# The Asia Pacific Association for Medical Informatics (APAMI) and World Organisation of Family Doctors (WONCA) Consortium on General and Family Practice Informatics - a Statement of Intent.

ST Liaw<sup>a</sup>, M Kidd<sup>b</sup>, B Cesnik<sup>c</sup>, KC Lun<sup>d</sup>, LG Goh<sup>d</sup>, T Yoo<sup>e</sup>, YT Wun<sup>f</sup>

<sup>a</sup>The University of Melbourne Department of Public Health & Community Medicine
<sup>b</sup>The University of Sydney Department of General Practice
<sup>c</sup>The Monash University Centre of Medical Informatics
<sup>d</sup> The National University of Singapore Department of Community Occupational and Family Medicine
<sup>e</sup>The Seoul National University Hospital Department of Family Medicine
<sup>f</sup>The Chinese University of Hong Kong Department of Community and Family Medicine

### Abstract

This paper describes the establishment of a consortium to advance health and medical informatics in general/family practice in the Asia Pacific Region. The objectives, current activities currently taking place in the region and key activities planned will be outlined.

## Background

The Asia Pacific Association for Medical Informatics (APAMI) Consortium on General and Family Practice (GP/FP) Informatics was formed at its annual general meeting in Sydney on 12 August 1997. Dr Teng Liaw from the University of Melbourne was appointed to chair this Consortium. At the World Organisation of Family Doctors (WONCA) Asia-Pacific Regional Conference in September 1997, the WONCA Informatics Working Group and WONCA Asia Pacific supported the APAMI initiative and the consortium was renamed The Asia Pacific Association for Medical Informatics (APAMI) and World Organisation of Family Doctors (WONCA) Consortium on general and family practice informatics.

The backing of APAMI and WONCA Asia Pacific gives the Consortium a high political profile in the Asia Pacific region, which will facilitate its participation in and contribution to the success of various multinational IT&T projects being proposed in this region e.g. the Singapore Health One, and the Malaysian Multimedia Supercorridor.

Theoretically and historically, there are strong political and economic arguments for adopting an international and regional approach to facilitating the adoption of innovations like health and medical informatics. Practically, in these days of fiscal restraint and a keen eye for the export market, a multinational approach will facilitate the solicitation of support and resources from government and industry to develop, implement and evaluate expensive IT and multimedia projects. The economy of scale makes it more cost-effective for industry to invest in a larger international market.

### The objectives of the consortium are to:

- 1. Facilitate discussion and develop a position paper on GP/FP Informatics in the Asia Pacific region,
- 2. Develop a viable program to design, implement and evaluate GP/FP Informatics projects in the Asia-Pacific region,
- 3. Raise support and resources for the program from governments and businesses in the region,
- 4. Encourage Medical Schools in the region to include health and medical informatics in the curriculum, and
- 5. Establish the place of GP/FP Informatics as an integral component of the region's health care system.

The strategies to achieve these objectives are to:

1. Prepare a position paper on GP/FP Informatics for approval by APAMI and member general practice organisations. This position paper will include:

- a rationale for GP/FP Informatics and its role in health informatics,
- a conceptual framework for developments in GP/FP Informatics,
- a program and a timeline for projects in GP/FP Informatics,
- an evaluation strategy for projects in GP/FP Informatics
- an education and training program in GP/FP Informatics

2. Develop strategic alliances with universities, professional bodies, governments, the lay and professional media, and industry in the region to support a program in GP/FP Informatics.

3. Publicise the discussions and recommendations widely via publications in medical newsletters, journals and the WWW with a view to encouraging and engaging the health care profession.

### Membership of the consortium:

Health care professionals with an interest and/or expertise in health and medical informatics with a particular focus on general and family practice will be eligible. They are envisaged to be derived from member organisations of APAMI, WONCA Asia Pacific or universities in the Asia Pacific region. While we recognise that English may not be the primary language in all the Asia Pacific countries, it will be the medium of communication for the consortium. International collaboration and implementation of projects will have to be bilingual - English plus the relevant national language.

