Global health: engaging with Vietnam

Vietnam is a beautiful country with a history of resilience to conflicts, epidemics and other challenges to health. It is also one of the quiet Asian ‘power houses’ with economic growth averaging over 7% per annum over the last decade. Although the per capita GDP of Vietnam in 2006 was US$722 and poverty is still significant, compared with some countries with the same GDP per capita, Vietnam has good health achievements. Life expectancy at birth has increased steadily, and in 2005 it was 71.5 years; the infant mortality rate for children under one has reduced from 31 per 1000 live births in 2000 to 17.8 in 2005; the under five mortality rate has fallen from 30 per 1000 live births in 2000 down to 19 in 2005 due to the success of public health programs in nutrition, immunisation and health care for mothers and children.

Some of the major issues Vietnam is now facing are how to deal with inequalities in health and also the transition to non-communicable diseases while still dealing with major infectious disease concerns such as SARS and avian flu.

The School has had a long and positive relationship with individuals in Vietnam for over a decade. Over twenty students have completed their Masters; some in Public Health (MPH), Health Administration (MHA) and Health Professional Education programs. Most were supported through AusAID or WHO Fellowships. Many of these students have returned home and gained promotions in their organisations, or have accepted new roles and posts in a range of government and non-government agencies.

A number of academic staff has also worked on projects in Vietnam, which have resulted in longstanding relationships and strong personal bonds. We have graduates in the Institute of Hygiene and Public Health based in Ho Chi Minh City, the Hanoi School of Public Health, Hanoi Medical University and other medical universities throughout the country. Most recently Van Nguyen submitted her PhD thesis on Hepatitis B-related liver disease burden in Vietnam and Australia and Tuan Anh Nguyen is currently enrolled in a PhD titled Analysis of pricing policy and feasible solutions for affordable medicine prices in Vietnam.

One of the prime movers in promoting the School’s connections with Vietnam has been Associate Professor Anna Whelan. “My first visit to Vietnam was in 1999 when asked by WHO to provide assistance to the Ministry of Health on social mobilisation and health care and health protection. That mission taught me how complex and difficult it is to understand the system, the personalities and how best to work collaboratively. I felt that I was working in a fog! The person involved in that project then went on to become the Director of the new Health Strategy Policy Institute, designated to provide policy advice to the Ministry of Health.”
Engaging with Vietnam

The School’s current work in Vietnam is very exciting. Professor Daniel Tarantola, who began to work in Vietnam in the early 1980s, is now leading a team from the School together with Dr Luu Ngoc Hoat and his team of researchers at the Hanoi Medical University, which is looking at the sexual and reproductive health of sex workers and injecting drug users. Professor Tarantola is also working with the Central Committee of the Party on establishing and enhancing the interaction between health and human rights in relation to such issues as maternal and child health, emerging diseases, HIV, climate change and economic globalization.

“In May we had another important visit from four staff from the Health Strategy Policy Institute (HSPI). We were selected by the HSPI to establish a collaborative partnership that will be supported by AusAID. This is a huge honour as there were many other universities and institutes that could have been selected,” says Anna.

If this partnership is supported by AusAID, it will involve a three year capacity building exercise with many staff exchanges, strategic research and research development. The aim is to improve the policy expertise within the HSPI to assist the Ministry of Health in strategic policy development and effective implementation. It will be an important initiative that may involve a number of staff at the School, Faculty and also other Australian expertise such as the Nossal Institute in Melbourne.

“The opportunity to work closely with the HSPI at a time of major change and growth in Vietnam is one that will have long lasting positive effects, and the School is very proud to be involved with such an energetic and focused group of people. I believe that we are uniquely placed to work collaboratively with HSPI to make a real difference. They are the Ministry of Health’s policy institute in Vietnam and will provide high level advice on human resource planning as well as health policy and financing. So this is a unique opportunity to learn from each other and work closely with people who will have a major input into the future development of Vietnam’s healthcare system,” says Anna.

