

Symposium on Health Surveillance: Information for Action in the 21st Century

Museum of New Zealand Te Papa Tongarewa
Wellington

Friday 19th March 2010

Keynote speakers

Dr Lisa Lee
Centers for Disease Control and
Prevention
Atlanta, USA

Emeritus Professor Roger Morris
Formerly Gilruth Professor of Animal
Health and Director of the Epi Centre
Massey University

Other speakers

Associate Professor Michael Baker
Department of Public Health
University of Otago-Wellington

Ron King
Auckland Regional Public Health Service

Dr Don Bandaranayake
Institute of Environmental Science and
Research

Dr Douglas Lush
Ministry of Agriculture and Forestry

Dr Derek Bell
Public Health South

Kylie Mason
Ministry of Health

Associate Professor Barry Borman
Centre for Public Health Research
Massey University

Dr Fran McGrath
Ministry of Health

Dr Katherine Butterfield
ERMA New Zealand

Dr Melissa McLeod
Department of Public health
University of Otago-Wellington

Dr Donald Campbell
New Zealand Food Safety Authority

Professor Neil Pearce
Centre for Public health Research
Massey University

Professor Jeroen Douwes
Centre for Public Health Research
Massey University

Dr Phil Shoemack
Bay of Plenty District Health Board

Professor Nigel French
Institute of Veterinary, Animal and
Biomedical Sciences
Massey University

Mark Wagstaffe
Centre for Public Health Research
Massey University

Tanya Gray
Ministry for the Environment

Dr Shiyong Wang
World Bank East Asia Region

Dr Nick Jones
Hawkes Bay District Health Board

Dr Paul White
Ministry of Agriculture and Forestry

FOR REGISTRATION DETAILS ON-LINE VISIT

<http://publichealth.massey.ac.nz/Symposia/Sym2010/Symposium/Health%20Surveillance.htm>

The symposium is organised by the Centre for Public Health Research (Massey University).

Participants should register in advance, and will be asked to pay a small registration fee to cover organisational costs and lunch. Registration fees: \$100.

Participants Limited to 120.

Symposium on Health Surveillance: Information for Action in the 21st Century

Programme – Friday 19th March 2010

Session 1: Plenary sessions “Health Surveillance, past, present and future” **Chair: Associate Professor Barry Borman**

- 9.00 – 9.45 Current state and future opportunities in public health surveillance - (Dr Lisa Lee)
- 9.45 – 10.30 A surveillance portfolio for emerging and evolving diseases – design, delivery, deductions and decisions (Professor Roger Morris and Dr Shiyong Wang)
- 10.30 – 11.00 *Morning Coffee*

Session 2: Theory and practice of surveillance **Chair: Professor Neil Pearce**

- 11.00 – 11.20 Infectious disease surveillance - (Associate Professor Michael Baker)
- 11.20 – 11.40 Occupation health surveillance - (Mark Wagstaffe)
- 11.40 – 12.00 Environmental Health Surveillance: case studies - (Professor Jeroen Douwes)
- 12.00 – 12.20 The use of molecular tools for the surveillance of human and animal pathogens - (Professor Nigel French)
- 12.20 – 12.40 ‘One World, One Health’ - (Dr Douglas Lush)
- 12.40 – 1.30 *Lunch*

Session 3: Surveillance in New Zealand **Chair: Professor Nigel French**

- 1.30 – 1.45 Syndromic surveillance I - (Dr Melissa McLeod)
- 1.45 – 2.00 Syndromic surveillance II - (Kylie Mason)
- 2.00 – 2.15 Surveillance in local public health practice - (Dr Nick Jones)
- 2.15 – 2.30 Disease clusters: a case study - (Dr Derek Bell)
- 2.30 – 2.45 Monitoring the state of the environment - (Tanya Gray)
- 2.45 – 3.15 *Afternoon Tea*

Session 4: The role of government agencies in surveillance **Chair: Dr Paul White**