### Relationship of the Consortium to the "parent" organisations:

APAMI comprises informatics organisations from member countries in the Asia Pacific: Australia, Hong Kong, Japan, Korea, Malaysia, Singapore, Thailand, and Philippines. Each member organisation may have a Working/Interest Group in GP/FP Informatics. Thus, HISA in Australia has a GP Special Interest Group. In turn, APAMI is a member of IMIA; member countries are also members of IMIA. At this point in time, IMIA does not have a formal WG on GP/FP Informatics. If the APAMI GP/FP Informatics Consortium is successful, other regional groupings may be encouraged to adopt a similar strategy.

WONCA Asia Pacific also comprises GP/FP organisations from member countries in the Asia Pacific. Each member organisation may have a Working/Interest Group in Informatics. Thus the RACGP in Australia has an Informatics Committee and runs a Computer Conference every 2 years. WONCA Asia Pacific is a Member of WONCA; member countries are also members of WONCA. WONCA has an international Working Group on Informatics; however, there is no Asia Pacific group. This situation may be contrasted with the WONCA Classification Committee, which set up an Asia Pacific Committee because of a perceived need for support in relation to data collection and classification in the Asia Pacific region. This committee also has an interest in informatics especially in the area of standards in coding and classification for electronic health records.

The place of standards organisations, namely the International Standards Organisation (ISO), in relation to health informatics is fairly well defined internationally and nationally. As far as this consortium is concerned, any relationships will be via the "parent" organisations and member countries. It is envisaged that the consortium will be guided by the policies of the APAMI, WONCA Working Group on Informatics and WONCA Asia Pacific in all its deliberations and activities. The views and aspirations of the participating member countries will decide the final format of the position paper and strategies recommended. Any lack of consensus will be included in the final recommendations to be presented to the "parent" organisations of the Consortium.

## **Draft position paper on GP/FP Informatics**

#### Rationale:

Because it involves the largest number of clinicians, GP/FP Informatics is the leading sector in health and medical informatics in the Asia Pacific region. The situation is similar in the European Community and Canada, though less so in the USA. In most countries, the use of information and communication technology is generic throughout all sectors and disciplines of health care. However, the context will differ depending on whether we are concerned with general and family practice, intensive care or nursing. Just as, if not more, important is the need for agreed and accepted standards in data and information structures and sharing to integrate health care services efficiently and effectively. The link between hospital-based and community-based health care services needs significant improvement to achieve its potential to provide comprehensive, coordinated and continuous care for patients. This is important at both the acute health and post-acute and rehabilitative phase of health care.

At all levels of health care services, the information-sharing infrastructure must be similarly coordinated (and filtered) to ensure that appropriate health information are accessible to healthy and at risk consumers. The GP/FP has the greatest contact with the population - 80% of the population in Australia will see a GP/FP over a 12 month period - and is in the most strategic position to facilitate ongoing disease management, preventive health care and health promotion. This is the strength of GP/FP Informatics.

To improve the quality of care, teaching and research, it is important to make quality information available to and easily accessible by GP/FPs. The technology, especially the user interface and navigational tools, should be kept simple and userfriendly. For example, the electronic health record should be intuitive to use and meet the needs of GP/FPs and their patients and the searching the literature or the WWW should be simple to learn and execute.

A difficulty in the dissemination of GP research findings and methodology is the lack of a forum. The usual sponsors, e.g. drug companies and publishing houses, are less inclined to support hardcopy journals because they are not seen to be widely read. The electronic medium is a solution to this dilemma because it is relatively cheap and pervasive.

Finally, what do the GP/FPs and their patients get out of GP/FP Informatics? All the most innovative strategies in the world will not advance the uptake of GP/FP Informatics if there is no costeffective benefit to be gained by GP/FPs or their patients.