STAFF PROFILE

Focused on geriatric medicine

The School of Public Health and Community Medicine has over 70 conjoint staff who contribute significantly to the School’s teaching and research activities. In this issue we highlight the activities of one such conjoint - Professor Daniel KY Chan who is the director of Aged Care and Rehabilitation at Bankstown-Lidcombe Hospital and a conjoint Professor of Geriatrics within the School. Daniel has multiple qualifications which give him relevant background in his current roles – as a manager (MHA, AFCHSE), a staff specialist (MBBS, FRACP, FHKCP) and an enthusiastic medical researcher (MD). He is involved in undergraduate medical student teaching and supervises Masters and PhD students.

Daniel’s research interests are broad, ranging from basic science to health care service related topics. He says: “One of my main interests is finding the genetic and environmental risk factors for a number of neurodegenerative diseases such as Parkinson’s disease and vascular dementia. National and international collaborations have been established for the studies of the genetic associations which includes Australia, mainland China, Hong Kong, Singapore and Japan.”

Daniel has been involved with large-scale epidemiological studies, surveying over 7000 households for prevalence of Parkinson’s disease and interviewing identified Parkinson’s patients in metropolitan Sydney. “Longevity and healthy ageing is another collaborative study currently in progress where we are recruiting and interviewing subjects who are healthy elderly aged 80 years and over,” he says.

In addition, Daniel has been involved with stroke service related research and stroke epidemiological research projects. His effort in establishing a better stroke unit model has resulted in invitations as a keynote speaker to the International Stroke Conference in Shanghai in April 2004 and to present his experiences and results in many other conferences in the Asia Pacific area. Neurologists from China and geriatricians from Singapore have come to learn from the comprehensive stroke unit model in Bankstown Hospital. This year, Daniel is involved in a comprehensive stroke care model trial funded by the NHMRC as a chief investigator. Results of most of his research projects have been published in various scientific journals with over 50 publications in peer-reviewed journals in the past five years and about two-fifth of these as first author.

Daniel has been successful in securing in excess of $2 million from various competitive grants as a first applicant. Sources of grants include: NHMRC, Hong Kong Research Council; New South Wales Health Department; Australian Council for Safety and Quality in Health Care (Commonwealth); Royal Australasian College of Physicians.

Apart from his positions in Australia, Daniel is an honorary professor of the Institute of Geriatrics, Beijing Hospital, China, and the honorary overseas editor for the Journal of the Hong Kong Geriatrics Society. Since 2006, he has been the international advisor for the Asian Journal of Gerontology and Geriatrics.
Developing intelligent search systems in healthcare

The UNSW Centre for Health Informatics (CHI) remains Australia’s largest, longest running and most successful academic health informatics research group. CHI conducts fundamental and applied research in the design, evaluation and application of decision-support technologies for healthcare and the biosciences. It has a long and successful research grant track record with both the ARC and the NHMRC, and carries out multidisciplinary research across the Faculties of Medicine and Engineering. Its focus on decision support is also a unique national strength, and widely recognised internationally.

According to Professor Enrico Coiera, Director of CHI: “The next healthcare revolution is in information and systems, or informatics. Building a sustainable health system for the 21st century will require the reinvention of much of the present day system, and require the intelligent use of information and communication technologies to deliver high quality, safe, efficient and affordable health care.”

CHI with its large academic research group in this emerging discipline is internationally recognised for its groundbreaking contributions in the development of intelligent search systems to support evidence-based healthcare, developing evaluation methodologies for IT, and in understanding how communication shapes the safety and quality of health care delivery. It is ideally positioned to work on modeling the complex nature of health systems and the bioscience research enterprise, and design scientifically rigorous and system wide interventions to sustain tomorrow’s health system.

Coiera says: “Our research program continues to develop in response to emerging technologies, and evolving health priorities. We have for many years focussed on improving the quality of decision making by clinicians, but have now begun to turn our focus to consumer decision-making. With a $1 million funding support over two years from the HCF Health and Medical Research Foundation, we are now able to undertake a major new program of research. We are exploring the design and evaluation of a new ‘Facebook for Health’ system that will bring together many emerging elements from Web 2.0 like social computing, Wikis, blogs, and embedded and context sensitive information retrieval. Our goal is to develop tools that support consumers in the decisions they face as they interact across the health system.”