- 3.15 – 3.25 Ministry of Health - (Dr Fran McGrath)
- 3.25 – 3.35 Ministry of Agriculture and Forestry (MAF) - (Dr Paul White)
- 3.35 – 3.45 Institute of Environmental Science & Research - (Dr Don Bandaranayake)
- 3.45 – 3.55 Auckland Regional Public Health Service (ARPHS) - (Ron King)
- 3.55 – 4.05 Bay of Plenty District Health Board - (Dr Phil Shoemack)
- 4.05 – 4.15 New Zealand Food Safety Authority (NZFSA) - (Dr Donald Campbell)
- 4.15 – 4.25 ERMA New Zealand - (Dr Katherine Butterfield)
- 4.30 – 5.00 Discussion - (Professor Neil Pearce)
- 5.00 – 5.10 Conclusion - (Professor Neil Pearce)



BIOGRAPHIES

KEYNOTE SPEAKERS

Dr Lisa Lee, Centers for Disease Control and Prevention, Atlanta, USA

Lisa serves as CDC's Assistant Science Officer, where she serves as the deputy to the Chief Science Officer and assisted with the development and execution of scientific and research strategies in support of CDC's mission. She oversees the agency's public health ethics activities, as well as its scientific regulatory services. In addition, she created and leads the Surveillance Science Advisory Group, which advises CDC on the science of public health surveillance, and the Institutional Biosecurity Board, which monitors dual use research of concern.

Lisa has worked in as a public health epidemiologist and surveillance scientist for over 20 years at the local, state, and federal level. She spent many years as a senior epidemiologist with the Division of HIV/AIDS Prevention at CDC where she led the domestic national HIV/AIDS surveillance activities including development and implementation of a new national HIV incidence and viral resistance surveillance system. She served as the lead scientist on the national HIV prevention initiative, Advancing HIV Prevention. Lisa's work at CDC has included ethics of public health surveillance, development and evaluation of surveillance systems, research on HIV and fertility, HIV/AIDS survival, HIV and tuberculosis, and data quality. She has led several agencywide working groups and committees working to establish and maintain an environment of scientific integrity and excellence.

Lisa is the lead editor of Principles and Practice of Public Health Surveillance, 3d edition (OUP, in press). She serves as Associate Editor for the Journal of Pediatric Infectious Diseases, has authored numerous scientific publications, and has served as a peer- and guest reviewer for many scientific conferences and numerous scientific journals including the American Journal of Public Health, the American Journal of Preventive Medicine, the American Journal of Managed Care, AIDS, Emerging Infectious Diseases, and Epidemiology. She has presented at over 30 national and international scientific conferences and has received numerous awards for her contributions to public health. Before coming to CDC, she spent many years working in local and state public health programs. Lisa is a graduate of Johns Hopkins University and is trained in epidemiology, formal demographic methods, and bioethics.

Professor Roger Morris, Institute of Veterinary, Animal and Biomedical Sciences, Massey University

Roger established the EpiCentre at Massey University in 1986, and was responsible for the development of the Centre. Earlier in his career he was Assistant Chief Veterinary Officer for Australia, responsible for epidemiology and biosecurity policy development, and then Head of the Department of Population Medicine at the University of Minnesota before taking up his position as Gilruth Professor of Animal Health at Massey University, which allowed him to develop the EpiCentre. Over the last 40 years he has provided consulting services concerning disease control and international biosecurity policy to all the major international organisations and to countries throughout the world. One of his major interests has been the development of national information systems and surveillance procedures for diseases, particularly those affecting both animals and man. In recent years he has been extensively involved in control of avian influenza in Asia, and in the development of training in epidemiological approaches to disease control for both public health specialists and veterinarians in the Asian region. He has also guided a research program on the integration of epidemiological and economic methods to develop optimum surveillance strategies for diseases, using the twin concepts of risk landscaping and portfolio analysis. He is now Emeritus Professor at Massey University, and runs an international consultancy company specialising in animal health and food safety policy and programs.

CHAIRS AND OTHERS SPEAKERS

Associate Professor Barry Borman Centre for Public Health Research, Massey University

Barry is an epidemiologist with extensive experience in applied epidemiology, the establishment and operation of health surveillance systems and the uses of national health data sets. He has conducted the evaluation of the Chemical Injury Surveillance Systems and is currently developing a surveillance system for occupational disease, environmental health indicators, and a number of record linkage studies. He was previously the Manager of Public Health Intelligence, the epidemiology and surveillance group of the Ministry of Health.

