Mantas

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