

Centre for Research Excellence in Infectious Diseases Modelling to Inform Public Health Policy Inaugural Conference

Program / Agenda

Date: 29 April – 1 May 2015

Venues: 29 & 30 April Graduate House, University of Melbourne
220 Leicester Street, Carlton

1 May Melbourne School of Population and Global Health (MSPGH)
Room 410, 207 Bouverie Street, Carlton

Chief investigators:

Jodie McVernon, Archie Clements, Joshua Ross, James McCaw, James Wood, Emma McBryde,
Kathryn Glass, Nicholas Geard

Day 1	Wednesday 29 April	
9:00am – 9.30am	Registration Coffee / tea	
9.30am – 10:00am	Welcome/how did we get here? Proposed themes and scope for the CRE Model of collaboration and capacity building initiatives	Jodie McVernon
10:00am – 10:30am	Session 1 CASE STUDY: Singapore Case studies in Singapore and the link between surveillance, modelling, and policy.	Vernon Lee
10:30am – 11:00am	Morning tea/networking	
11:00am – 12:00md	Session 2: CASE STUDY: TB Modelling for policy development - James Trauer, Steve Graham, Emma McBryde New directions in Tuberculosis modelling - James Wood Tuberculosis research under the CRE and questions for modelling – Guy Marks	Chair: Emma McBryde
12:00md – 1:00pm	Session 3: CASE STUDY: Influenza and surveillance What do we use surveillance for? How does this use define systems and questions?– Rhonda Owen Influenza forecasting (methods)- Rob Moss, Lewis Mitchell FF100 studies (methods) – Joshua Ross	Chair: James McCaw
1:00pm – 2:00pm	Lunch/networking	
2:00pm – 3:00pm	Session 4 CASE STUDY: Emerging nosocomial pathogens Update on NHMRC C difficile project, molecular epi and modelling - Archie Spatial patterns of C diff, seasonal patterns of C diff, risk factors in community, fecal transplant – Luis Furya Kanamori Issues of Data quality in Hospital Infection Control- Emma Clinical lead infection control, VICNISS - TBC	Chair: Archie Clements

3:00pm – 4:00pm	Session 5 CASE STUDY: Social and spatial determinants of disease spread Early findings of contact diary studies - Jodie Household models and heterogeneity - Nic Spatial statistical modelling approaches (high level) - Archie	Chair: Nic Geard
4:00pm – 4:30pm	Afternoon Tea/networking	
4:30pm – 5:15pm	Open discussion of themes from day 1, identification of opportunities and new collaborations	CI Panel
5:15pm – 5:30pm	Summary Main points from day 1.	Jodie McVernon
7pm	Dinner at Café Italia, 56-66 University Street, Carlton.	

Day 2	Thursday 30 April
8.45am – 9.00am	Coffee / tea on arrival
9:00am – 9:15am	Welcome Overview – an open day of 16 presentations of 15 mins (12 mins + 3 mins questions)
9:15am-10:30am Chair: James Wood	<p>Presentation 1: James Trauer <i>Better Defining Tuberculosis Reactivation Risk Following Infection</i></p> <p>Presentation 2: Deborah Cromer <i>Modelling Malaria - new infections vs reactivation, which are more important?</i></p> <p>Presentation 3: Nick Scott <i>The role of a hepatitis C virus vaccine: modelling the benefits alongside direct-acting antiviral treatments</i></p> <p>Presentation 4: Trish Campbell <i>Determining best strategies for maternally-targeted pertussis vaccination using an individual based model</i></p> <p>Presentation 5: Chris Baker <i>Optimising resource allocation for the eradication of invasive island species</i></p>
10:30am – 11:00am	Morning tea/networking
11:00am – 12:30pm Chair: Joshua Ross	<p>Presentation 6: Alastair Bell <i>A microbiological release assessment modelling international movement of highly pathogenic strains of Clostridium difficile into Australia to prevent importation and outbreaks.</i></p> <p>Presentation 7: Robert Cope <i>Spatially structured epidemic models</i></p> <p>Presentation 8: Mingmei Teo <i>Optimal vaccine allocation for structured populations</i></p> <p>Presentation 9: Rachel Sacks-Davis <i>Many hepatitis C reinfections that spontaneously clear may be undetected: Markov-chain Monte Carlo analysis of observational study data</i></p> <p>Presentation 10: Nicolas Rebuli <i>Hybrid Markov chain models for disease dynamics</i></p> <p>Presentation 11: Tan Doan <i>Characterising the Transmission Dynamics of Acinetobacter baumannii in Intensive Care Units using Hidden Markov Models</i></p>
12:30pm – 1:30pm	Lunch
1:30pm – 2:45pm Chair: Katie Glass	<p>Presentation 12: Ada Yan <i>Selecting a model for the host immune response to influenza using observed temporary immunity in ferret re-infection experiments</i></p> <p>Presentation 13: Pengxing Cao <i>Using mathematical models to investigate the roles of various immune responses in the control of influenza virus infection</i></p> <p>Presentation 14: Edward Waters <i>A new index for predicting the virulence of an outbreak based on household data</i></p> <p>Presentation 15: James Walker <i>Inference Methods for First Few Hundred Studies</i></p> <p>Presentation 16: Alexandra Hogan <i>Exploring the dynamics of a model for a seasonal childhood respiratory infection</i></p>