Associate Professor Michael Baker, Department of Public Health, University of Otago-Wellington

Michael is a public health physician and associate professor at the University of Otago, Wellington. He has worked extensively on the surveillance, investigation and control of infectious diseases. This work has included: A recent review of New Zealand's infectious disease surveillance capacity for the Ministry of Health; work with the World Health Organisation on development and implementation of the International Health Regulations; and current work to support effective surveillance and investigation of pandemic influenza.

Dr Don Bandaranayake, Institute of Environmental Science and Research

Don is Senior Epidemiologist and Public Health Medicine Specialist at National Centre for Biosecurity & Infectious Disease (NCBID), Institute of Environmental Science and Research Ltd (ESR). He was previously worked in the Department of Public Health, University of Otago-Wellington and was a member of Special Ministerial Committee for the Investigation of long-term health effects on fire fighters following exposure to the ICI fire, and previously. Don has extensive experience as a Consultant in Human Resource Development for WHO in the SE Asian Developing Countries. He has been involved in teaching epidemiology and public health, conducting public health studies and developing primary care and the local workforce in several countries.

Katherine Butterfield, ERMA New Zealand

Katherine is Senior Policy Analyst at ERMA New Zealand and has a background in civil engineering, attempting to solve complex soil mechanics problems. As a senior policy analyst she attempts to solve complex regulatory problems, including using health surveillance data to check if regulatory interventions have made the difference anticipated.

Dr Derek Bell, Public Health South

Derek is a Public Health Physician who has been the Medical Officer of Health for the southern region – Otago and Southland since 1998.

Dr Donald Campbell, New Zealand Food Safety Authority

Donald is Principal Advisor (Public Health), New Zealand Food Safety Authority. His role is to provide expert advice and information on the public health and medical aspects of food safety. He acts as link between the Agency and the health agencies.

Donald graduated from Aberdeen University, UK and after 10 years as a general practitioner moved from a personal to a community health focus and trained as a Specialist in Public Health Medicine. After working in national disease surveillance in Scotland he moved to New Zealand, initially as a Medical Officer of Health joining NZFSA in 2004. He is a Fellow of the Faculty of Public Health (UK) and of the New Zealand College of Public Health Medicine.

His special interests include foodborne disease surveillance and source attribution and public health risk assessment and communication. He has been intimately involved in NZFSA's ground breaking work on *Campylobacter*.



CHAIRS AND OTHERS SPEAKERS cont.

Professor Jeroen Douwes, Centre for Public Health Research, Massey University

Jeroen is Co-Director of the Massey University Centre for Public Health Research (CPHR). He has completed both his MSc and PhD in The Netherlands (Wageningen University) but is based permanently in New Zealand since 1998.

Jeroen has been involved in numerous occupational and environmental health studies and (co)-authored 100+ peer reviewed scientific publications. His current research programme focuses on asthma causation, mechanisms and prevention, occupational dermatitis, and occupational intervention studies.

Professor Nigel French, Institute of Veterinary, Animal and Biomedical Sciences, Massey University

Nigel is Professor of Food Safety and Veterinary Public Health at Massey University, New Zealand. He is Director of the EpiCentre, and runs the Molecular Epidemiology and Veterinary Public Health laboratory in the Hopkirk Research Institute, specializing in research and training in molecular epidemiology, food safety and the control of zoonotic diseases. He has a particular interest in the application of molecular tools and modelling for the surveillance and control of the major zoonoses including: campylobacteriosis, salmonellosis, cryptosporidiosis, giardiasis and E. coli infection.

Nigel holds a post as visiting professor and Honorary Research Fellow at the University of Liverpool, UK and visiting professor at the University of Glasgow, UK. He is a member of the New Zealand Food Safety Authority Academy and the New Zealand Institute for Advanced Studies and is a Principal Investigator in the Allan Wilson Centre for Molecular Ecology and Evolution.

