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Challenges in Medical Informatics

School of Biological Sciences
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Inaugural Address

delivered by Dr K C Lun
President, International Medical Informatics Association
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Dr Jan van Bemmel, out-going IMIA President, Honoured Guests, Distinguished Participants, Ladies and Gentlemen:

In the International Medical Informatics Association (IMIA), we have a tradition. The end of a MEDINFO conference marks the beginning of a three-year term for a new IMIA President. The British has an expression for this exercise. It is called the "Changing of the Guard".

Completing the term as IMIA Vice-President (MEDINFO)

As I complete my term as IMIA Vice-President (MEDINFO), I wish to record my sincere gratitude to the people who have given me their unfailing support and the immense pleasure of doing this job. In particular, I wish to thank Ms Jean Roberts and the members of her London Organizing Committee, Dr Arie Hasman and Dr Hiroshi Takeda, the co-chairs of the Scientific Programme Committee and their Committee Members, the Editorial Committee comprising Dr Vimla Patel, Dr Reinhold Haux and Dr Ray Rogers. I am also grateful for the support given to me by the IMIA MEDINFO Steering Committee comprising the IMIA President, Dr Jan van Bemmel, the IMIA Treasurer, Ms Ulla Gerdin and the IMIA Executive Director, Mr Steven Huesing.

As I take on my new IMIA role as President, I am reminded of yet another British expression, "Uneasy lies the head that wears the crown". In case you think that from hereon, I want to be known as 'His Majesty', let me quickly change the expression to, "Uneasy lies the head that wields the IMIA gavel". I am aware of the big responsibility that lies ahead of me over the next three years and I am honoured to have been given the trust and confidence of my IMIA colleagues from all over the world to handle this job. And I was especially glad that the decision taken at the IMIA General Assembly in 1999 to appoint me as President-elect was unanimous. We did not have to resort to a Florida-style vote recount.

Some Singapore Trivia

As you all know, I come from Singapore but you would be amazed that there are still many people who do not know where Singapore is. For example, a year ago, I was invited to speak at an international conference somewhere in the western world and I was visibly shocked when I was handed the conference badge. The badge listed me as coming from "Singapore, China"! Hence, when I delivered my plenary paper the next day, I began the presentation with a short lesson in geography for the audience, telling them the exact geographical location of my country. Singapore, as I am sure many of you already know, is geographically located at the southern tip of peninsular Malaysia, just north of the equator. It has been an independent republic since 1965. The main island is about 42 kilometres from east to west and 23 kilometres from north to south and so it is shaped like a diamond or a top. The total land area is about 648 square kilometers (or 253 square miles) and within this area lives a population of some 3.8 million people. The population is cosmopolitan, comprising 75% Chinese, 15% Malays, 7% Indians and 3% of other races. Singapore is also a highly wired country with the highest net penetration in Asia.

About IMIA

Now, let me talk about the International Medical Informatics Association. For those of you who are attending MEDINFO for the first time, this

World Congress is a major IMIA event which is held once every three years. IMIA is an international organization that comprises some 50 national member societies, 12 corporate and 13 academic institutional members. Currently, it has three regional groups viz. the European Federation of Medical Informatics (EFMI), the IMIA-Latin American and Caribbean countries (IMIA-LAC) and the Asia Pacific Association for Medical Informatics (APAMI) of which I was the founding president from 1994-7.

It is auspicious that I hold office as the 10th IMIA President at the 10th World Congress of Medical Informatics. I am also honoured to join a very distinguished company of individuals who had served as IMIA Presidents before me, and the second Asian to hold this high office (Figure 1).

As you can see from Figure 1, the term of each IMIA President is associated with a major accomplishment that each is best remembered for.

All of my IMIA predecessors have big shoes to be filled by someone who wears only size 6! If there is one slogan that I would like my successor to describe what I have accomplished four years from now, it is "Bridging the Medical Informatics Divide". This will be of highest priority in my "Agenda of Action" as the new IMIA President.