In the short-term GP/FPs would appreciate prompt advice and decision support from their peers and colleagues as well as advice and help from clinical experts who understand their circumstances. Over the longer term, computers should, without losing them money, improve their professional and social knowledge, the way they practice medicine and their patients' health. GP/FPs would also like assistance in computerising their practices, buying and using software that can help them improve their care of patients, and systems that can help them monitor the clinical progress of their patients.

In the short-term, consumers want to be able to access credible health information from print and electronic sources such as the WWW. They may also want to access low level health care electronically. GP/FPs have a facilitating and coordinating role in these circumstances. Over the longer term consumers want to improve their knowledge of health care and health, particularly, their own health, leading to more informed decision making and greater responsibility in their own health care.

# A conceptual framework for developments in GP/FP Informatics:

To achieve the aims outlined in the rationale, the optimum approach to developing and implementing informatics projects must be multidisciplinary, intersectoral and link the secondary and primary levels of health care. There should be appropriate emphasis on project evaluation and the education and training of the stakeholders and participants. The timeline must be realistic and the business case sound. Country specific and coordinated approaches to develop strategic alliances with universities, governments and industry in the region to support a program in GP/FP Informatics should also be developed. Apart from these generic and general requirements, the details of the framework may vary from country to country.

Such a framework may be based on the perceived roles of IT in GP/FP:

- 1. Information management and communication
  - · between GP/FP and patients
  - between GP/FPs and other GP/FPs, allied health professionals and other community-based carers
  - between primary and secondary/tertiary care
  - between GP/FP and funding agencies and health insurance companies.
- 2. Research
  - project and resource management (collaboration, timeline)
  - data collection, management and analysis
  - evaluation and continuous quality improvement
- Education
  - undergraduate curriculum
  - postgraduate CME
- 4. Doctoring using the IT&T, including the Internet

### A program and a timeline for projects in GP/FP Informatics:

This will vary from country to country for country specific projects. However, collaborative projects will need careful coordination. From personal experience in Australia, the timeline for a development program in health informatics should be no less than in 5-year cycles.

Various centres and seedbeds exist in the Asia-Pacific to assist and enhance the development of GP/FP Informatics:

- the Singaporean Health One project,
- the Cyberspace Hospital maintained by the Centre for Medical Informatics at the National University of Singapore,
- the Korean Virtual Doctor and Virtual Health Centre maintained by Dankook University College of Medicine in Korea,
- · the APAN maintained from Japan,
- · the Malaysian Multimedia Supercorridor, and

 the Vision for Information-Enhanced Well-being towards the 21<sup>st</sup> century (VIEW21) project in Victoria, Australia

These various centres can easily coalesce or collaborate under one umbrella - an Asia Pacific Collaborating Centre for GP/FP Informatics. Resourced by a consortium of industry, governments, professions and academia, this Collaborating Centre can determine priorities and undertake conceptual development and evaluation of relevant systems within an overall framework of common functional specifications and requirements for standards in data structures, terminology and communication. Each participating country may take the lead role for particular aspects of informatics e.g. computer-based medication management system, as determined by the collaboration. This modular approach is important ensure that the final product will be an integrated whole, sharing information meaningfully and seamlessly. For practical purposes, the language of international collaboration will have to be English. However, the multicultural and multilingual issues must be addressed and many of the collaborative projects will require bilingual skills.

### An evaluation strategy for projects in GP/FP Informatics:

Evaluation must be a realistic and relevant process leading to deeper understanding and consensus. A systems approach, in the context of the particular intervention or professional practice must be adopted e.g. a reminder & recall system to assist health promotion or a medication prompting system to assist prescribing. It must also be recognised that, while we require level one evidence from randomised controlled trials, often such controlled situations are not possible in the evaluation of health information resources. Indeed, the nature of the information resource often changes and evolves during the life of the project. How the user uses and interacts with the information resource is important. Evaluators must ask the right questions and have an open mind about the objectivist and subjectivist methodologies available.

### An education and training program in GP/FP Informatics

Education and training is an, if not the most, important determinant of success in the use of health information resources. This importance is reflected in and recognised by IMIA, whose first Working Group is the Education and Training Working Group. Education and training should be developed and implemented at undergraduate and graduate levels on an ongoing continuing education basis.