Tanya Gray, Ministry for the Environment

Tanya is a Senior Analyst in the Statistics and Geospatial team within the Information Directorate at the Ministry for the Environment. The Statistics and Geospatial team's key role at the Ministry is to provide a sound evidence base for decision makers. Tanya is responsible for the five freshwater indicators: river, lake and groundwater quality, recreational water quality and freshwater demand. These indicators are updated regularly, which involves requesting data from other agencies, data analysis and reporting. She is also the project lead on the Dependable Monitoring and Reporting Project in the New Start for Fresh Water programme.

Prior to her current role at the Ministry, Tanya was at Northland Regional Council for over five years. During this time she was an Environmental Monitoring Officer – monitoring water quality/freshwater ecology for two years. This included coordinating the Lake Omapere Restoration and Management Project and establishing a lake water quality monitoring programme for Northland. She then became the Environmental Reporting Coordinator at the Council. This role included coordinating the regional river water quality and recreational water quality monitoring programmes and producing the 2007 State of the Environment Report for Northland. Tanya also has experience from various research assistant and environmental consultancy positions.

Dr Nick Jones, Hawkes Bay District Health Board

Nick is a public health physician currently working as a population and environmental health specialist at the Hawkes Bay District Health Board. Nick has worked in the field of public health surveillance for most of his 20 year career. His work has included 10 years at the Auckland Regional Public Health Service where he pioneered electronic clinical record based surveillance with a network of general practitioners and established a regional geospatial public health information system. He has completed a number of country level surveillance assessments for the World Health Organization and more recently a 2 year fellowship in public health informatics at the US Centres for Disease Control and Prevention. After completing the fellowship Nick then went on to lead the Science Development team of the Environmental Health Tracking Branch at the National Center for Environmental Health for 2 years before returning to NZ. In addition to his locally focused environmental health work Nick acted as an expert advisor to the recent review of New Zealand communicable disease surveillance and is working with the Wellington School of Medicine on developing a short course on public health informatics for the 2011 summer school.



CHAIRS AND OTHERS SPEAKERS cont.

Ron King, Auckland Regional Public Health Service

Ron is currently Intelligence & Information Advisor within the Public Health Intelligence and Infrastructure team at Auckland Regional Public Health Service (since 2005). The three components to this role are: Planning and strategy around information management, coordinating and prioritising developments across ARPHS' new CRM based Public Health Information Management System (PHIMS), and actually getting in and doing some analysis, particularly that with a spatial bent. He was also involved for the duration of ARPHS' response to the 2009 influenza pandemic in the Planning and Intelligence area.

Ron previously worked with the Geography Department at the University of Auckland, and the Public Health Intelligence group of the Ministry of Health.

Dr Doug Lush, Ministry of Agriculture and Forestry Biosecurity New Zealand

Doug Lush has trained in public health, applied epidemiology and public administration. Doug spent 10 years working in the area of communicable disease control within the New Zealand Ministry of Health. Responsibilities while working within the Ministry of Health included outbreak response, pandemic planning and certification of national polio eradication.

Doug's current role is that of principle advisor human health within MAF Biosecurity New Zealand (MAFBNZ). Within MAFBNZ Doug is using the 'One World, One Health' (OWOH) paradigm to drive collaborative thinking and action across organisations and paradigms to achieve better human, animal and ecosystem health. The ideas expressed by Doug at the symposium are his own, and not necessarily those of MAFBNZ.

Kylie Mason, Ministry of Health

Kylie is a Senior Advisor in Epidemiology at the Ministry of Health, working in the Health and Disability Intelligence unit. She has been involved in a variety of epidemiological research, including analysis of national health surveys, and work on problem gambling, alcohol and drug use, and living standards. For the last three years, Kylie has also been involved in syndromic surveillance, in particular helping to develop the analysis and reporting for two surveillance systems, HealthStat and HealthLine. Last year, she was quite heavily involved in on-going surveillance work during the H1N1 'swine flu' pandemic.