Coming from a third world country that has only recently transitioned to a first, I am conscious of the need to assist developing countries to break into medical informatics as one of the means to achieve healthcare delivery standards of the first world. Therefore, to "Bridge the Informatics Divide", I will help steer IMIA on two major initiatives: (1) convening Helina 2002, the pan-African Conference on Medical Informatics in Cairo in 2002
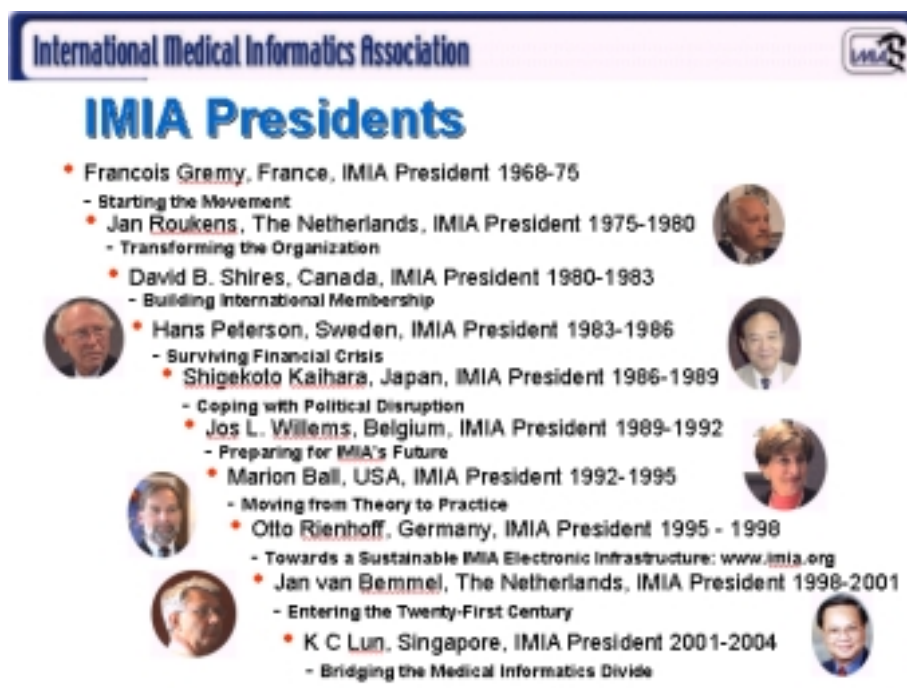

Fig.1. IMIA Presidents

and (2) promoting a Virtual University for Medical Informatics to be driven by IMIA WG1 on "Health and Medical Informatics Education".

Bridging the Medical Informatics Divide: Helina 2002

It is my hope that Helina 2002 will serve as a catalyst for more medical informatics activities in Africa. Helina, as a conference, is not new. The first Helina conference took place in Nigeria in 1993. Since then, Helina conferences had been held in South Africa in 1996 and in Zimbabwe in 1999. We know that one positive outcome as a result of increased medical informatics activities in Africa will be an improvement in the standard of healthcare delivery through timeliness of data using infocommunications technology. It is my goal to have the Helina conference serve as a catalyst for the formation of an African regional group of IMIA, coming after EFMI, APAMI and IMIA-LAC by the time I complete my term as IMIA President in 2004.

In reaching out to developing countries to help bridge the Medical Informatics Divide, we can draw on the experience of Informedica 2000, the 1st Iberoamerican Virtual Congress of Medical Informatics which was very successfully held last November under the able leadership of Dr Nora Oliveri, our Chair for IMIA Working Group 9.

Bridging the Medical Informatics Divide: Virtual University for Medical Informatics

It would be wrong to apply the term, "Medical Informatics Divide" only to address the disparity between developed and developing countries. In my opinion, it should also be applied to all countries, organizations and institutions that do not, as yet, have an awareness of medical informatics. I would like to borrow a quotation from the e-Testimony to the Web-based Commission on Education to the President and Congress of the USA, "There is no going back, the traditional classroom has been transformed". The

message is clear – we have to look beyond the traditional transfer of knowledge in the physical classroom.

To this end, I would like to strongly support, during the term of my presidency, an initiative on the Virtual University for Medical Informatics, to be launched by IMIA Working Group 1, led by its two co-chairs Dr Evelyn Hovenga of Australia and Dr John Mantas of Greece with the collaboration of Dr Jim Turley of the USA. It is an IMIA initiative which will not only spread medical informatics knowledge and practice far and wide but will also provide a value-added benefit to our IMIA academic institutional members as they will provide the skills and teaching resources to this global programme through distance education.

Meeting the Challenges of the Life Sciences

IMIA will also need to respond to the growing emergence of life sciences, a discipline which is bringing winds of change to the global economy. Those of you who heard Dr Casimir Kulikowski's invited presentation on bioinformatics would have appreciated the need for medical informatics to position itself for the new and exciting research opportunities that come hot on the heels of the mapping of the human genome and the growth of bioinformatics.

Many governments, academic and research organizations have already recognized the importance of the new biotech economy and are committing major investment and resources to tap the opportunities that follow the decoding of the human genome. It is also for this reason that I have recently left my job of 26 years at the National University of Singapore to help start a life sciences initiative at the Nanyang Technological University in Singapore.

