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Improving health worldwide

Improving health worldwide:  
**SOUTH EAST ASIA**



# Working in partnership to improve health in South East Asia



**South East Asia is developing rapidly, with societies and health in transition. Rising prosperity and levels of education have led to increasing investment in health services and systems, and yet despite this impressive progress, the region faces health challenges old and new.**

Alongside the unfinished agenda of tackling infectious diseases, malnutrition, and child and maternal mortality, South East Asia is on the front line of pandemic influenza, evolving drug-resistance in malaria and other pathogens, public health impacts of earthquakes and floods, and above all, the growing threat of non-communicable diseases such as cancers, cardiovascular disease and diabetes.

Our School has been working in the region for over a century, however in today's increasingly globalised world, the traditional model of the 'rich north' solving the problems of the 'poor south' is no longer relevant. We must embrace greater interdependence, expertise and pluralism in both problems and solutions.

This is why we are working closely with the Saw Swee Hock School of Public Health in Singapore, Mahidol University in Bangkok, and numerous other partners to develop and foster regional networks for research, education and innovation, in order to understand these challenges fully and develop practical solutions.

Effective public health provision requires governments to act, but more importantly depends on the sustained creativity of institutions, communities and individuals – scientists, health workers, activists, entrepreneurs and philanthropists – to develop and implement innovative programmes that can be replicated globally.

We can only achieve this by working together, driven by our shared mission to improve health for all. We hope that by reading these pages, you will be inspired to support us and to join us.

**Professor Baron Peter Piot**  
Director and Professor of Global Health



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## Commitment and collaboration



**We hope that our collaboration will result in enhanced education, vital research programmes and policies for our region and worldwide”**

Professor Chia Kee Seng, Dean,  
[Saw Swee Hock School of Public Health,](#)  
National University of Singapore



Dr Amy Khor, Minister of State for Health with Prof Chia Kee Seng, Prof Anne Mills and Dr Vince Cable, UK Secretary of State for Business, Innovation and Skills, at the partnership launch in London, October 2011.

Our collaborative work over many years with partners across the region, notably Mahidol University where Professor Richard Coker and his team have been based, has helped develop and support public health research and capacity building.

**“ We are proud of our achievements working in partnership with the School, enabling us to exchange experience, knowledge and skills to improve public health in Thailand and throughout South East Asia.”**

Associate Professor Phitaya Charupoonphol,  
[Dean of the Faculty of Public Health, Mahidol University, Bangkok](#)

In 2011, the School established a strategic partnership with the newly-founded Saw Swee Hock School of Public Health in Singapore. We are already engaged in staff and student exchanges, academic and extensive collaborative programmes in infectious disease control and health systems. Our objective is to improve public health by conducting research that is relevant to practitioners and policy-makers.

**“ For academic partnerships to be successful, both strong commitment at the leadership level as well as active ground-level collaboration are crucial. Moving forward, the two Schools will work together at integrating diverse disciplines into cutting-edge public health research. We hope this will result in a Joint Centre supported by joint appointments and a joint PhD programme. I am therefore very confident that this collaboration will be a robust and fruitful one and together we can ‘Turn Discovery into Healthier Communities’.”**

Prof. Chia Kee Seng, Dean of the [Saw Swee Hock School of Public Health,](#)  
National University of Singapore



# Putting health on the map: some key projects and partnerships

## 1 Flu scenarios in Cambodia

Determining funding priorities in resource poor countries in anticipation of future pandemics is challenging. Dr Sok Touch, Director of Cambodia's Surveillance Centre, along with Tom Drake, Richard Coker and other colleagues from the School, with funding from the German government, are conducting economic analyses of pandemic influenza scenarios, resource allocation, and risk uncertainty to support Cambodia's pandemic preparedness strategies.



## 2 Tracking drug-resistant malaria

The Tracking Resistance to Artemisinin Collaboration (TRAC) is a multi-country multi-disciplinary collaboration funded over 3 years by the UK Government Department of International Development. Partners include Mahidol University, Bangkok, and the Cambodian National Malaria Control Programme (see page 5 for more details). School researchers are focusing on social and economic factors around demand, use and quality of Artemisinin-based drugs, and implications for the development and control of drug resistance.



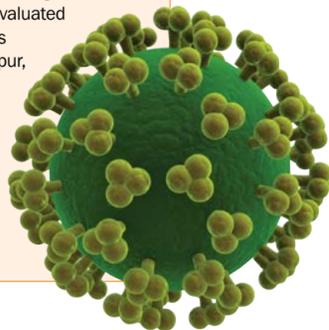
## 3 Macaques and malaria in Malaysia

Previously common types of malaria have become better controlled in several countries in the region due to effective diagnosis and treatment. Dr David Conway, working with Prof Balbir Singh's group at the University of Malaysia in Sarawak (UNIMAS), has conducted innovative research to reveal the significant problem of Plasmodium knowlesi malaria, which is transmitted by mosquitoes that feed on infected macaques. This form of malaria now affects thousands of people across the region, and the team is working with the support of the Wellcome Trust to understand its control and spread.



## 4 Treating HIV in refugees and host communities

A consortium of researchers from the School, the UN High Commissioner for Refugees and the Malaysian Ministry of Health evaluated antiretroviral therapy outcomes in a public clinic in Kuala Lumpur, finding no differences in virological outcomes between refugees and the host community. These results tentatively support a policy of equal provision to refugees and the host community in this urban setting.



## 5 Working in Myanmar



School researcher Kalpana Sabapathy works extensively in Myanmar with Médecins Sans Frontières and is publishing findings from a major HIV treatment programme. Geographical Information Systems specialist Chris Grundy is working with medical charity Merlin to establish a service to support a network of village health volunteers.