2:45pm – 3:15pm	Afternoon Tea/networking	
3:15pm – 4:15pm	Session – open discussion, collaborative opportunities, next steps	CI Panel
4:15pm – 4:30pm	Closing remarks and thank you (note: venue needs to be vacated by 5pm)	Jodie McVernon

WORKSHOP DAY 3 – ENGAGEMENT WITH STEERING GROUP OF EXPERTS

Friday 1 May: Room 410, 207 Bouverie Street, Carlton

Chief investigators:

Jodie McVernon, Archie Clements, Joshua Ross, James McCaw, James Wood, Emma McBryde, Kathryn Glass, Nicholas Geard

Key affiliates/mentoring leads:

(Kathryn Glass) – post-doctoral mentoring and training co-ordinator;

Trish Campbell – PhD mentoring and training co-ordinator;

Steering group members:

Dr Jenny Firman	Principal Medical Adviser, Office of Health Protection, Australian Government Department of Health
Ms Gayle Anderson	Assistant Secretary, Immunisation Branch, Australian Government Department of Health
Prof Raina MacIntyre	Head, School of Public Health and Community Medicine, UNSW
Prof Niels Becker	Emeritus Professor, NCEPH, Australian National University
Prof Terry Nolan	Head, Melbourne School of Population & Global Health, The University of Melbourne
Prof Peter McIntyre	Director, National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases
Prof Sharon Lewin	Director, Doherty Institute for Infection and Immunity, The University of Melbourne
Prof Margaret Hellard	Head, Centre for Population Health, Burnet Institute
A/Prof Steve Graham	Head, International Child Health Group, Murdoch Children's Research Institute, Royal Children's Hospital
Ms Jenny Herz	Director, Biointelect Pty Ltd
Ms Rebecca Newton	Principal Advisor, Australian Government Therapeutic Goods Association

Day 3	Friday 1 May: Room 410, 207 Bouverie Street, Carlton	
9:00 am – 10:00am	<p>Recap of themes and projects covered in days 1 and 2. Formal identification of opportunities for collaboration and co-supervision of students.</p> <p>On this basis, work with post-doc and PhD mentors to allocate affiliates to groups and CIs accordingly, identify opportunities for training and study exchange</p>	CIs Key affiliates
10:00am - 10:30 am	Consider opportunities for outreach, proposals for more focused meetings, workshops and short courses. Plans for engagement with related researchers at various sites	CIs Key affiliates
10:30am - 11:00 am	Coffee break	
11:00am – 12:30pm	<p>Formal engagement with Steering Group in person or by teleconference, as available. Key questions to this group will include:</p> <ul style="list-style-type: none"> • Review of proposed projects and strategy; • Identification of unmet needs and horizon scanning for future questions relevant to infectious diseases control in Australia and the region; • Opportunities for engagement and training to facilitate knowledge exchange and impact eg proposal for annual brainstorming week; • Potential for placements in/direct engagements with health departments for training and knowledge exchange purposes; • Input on proposal to develop 'User's guide to modelling outputs' targeted at non-expert end users that might be used by the Department for distribution to groups such as ATAGI, PBAC, TGA. Possibly also for industry groups engaging with these bodies? 	CIs Key affiliates Steering Group
12:30pm – 1:30pm	Lunch, departures to airport	