The undergraduate program should build on the information technology skills learnt in schools. The emphasis should be on using the computer as a tool, information management proficiency and appreciating the role of the clinician as a knowledge resource as well as being a good clinician. Thus skills to be taught should include: critical appraisal to filter the massive amount of available health information, the organisation of data, information and knowledge, and the need for standards, data quality and security in the clinical context. Ideally this program should be taught as an integral part of the medical curriculum. However, specific graduate diplomas, masters courses and PhD programs have their place in the overall scheme of things. As a rule, all education programs should be learner-centred and be based on adult learning principles. For the neophyte clinician and professional, change management strategies should also be part of the curriculum.

At the graduate and professional education level, similar emphases must be taught. However, it must be recognised that clinicians are at a variety of levels of information proficiency and computer literacy. So the programs must be targeted appropriately. Computer education training for clinicians have been conducted as short courses (as at the University of Melbourne http://ariel.unimelb.edu.au/~tengliaw/gpcomput.html) or as certificate courses. The collaboration between The University of Melbourne and The National University of Singapore over the internet to discuss best practice in research, teaching and clinical activities in general and family practice is another strategy (http://www.ch.nus.sg/fammed)

# Developing strategic alliances with universities, governments and industry in the region to support a program in GP/FP Informatics.

The approach should be coordinated at the APAMI and WONCA level and targeted at the respective member countries, international governmental organisations and multinational companies. Professional bodies should develop strategic alliances with universities, governments and industry in the region to support a program in GP/FP Informatics. The approach can be coordinated at the APAMI and WONCA level and targeted at the respective member countries, international governmental organisations and multinational companies. Despite international differences in health care systems, there is much educational, healthcare, research and socioeconomic issues in health informatics that the member countries of APAMI and WONCA Asia Pacific have in common. The wheel should not be reinvented, and resources wasted, to solve these common problems. Resources can then be targeted at issues and problems specific to member countries, resulting in cost-efficiencies.

This statement of intent has been through a few iterations via the APAMI and WONCA interest groups in general and family practice informatics. It is planned that a final draft of the position paper for GP/FP informatics in the Asia Pacific region will be available for presentation at Medinfo 98 in Seoul.

### **References:**

- Australian Medical Association (AMA) and The Royal Australian College of General Practitioners (RACGP). Strategic Framework for Improved Information Management through the use of Information Technology in General Practice. 1997
- [2] Department of Health and Family Services. General Practice in Australia: 1996. AGPS, Canberra, 1996.
- [3] Hasman A, Albert A, Wainwright P, Klar R, Sosa M. Education and Training in Health Informatics in Europe. IOS Press Netherlands 1995.
- [4] New South Wales Department of Health. National Codeset Project: Community Based health Services. Doll Martin associates Pty Ltd. Sydney 1997
- [5] Parliament of the Commonwealth of Australia House of Representatives Standing Committee on Family and Community Affairs. Health on Line. A report on health information management and telemedicine. AGPS, Canberra 1997.
- [6] Royal Australian College of General Practitioners (RACGP). Position statement on IM/IT. 1997.
- [7] US Congress, Office of Technology Assessment (OTA). Bringing Health Care Online: The role of information technologies. OTA-ITC-624 (Washington, DC: US Government Printing Office, September 1995.
- [8] Victoria Department of Human Services. A proposal for a Cooperative Feasibility Study: To establish an Electronic Personal health Management Program. 1997
- [9] Victoria Department of Human Services. IT Strategic Plan Framework. 1996.
- [10] Victoria Department of Human Services. Information, Information Technology and Telecommunication Strategy for Victorian Public Hospitals. Final Report. Melbourne, Dec 1996.

### Address for correspondence:

Liaw ST

Department of Public Health & Community Medicine, The University of Melbourne. 200 Berkeley Street, Carlton, Victoria, 3053 Australia.