In 2007, CHI also consolidated its investment in translational bioinformatics, exploring how the fruits of the genome and bioscience revolution will translate into clinical practice. CHI is extremely fortunate to have a strong partnership with the ICPMR at Westmead Hospital, and infectious diseases are a core focus for its translational bioinformatics work, as well as the Centre’s ongoing work in infectious diseases surveillance systems.

“This year we are also refreshing our long standing research partnership with clinicians at the Prince of Wales Hospital, and have started a new project, with Australian Research Council funding, to develop tools to understand the impact of communication practices like handover on patient safety, and to undertake some design and testing of new information system components which can support clinical team communication,” says Coiera.

Patient safety is a major thread in much of the research at the Centre, and studies are also now well underway, working with clinical partners at St. Vincent’s Hospital, on the impact of computerised systems to support prescribing. CHI has also built a new and fruitful partnership with the Australian Patient Safety Foundation, and has begun several studies of their critical incident databases, which will be of international significance when completed.

A number of key performance indicators of the success of the Centre for Health Informatics in 2007 includes $1.1 million in grants, 31 publications of which 13 were in international journals, successful hosting of the Third International Conference on Information Technology in Health Care: Socio-technical Approaches (ITHC 2007) held in Sydney over August 29-20, 2007, four full papers and a panel on patient safety and informatics at the World Congress for Medical Informatics (Medinfo) held in Brisbane and a PhD student, Sata Busayarat, winning the IFMBE Young Investigator competition (International Federation for Medical and Biological Engineering) at MEDIICON 2007 from a field of 12 finalists.

“One of the major challenges for all academic research organisations is sustainability and critical mass, and this year we undertook to form a new Institute of Health Innovation, which will bring together a number of key health services research and related organisations, under a single banner. CHI will retain its research identity and focus in the new Institute, but we anticipate significant opportunities to work more closely with our sister research organisations, and to pool resources to undertake much larger research programs. The arrival of the Institute is likely to be a major milestone in the Centre’s history, and is one we look forward to, as it is the harbinger of even greater things for us,” says Coiera.
Health promotion through football for social inclusion

Football United began in 2006 as the Refugee Youth Soccer Development Program. Conception for the program actually began long before that, during founder Anne Bunde-Birouste’s work with the UNSW Health and Conflict project team. Sensitised to the difficulties that recently arrived humanitarian refugee youth and families often face in their transition into Australian society, and remembering the unity that the game brought to France during the 1998 Football World Cup, Anne started exploring ways to use people’s love for football (soccer) to build opportunities for belonging, racial harmony and community cohesion in the Sydney area.

“There is evidence of the positive impact of sport on individual participants’ physical, mental and social health. At the community level, sport can contribute to promoting a socially cohesive society. Football, as the only truly global game, has a particular capacity to bring people together. However, care needs to be taken in how programs are developed and implemented to ensure they provide bridges to mainstream community organisations and structures, and are socially inclusive rather than exclusive,” says Bunde-Birouste. It is this “how” that Anne is studying as she leads the implementation of the program.

The Football United program was developed through consultation with many diverse communities during a nine month mapping period. An initial steering group to oversee the community mapping included members of Auburn and Liverpool Migrant resource centres, the African–Australian Youth Tournament, and diverse football personalities, including former professional players, and local and district football association management staff.

Issues identified through the consultations include:

- A lack of available sports programs addressing barriers faced by refugee and migrant communities;
- Under-representation of refugee and migrant young people in structured or formalised sport;
- Young people of refugee background want to have ‘normal experiences’ and be accepted in ‘normal environments’;
- High enthusiasm from refugee community members for a comprehensive football development program.

The mapping period indicated that a number of sports activities were happening, yet at that time the tendency was to hold short-term events. “The Football United program was designed to support these where possible, but focus was particularly on building a long-term program that would incorporate leadership development, mentoring and bridging with mainstream soccer and the communities in which it is played,” says Bunde-Birouste.

