

Children's Health and Environment Program (CHEP) Annual Report 2011

The Children's Health and Environment Program (CHEP) **was** established in 2011 with funding from the University of Queensland and the Queensland Children's Medical Research Institute. CHEP is located within the Queensland Children's Medical Research Institute; a Centre with the Faculty of Health Sciences at UQ, and provides a strategic opportunity for UQ to take a leadership role in Children's Environmental Health nationally and internationally. Within UQ there are groups with recognized expertise in population health and environmental health, however these do not have a focus on children's health. CHEP will coordinate efforts from across UQ and provide opportunities for interactions with international organizations.

1. Events 2011

1.1. Scientific Conference/Launch, August 5th – 7th.

The Children's Health and Environment Program was launched in Brisbane in August 2011 with an international conference. The Scientific Conference to Launch the Children's Health and Environment Program at the University of Queensland was held in the Education and Training Centre Royal Brisbane and Women's Hospital. Registrations were received from 120 national and international participants.

The official party included: HRH Professor Princess Chulabhorn Mahidol and an official party from the Embassy of Thailand; Her Excellency, Penny Wensley, Governor of Queensland; Adjunct Professor Mary Mahoney, Deputy Chancellor UQ; Professor Michael Kenniger, Senior Deputy Vice Chancellor, UQ; and Professor Keith Grimwood, Director, Queensland Children's Medical Research Institute.

The Opening Plenary Session included the following presentations:

Environmental Carcinogens: Exposure and Impacts on Children's Health. HRH Professor Princess Chulabhorn Mahidol, Chulabhorn Research Institute, Bangkok, Thailand.

Chief causes of death and disability of children worldwide: results from the Global Burden of Disease Study. Professor Alan Lopez, Head, School of Population Health, University of Queensland.

Biomarkers as an aid to Environmental Research in Children. Professor Peter Sly, Director, Children's Health & Environment Program, University of Queensland and Deputy Director, Queensland Children's Medical Research Institute (QCMRI).

The full program is available on the CHEP website [www.chep.org.au].

1.2. Symposium: Assessing the contribution of environmental risk factors to the burden of among children in Australia, November 10th.

In November 2011 CHEP organised and ran a symposium, "Assessing the contribution of environmental risk factors to the burden of disease among children in Australia". The symposium brought together approximately 40 members of the scientific community in order to review and determine the strength of existing data, identify knowledge gaps and define a research agenda.

The main aim was to establish a framework for understanding the environmental contribution to burden of disease among children with a specific focus on non-communicable disease outcomes including asthma/respiratory disease, neurodevelopmental, mental and behavioural disorders, obesity and diabetes and childhood cancers. The symposium provided a unique opportunity for researchers from different groups to come together and establish grounds for collaboration. Already new collaborations have been formed as a direct outcome of the symposium.

1.3. Public Lecture: Do Environmental Exposures Caused ADHD? November 30th.

Professor David Carpenter, from the State University of New York, Albany New York was awarded a Wiley Fellowship from UQ to visit CHEP. During his visit he presented a public lecture, which generated significant media attention. His lecture is available on the CHEP website. The main message was that exposure to neurotoxic chemicals during gestation and in early life is likely to make a substantial contribution to ADHD and behavioural problems.

2. International and National Visitors

During 2011 CHEP hosted official visits by:

- Dr Kathleen McCarty, Yale University, February 2011. Dr. McCarty visited to discuss collaborative projects involving the impact of ambient air pollution of respiratory health in children and presented to the Brisbane Lung Research Group on “Environmental Exposures and Cancer”
- Professor David Carpenter, from the State University of New York, Albany New York, November 2011. Professor Carpenter discussed collaborative projects on the impact of exposures to PCBs on asthma and allergies and on neurodevelopment and ADHD

3. Key Activities

In 2011, CHEP has established a number of collaborations that have lead to key activities addressing the CHEP aims and terms of reference. These include:

Focal Area leadership in Population Health for The Global Change Institute (GCI), UQ: Professor Peter Sly, CHEP, and Dr. Paul Jagals School of Population Health, UQ (SPH) provide focal area leadership on the impact of global change on population health. This will provide the link between the other GCI Focal Areas and health outcomes.

Population Health: Dr. Paul Jagals has become an “external member” of CHEP and will collaborate in areas including: assessing the environmental contribution to the burden of disease in children; increasing the “child” focus of existing and new population health research; developing joint education programs in children’s environmental health.

Toxic Exposures: Professor Jochen Mueller has become an “external member” of CHEP and active collaborations have been established with Professor Mueller and the National Research Centre for Environmental Toxicology (Entox) combining the expertise in quantifying exposures to harmful chemical in the environment with paediatric epidemiology and health outcome expertise. Amy Heffernan, PhD candidate, is jointly supervised and a number of collaborative projects are under way.

Infections: Collaboration has been established with Professor Paul Young within the Australian Infections Diseases Research Group, UQ, with the joint appointment of Dr. Keith Chappell to investigate polymicrobial infections in respiratory diseases in childhood.

Neurodevelopment and mental health: CHEP is collaborating on several projects investigating the impact of environmental exposures on neurodevelopment and mental health in children. CHEP and ENTOX are providing expertise in environmental monitoring to the Barwon Infant Study, co-ordinated by Dr. Peter Vuillermin and Professor Anne-Louise Ponsonby, Murdoch Children's Research Institute, Melbourne.

Dr. James Scott has joined CHEP as an "external member" and will lead a Mental Health Group. Initial research will centre on Bullying in children.

Education & Training: There is a general lack of awareness of the particular vulnerability of children to adverse environmental exposures.

- In 2011 CHEP worked with SPH to deliver educational material as part of the Master of Public Health program.
- CHEP worked with Kidsafe to develop new factsheets that specifically addressed the unique vulnerability of children in the present environment in Australia.
- In addition CHEP helped with the revision of existing Kidsafe factsheets.

Safe Kids Australia/The Child Accident Prevention Foundation of Australia (Kidsafe) is the leading Australian non-governmental, not-for-profit charitable organization dedicated to preventing unintentional childhood injuries.

Public Engagement: CHEP provides UQ with the opportunity to take a leadership role in engaging the public in children's environmental health and in child health advocacy.

- During 2011 CHEP produced twelve monthly editions of the Children's Environmental Health International Initiatives newsletter, a joint venture from World Health Organization and the United Nations Environment Program.