Working in a technological university, with a very strong engineering tradition that is also starting to grow the development of life sciences, will offer many exciting opportunities for me to explore the relevance and applications of medical informatics to the life sciences, particularly with respect to its convergence with bioinformatics.

Within IMIA we have also given recognition to the new challenges that the growing emergence of the life sciences will bring to the field of medical informatics. Already, IMIA has convened two workshops on "Challenges in Medical Informatics", one in Madrid in March this year and the other here in London to address this and other issues. These were led by Dr Mark Musen and Dr Jan van Bemmel. In addition, IMIA hopes to convene a conference on Clinical Bioinformatics in Singapore in March 2003 to further address the convergence of medical informatics with bioinformatics.

IMIA resources – its Working Groups and Special Interest Group

You would have noticed that in my inaugural address I have made references to the work of our IMIA Working Groups and SIG on Nursing. To me, the WGs and our SIG on Nursing (Figure 2) are our source of strength and there is a wealth of global talent and resources within IMIA which the organization can leverage on to help "Bridge the Medical Informatics Divide".

In addition, within IMIA, we also have an extensive network of national and corresponding members, corporate and academic institutional members. We need to build better "skyways", "subways" and "linkways" to foster closer strategic partnerships between these members on the one hand and IMIA WGs and the SIG on Nursing on the other.
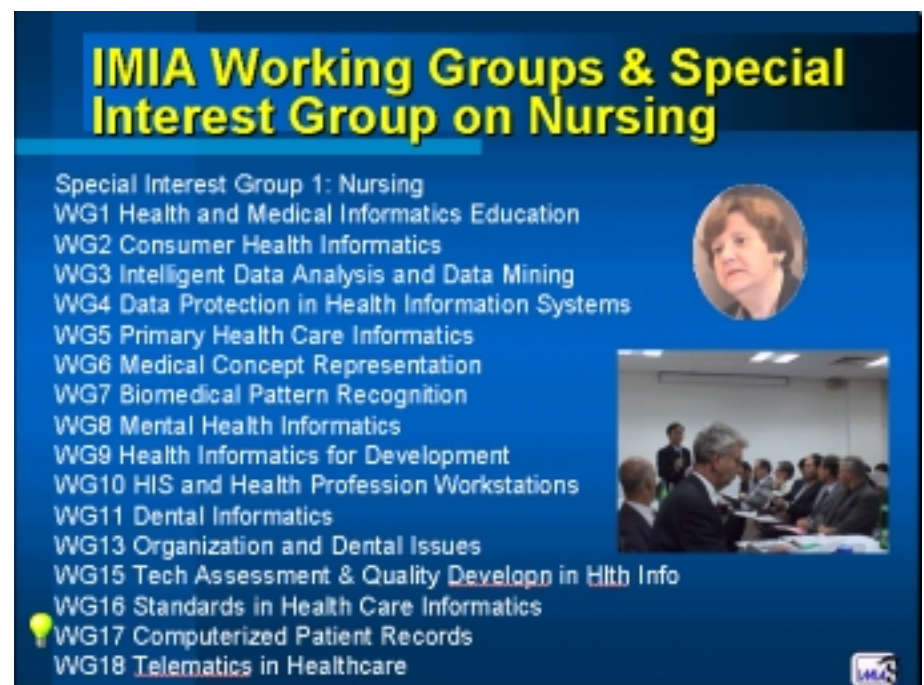

Fig. 2. IMIA Working Groups and Special Interest Group on Nursing

Dream Teams

In carrying out my job, I am very fortunate to have a team of excellent and very capable people that will serve with me on the IMIA Board (Figure 3).

I have an equally exciting team from the American Medical Informatics Association (AMIA), chaired by Dr Edward Shortliffe, who will be bringing you the next MEDINFO in 2004 in San Francisco. MEDINFO 2004 promises to be the best MEDINFO ever and I look forward to greeting everyone again in San Francisco three years from now.

Acknowledgements

Before I end my Inaugural Address, I should acknowledge the generosity of the Singapore International Foundation for honouring me with a *Singapore Internationale* Award to deliver this Inaugural Address. I also wish to thank my new employer, the Nanyang Technological University, for providing me with the conference leave and funding support to attend MEDINFO 2001. I also wish to acknowledge the global community of IMIA colleagues for their trust and confidence in me to lead the organization over the next three years.

Finally, to borrow a quotation from the great British statesman, Sir Winston Churchill, I wish to thank all of you for sharing with me, "My Finest Hour"

Thank you.

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IMIA President

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Fig. 3. Members of the IMIA Executive Board