A program of activities was designed and trialled during a pilot development period of 12 months, again, in partnership with groups such as STARTTS, Auburn, Liverpool, and Blacktown Migrant Resource Centres as well as the PCYC and football clubs and associations. The resulting Football United program activities were designed to provide individual participants with skill sets that are transferable to other contexts. The
Football for social inclusion

various elements are integrated into football training and playing opportunities which include three key focus areas:

1. Football activities: These include regular Saturday and after school programs, gala days and school holiday camps.
2. Training: Youth and family members from the communities have opportunities to participate in courses in the following areas: coach, referee, mentoring and life-skills.
3. Fostering involvement with local football clubs: Football United has supported three teams in local Futsal competitions, and registration of a number of young players on local teams in the Blacktown District.

UNSW students have contributed greatly to the development and running of the program to date. Master of Public Health students volunteer in all aspects of the program, and medical students have provided vital development assistance and learning during their ILP (Independent Learning Project) years.

A team of researchers from SPHCM, with an international group of colleagues, has recently submitted a proposal to the Australian Research Council to implement a ground-breaking longitudinal cohort impact study that will investigate the implementation of the Football United program over a three year period to analyse processes and impacts on individual health/wellbeing, social inclusion and cohesion. A short view of Football United in action can be seen on the following UTUBE link http://www.youtube.com/watch?v=DBdS7GEOwBM.

It is important to note that the Football United program has consistently worked in partnership with, and support from, a number of groups in addition to those mentioned above. Too numerous to list here, they can be found on the program website at http://soccer.sphcm.med.unsw.edu.au/. Anne can be contacted at ab.birouste@unsw.edu.au for further information.

### BROADENING HORIZONS

MPH student Padmanesan Narasimhan talks to Sophie di Corpo about his study and work at SPHCM

“I really feel so lucky” is how Padmanesan Narasimhan responded when I asked him about his experiences at SPHCM.

Our interview began with Padma describing his life in India before coming to Australia. He painted a picture of a busy physician, living and working in Chennai, India. As well as clinical duties, Padma was involved in research, particularly in the areas of TB and HIV/AIDS, which included travel to the USA and France to present his research with colleagues. “I wanted to extend my research skills so I looked all over the world for an MPH. I had heard a lot about the National Centre for HIV so I was interested in coming to UNSW. I was also looking for a shorter program as felt sure I would want to go on to do a PhD.”

Padma enrolled as a full time internal student in our Master in Public Health program at the beginning of this year. He describes the huge differences in study here to what he was used to in his home country, “I find the approach here much more engaging as we are encouraged to think critically. This has deepened my understanding and made me ask why, why is a particular thing needed, what should we do and why should we do it, it is very different to the narrow way I studied for my undergraduate medical degree in India. There is also far more emphasis on social aspects of health which has really changed the way I look at things.”

A highlight of the program described by Padma is that of meeting students from all over the world, 35 different countries in the one class of 100 students when he was completing Health Promotion and Social Aspects of Health in Semester 1. “I have never had such an experience, so many of us from such different cultural backgrounds, from America, Burma, Kenya, Australia, Nigeria, Nepal, Pakistan, and many more. I feel so culturally enriched. We also have different professional backgrounds with doctors, nurses, physiotherapists, psychologists etc. I was never in such a situation where I was studying with such a diverse group of students.”

Padma’s review was not all glowing, however, as he said at times he wondered whether the expectations placed on students are too high. He commented that the pressure of completing four courses across two semesters is at times very difficult.

He also warned that students enrolling in an MPH full-time need to think about their plans for when they finish the program and the sooner the better.

Padma himself was particularly fortunate as Professor Raina MacIntyre joined as Head of School in April. Padma contacted Professor MacIntyre to explore the possibility of enrolling in a PhD once he completed his MPH. Not only has he been able to confirm his PhD with Professor MacIntyre and Dr James Wood as his supervisors, but he was also able to join an ARC Project: Modelling and estimation techniques for the transmission and control of Tuberculosis with new and existing vaccines, as a research assistant.

Padma’s PhD Topic is “The epidemiology and transmission dynamics of tuberculosis (TB) in Southern India, with a focus on risk factors and household contact patterns.”