Dr Melissa McLeod, Department of Public Health, University of Otago-Wellington

Melissa (Ngai Tahu) is a public health physician and senior Research Fellow working at Te Rōpū Rangahau Hauora a Eru Pōmare, University of Otago, Wellington and the Centre for Public Health Research, Massey University. Melissa has a particular interest in Māori health research, infectious diseases and screening. She contributed to the development and implementation of a Respiratory Syndromic surveillance system as a public health medicine registrar working at Regional Public Health in 2007/8, and worked in the National Health Coordination Centre, Ministry of Health during the 2009 H1N1 influenza pandemic.

Dr Fran McGrath, Ministry of Health

Fran is a specialist public health physician with comprehensive experience in public health, public policy and senior management in different parts of the health sector including as senior health advisor to a Ministers of Health. Since the outbreak of the Influenza pandemic, Fran has been a Key Advisor and spokesperson for the national pandemic response.

Dr Phil Shoemack, Bay of Plenty and Lakes District Health Boards

Phil is a Clinical Director and Medical Officer of Health for the Bay of Plenty and Lakes DHBs, a position he was first appointed to in 1988. He has been a member of the National Health Committee and its subcommittee, the Public Health Advisory Committee, since 2005.

Phil's public health interests include reducing inequalities in health outcomes, creating environments which support physical activity and restoring confidence and trust in health authorities.



CHAIRS AND OTHERS SPEAKERS cont.

Professor Neil Pearce, Centre for Public Health Research, Massey University

Neil is Director, of the Centre for Public Health Research in the Research School of Public Health on the Massey University Wellington Campus. Since the completion of his PhD in epidemiology in 1985 he has been engaged in a wide range of public health research activities. During 1980-1988 his main research interest was in occupational epidemiology, and during this time he co-authored the leading textbook of occupational epidemiology, published by Oxford University Press in 1989 (the 2nd edition was published in 2004). In the 1990s he conducted a wide range of asthma research projects including the identification of the role of the asthma drug fenoterol in the New Zealand asthma mortality epidemic, studies of occupational asthma, studies of the management of asthma in the community, and more recently studies of the causes of the increases in asthma prevalence in New Zealand and worldwide.

Neil has authored a textbook of asthma epidemiology which was published by Oxford University Press in 1998. His new Centre was established in 2000, and is conducting a wide range of public health research including respiratory disease, cancer, diabetes, Maori health, Pacific health and occupational and environmental health research. In 2008 he was made a Fellow of the Royal Society of New Zealand, and commenced a three-year term as President of the International Epidemiological Association.

Mark Wagstaffe, Centre for Public Health Research, Massey University

Mark is a Research Fellow at the Centre for Public Health Research and Principal Advisor, Health and Safety Policy at the Department of Labour.

Previously, Mark was Project Manager, NOHSAC and Programme Manager, Injury Prevention, Workplace at ACC. Mark is a co-author of the following reports: Burden of Occupational Disease and Injury in New Zealand, Surveillance of Occupational Disease and Injury in New Zealand, Surveillance and Control of Workplace Exposures in New Zealand, Social and Economic Costs of Occupational Disease and Injury, Review of Schedule 2 of the IPRC Act 2001, National Profile of Occupational Health and Safety in New Zealand and Review of the Key Characteristics that Determine the Efficacy of OHS Instruments.

Dr Paul White, Ministry of Agriculture and Forestry Biosecurity New Zealand

Paul is an epidemiologist specialising in spatial and surveillance methods applied to communicable diseases and environmental epidemiology mainly for outbreak detection and surveillance of zoonotic diseases. He is the manager of the Animals surveillance team within the surveillance group of the Ministry of Agriculture and Forestry Biosecurity New Zealand (MAF BNZ) responsible for the management and operation of active (targeted) biosecurity surveillance programmes for exotic zoonotic pathogens.

Previously, Paul was the Principal Technical Specialist in spatial epidemiology in the Ministry of Health, supervising the GIS and spatial epidemiology team within Public Health Intelligence (the epidemiology group of the MoH), providing advice on spatial epidemiology, surveillance, outbreak investigations and pandemic preparedness planning to the MoH, and across the wider health sector. He led the development of the Influenza-like-Illness syndromic sentinel surveillance system that was the first national year round fully automated data collection surveillance system using multiple data sources, collecting daily data and reporting weekly. This system was used by the MoH during the Pandemic Influenza (H1/N1) 2009 outbreak.