## 6 Health systems and financing



The RESYST consortium, led by Kara Hanson, is working on a range of health systems projects with IHPP Thailand, Indian Institute of Technology and the Health Strategy & Policy Institute, Vietnam. The research focuses on three critical components of health systems: financing, workforce and governance.

## 7 Sanitation and dysentery

Shigella bacterium is the major cause of dysentery worldwide, and as the region has developed, there has been a dramatic species shift, related to improvements in infrastructure and sanitation. Funded by the Wellcome Trust, Dr Stephen Baker has worked with the Hospital for Tropical Diseases in Vietnam to sequence the Shigella genome across the country, in order to discover how drug resistance is driving bacterial evolution.



## 8 Non-communicable diseases: a new epidemic



Diseases such as cancers, diabetes, cardiovascular disease and mental illness are reaching epidemic levels worldwide, and have become a major cause of death across South East Asia. In Spring 2012, the School established the Centre for Global Non-Communicable Diseases as a multi-disciplinary collaborative network to work on NCDs worldwide.

## 9 Pandemic preparedness

Researchers from the School are working with Taiwan Centers for Disease Control, IHPP Thailand, Mahidol University Faculty of Tropical Medicine, Vietnam Military Medical University, Vietnam Ministry of Science & Technology, National Institute of Public Health, and Wiku Adisasmito of University of Indonesia, Cambodia on the AsiaFluCap project, analysing health systems' ability to respond to the threat of pandemic influenza.



## 10 Child development and health outcomes

Xuanhao Chan, on a PhD scholarship from the Singapore Health Promotion Board, is investigating developmental trajectories during childhood and adolescence, to identify how risk factors may be targeted to improve later life outcomes in Singapore.



## 11 Protecting children from dengue fever



Dengue fever is a mosquito-borne disease that affects millions across the region. School researcher James Logan is working with Dengue Tools Consortium, Mahidol University and DUKE-NUS Graduate Medical School, Singapore, to investigate strategies for the prevention of dengue in children, conducting a trial in Thailand into how insecticide-treated school uniforms can reduce dengue transmission.

# Understanding and controlling infectious diseases

## Tackling anti-malaria drug resistance

Millions of people in South East Asia are affected by malaria. Although reported cases have halved in many countries over the past decade, malaria parasites in the region are evolving resistance to common anti-malarial drugs.

Dr Shunmay Yeung is one of the London School of Hygiene & Tropical Medicine researchers investigating antimalarial drug resistance and how to improve appropriate treatment of malaria. Researchers from the School's Malaria Centre are also working extensively on the emerging strain of malaria caused by *Plasmodium knowlesi*.



Dr Yeung is a lead investigator for the Tracking Resistance to Artemisinins Collaboration (TRAC), and Deputy Director for the ACT Consortium, based at the School.

She is now working with partners including the Cambodia National Malaria Control Programme, World Health Organisation, Partners for Development, and the Mahidol Oxford Tropical Medicine Research Unit, on a range of programmes aimed at providing better treatment for malaria and other diseases endemic in the region. Ongoing projects include:

- Assessments of anti-malarial drug quality across South East Asia
- An investigation into severe malaria and the mobile and migrant population
- A large community-based cohort study into treatment for febrile illness and diarrhoeal disease in children
- An economic evaluation of diagnostic and treatment strategies for Vivax malaria
- A pragmatic evaluation of Cambodian private sector malaria diagnosis and treatment
- An analysis of the "drug cocktails" routinely sold to customers at local pharmacies



# Regional health systems and emergencies

## Responding to pandemic 'flu

South East Asia has been the focus of considerable investment in pandemic influenza preparedness. Researchers from the School, led by Professor Richard Coker (right), are working with partners in Cambodia, Indonesia, Laos, Taiwan, Thailand and Vietnam, as well as Germany and the Netherlands, to assess how in various pandemic influenza scenarios, variations in health system capacity affect health outcomes across the region.

Their findings, published in the Public Library of Science in Spring 2012, show that wide variations exist in resource capacities between and within the six territories, with substantial mortalities predicted as a result. Severe nationwide shortages of mechanical ventilators were estimated to be a major cause of avoidable mortalities, with vaccines, hospital beds and staff also inequitably distributed within countries.



## Tracking bird 'flu in Bali

Indonesia is a hot-spot for the highly pathogenic H5N1 'bird flu' virus, and therefore of strategic importance for influenza surveillance and research. A research team from the School with Dr Wiku Adisasmito of the University of Indonesia and colleagues from the Udayana University, is conducting a major five-year study of influenza outbreaks in Bali – a popular tourist island with high population densities and close interaction between humans, poultry and pigs – to investigate risk of inter-species transmission.

## Disaster mitigation and response

A major challenge facing health systems in South East Asia is how they cope in surges in demand in the wake of disasters such as disease outbreaks, famines, floods and earthquakes.

Embedded Health Systems Analysis is a framework for modelling disaster mitigation and response developed by School researchers with colleagues in Indonesia, funded by the German government. It examines the role of health systems in disaster planning, how different services work together and how well they respond to local conditions.



# Support our work



The London School of Hygiene & Tropical Medicine's work in South East Asia is only possible thanks to the generous support of funders who share our commitment to improving health in this fast-growing region.

But these projects need additional funding to ensure research discoveries are put to practical use and fledgling programmes grow and become self-sustaining. The School also works with its partners across South East Asia to identify projects that can be rolled out regionally or globally.

Gifts from individuals and institutions make all the difference in making sure good ideas become good policy and practice. We hope you will join us in ensuring a healthy future for South East Asia.

The School rigorously measures progress, expenditures and outcomes of work, both in the lab and on the ground in South East Asia, and reports these to donors.

For more information about supporting our work, please contact:

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