So what does Padma do when he is not studying or working? “Sydney is fabulous, all the parks, the markets, the music, the different foods, Ethiopian, Indonesian, you can eat any food here. Favourite pursuits include going to hear the Australian Chamber Orchestra (ACO) and bushwalking in the Royal National Park. A group of students get together to enjoy all Sydney has to offer.”
Spotlight on research @ SPHCM

Face masks for the prevention of respiratory transmission of infectious diseases

During an outbreak of an emerging infection such as pandemic influenza or SARS, drugs and vaccines may be unavailable, delayed or limited in supply. Community demand for protection could become a law and order problem. Non-pharmaceutical interventions for community protection such as face masks are one of the few, widely available strategies that can be offered. Specialised particulate respirators (N95 or P2 masks) and plain surgical masks are alternative options for disease control, and individuals require multiple masks each during the period of risk. Particulate respirators are more expensive and potentially more effective than surgical masks, yet the relative efficacy of these two types of masks is unknown. Given that during a pandemic or other outbreak, large quantities of masks will be dispensed and used, and each person will need to use several masks during the period of risk, it is essential to have good scientific evidence to inform policy.

There has been far less research into non-pharmaceutical interventions compared to research efforts into drug and vaccine development. While there are many randomised controlled trials (RCTs) of the value of handwashing, there are none to date on the relative efficacy of different types of masks. There is only one published RCT on surgical masks which showed no effect, but low compliance. The only other data we have on the effectiveness of masks come from ad-hoc, retrospective data collected during outbreaks of diseases such as SARS.

These observational data suggest a protective effect of any type of mask, but the relative effect of other interventions such as handwashing, social isolation and other confounders cannot be determined. Masks may also cause adverse effects such as necrosis of the skin on the bridge of the nose, and hypoxia. For the purpose of rationally informing disease control policy on mask use, it is therefore essential to gather prospective clinical trial evidence about the efficacy, compliance and adverse effects of mask use in preventing transmission of respiratory pathogens.

Professor Raina MacIntyre and her team conducted a trial funded by The Office of Health Protection, Department of Health and Ageing in 2006 and 2007, which was the first trial to commence internationally. They also did pilot work in health care workers in Australia in 2007, and found very low acceptance of face masks in the Australian context. Dr Holly Seale, who works with Professor MacIntyre, has also done research on the unique aspects of health care workers’ knowledge, attitudes and belief systems, and how this impacts on compliance with pandemic plans. This team is now building on this work with much larger scale trials in Beijing in 2008 and a planned study in Hanoi in 2009.

The team and collaborators in the mask trials, led by Professor Raina MacIntyre, includes Dr Holly Seale, Associate Professor Mary-Louise McLaws, Dr Lorraine Yap, Dr Van Nguyen, Dr James Wood (UNSW); Professor Dominic Dwyer, (ICPMR, Westmead Hospital); Dr Simon Cauchemez, Professor Neil Ferguson (Imperial College, London); Professor Robert Booy, Dr Leon Heron, Ms Pam Cheung RN, Dr Michelle Cagney (National Centre for Immunisation Research); Dr Wang Quany and colleagues (Beijing Centers for Disease Control, China) and Associate Professor Phan Thi Nga and colleagues (National Institute of Hygiene and Epidemiology (NIHE), Hanoi, Vietnam).

In October 2008, the research team will travel to Beijing for the study with the Beijing Centers for Disease Control. This work will be a much needed contribution to new knowledge with real value for informing disease control policy globally.

For more information on research at SPHCM, see our website: http://www.sphcm.med.unsw.edu.au/SPHCMWeb.nsf/page/Research
Over 700 publications were identified and more than 70 were included in the assessment of the effectiveness of infection control measures. From the available evidence, it was ascertained that pre-exposure and post-exposure prophylaxis are efficacious and effective measures to limit infection of influenza. Seasonal influenza vaccination also appears to be efficacious and effective by limiting the transmission between the cases and the susceptibles. However, very limited evidence was retrieved concerning the effectiveness of face mask use.

According to Gralton, “Two types of masks are normally used to control the spread of infections. Surgical masks have historically been used to protect an open wound site from being contaminated by micro-organisms from the surgeon’s nasopharynx. These masks are also employed by healthcare workers to protect themselves against exposure to respiratory secretions from patients such as respiratory syncytial virus, whooping cough and most recently, SARS. N95 masks, which have a higher filtering capacity, thus conferring greater protection for the healthcare workers from inhaling infectious Mycobacterium tuberculosis particles from patients, were also used prominently during the SARS experience in South East Asia and Canada.”

Despite the anecdotal reports of the use of masks, very little published evidence was found to describe the effectiveness of these masks in limiting disease transmission; only mid to low level of evidence study designs had attempted to evaluate effectiveness. Pertaining more to the topic of limiting influenza transmission, no studies had been undertaken to assess whether masks are effective or which mask type is more effective.

Due to the limited evidence available it was not possible to conclusively determine whether N95 masks confer an increased protective value against respiratory disease, let alone influenza, to the wearer compared with surgical masks.

Based on the results of the literature review, together with consideration for standard universal precautions and patient care practice during a pandemic, evidence-based recommendations were developed and presented to the Commonwealth-appointed Special Influenza Advisory Group for feedback.

These recommendations will be reviewed for practicability and cost-effectiveness by a number of healthcare stakeholder groups including representatives from general practice, infection control departments, nursing and border protection. The end product, a reference tool, will provide the healthcare worker with evidence-based level of protection they require for specific clinical settings to ensure safe working environment.
Developing health workforce plans

The past three months have seen some significant developments in the School’s involvement in the field of health workforce planning in our region and elsewhere. In June this year John Dewdney, a Visiting Fellow at SPHCM, working as consultant for the German international consulting firm EPOS, conducted two health workforce planning workshops in Jakarta for staff of Indonesia’s Ministry of Health. The workshops were based on his computer-based Health Workforce Planning Workbook and what has come to be known as John Dewdney’s HRH Checklist.

“The original version of the Workbook was written in 1992 at what was then the WHO/UNSW Regional Training Centre as a do-it-yourself tool for the production of well formulated national health workforce plans – including both textual and tabulated material – in the Pacific Island countries,” says Dewdney. With support from WHO’s Western Pacific Regional Office – in particular from Lorraine Kerse, then HRH Regional Adviser at WPRO and now associated with the School’s HRH Hub@UNSW, the Workbook was used to draft health workforce plans in most of the Pacific Island countries in the early 1990s. Then, with support from AusAID, ADB and the World Bank, it has been used for planning development in the Mekong countries and some of the provinces of China. More recently the Workbook has been adopted and adapted in the preparation of national health workforce plans in Africa, Europe and the Caribbean.

Returning from Jakarta in July, John received from the WHO Office in Manila a CD – the WPRO Workforce Projection Tool Version 1.0 (WWPT). The WWPT, a somewhat polished and more user-friendly version of the workforce projection sheet model presented in John’s Workbook, has been developed for the Human Resources and Development (HRD) division by the Information and Technology Group (ITG) of the Western Pacific Regional Office. The CD is accompanied by a very detailed manual setting out how to use the tool.

John was also notified that version 1.0 of the workforce modelling software iHRS Plan, developed by the USAID/PEPFAR-funded Capacity Project in North Carolina, USA, had been put on the Web and would be pilot tested in Namibia in September 2008. This is the third of the Capacity Project’s free and Open Source core software packages, each addressing a specific human resources for health issue. The two previously released were iHRIS Manage - a human resources management system and iHRIS Quality - a training, certification and licensure tracking database. The iHRS Plan software has been built on top of a simplified version of Dewdney’s health workforce requirements and supply model, first published in his Workbook. That model was adopted as the basis for the development of iHRS Plan when John participated in a PEPFAR workshop at the World Bank, Washington, DC in December, 2007.

Recently, John received from his GTZ/EPOS counterpart in Indonesia, Dr James Darmawan, an email saying that the Ministry of Health was now embarking on the preparation of a definitive version of the draft national workforce plan prepared during the June workshops, and this would be presented for formal Government endorsement at a workshop in Jakarta later this year. Arrangements are in train for John to attend that workshop.

“It’s interesting to see that a workforce planning tool originally developed using data from Samoa with a population then of less than two hundred thousand is now being used in the preparation of a national workforce plan for Indonesia with a current population of more than 200 million people,” says Dewdney.