

Occupational Risk Factors for Congenital Malformations – *a study in New Zealand*

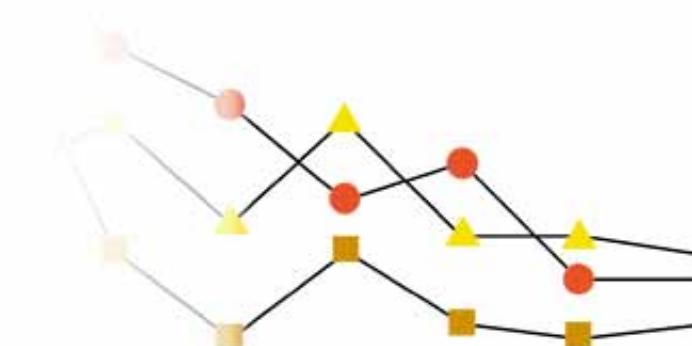
BRoHNZ Building Research
in Occupational Health
in New Zealand

Dr Andrea 't Manneje

**Centre for Public Health Research
Massey University
Wellington, New Zealand**

Congenital Malformations in New Zealand

- In New Zealand 2,500 infants are diagnosed with Congenital Malformations each year
- Congenital Malformations account for more than 20% of all infant deaths
- The modifiable risk factors for Congenital Malformations have never been studied in New Zealand

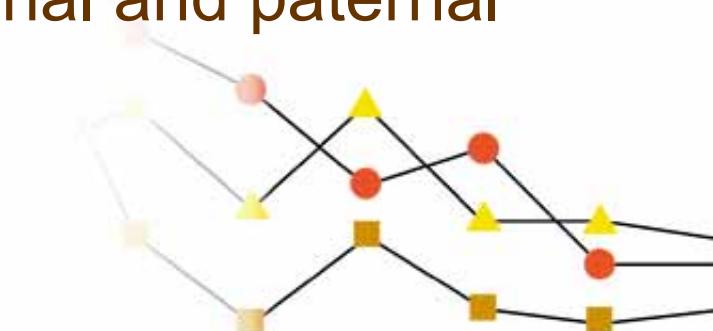


Occupational exposures & Congenital Malformations

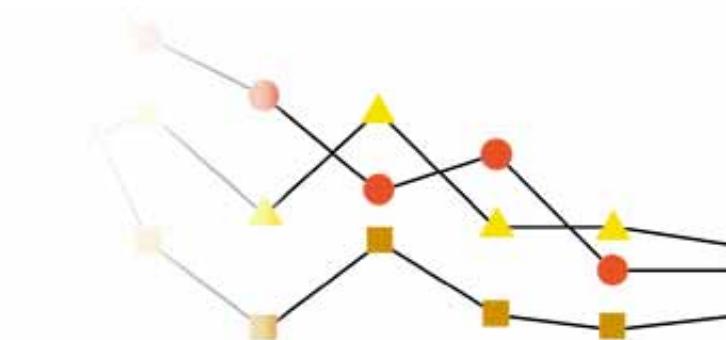
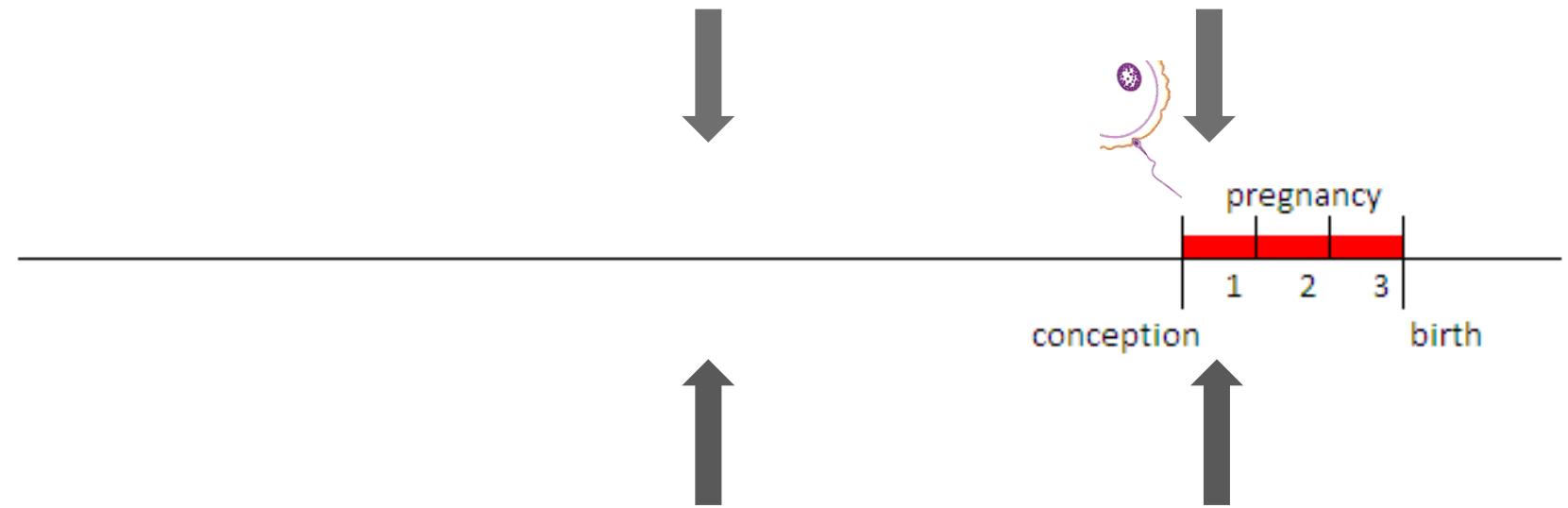
- Overseas studies have associated occupational exposures with CM

- Pesticides
- Solvents
- Metals
- Radiation
- Antineoplastic drugs

- Associations have been found for maternal and paternal exposure



Occupational exposures & Congenital Malformations



Occupational exposures & Congenital Malformations Is it of concern in New Zealand?

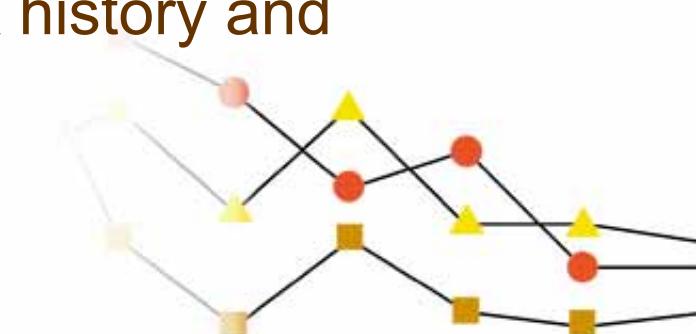
- We DO know that:

- New Zealand women and men are exposed to potential teratogens at the workplace
- Occupations with exposure to e.g. pesticides have been associated with an increased risk of cancer in NZ studies
- Congenital Malformations typically develop before the woman knows she is pregnant (no opportunity to avoid exposure)
- effects in offspring are of concern in New Zealand workers



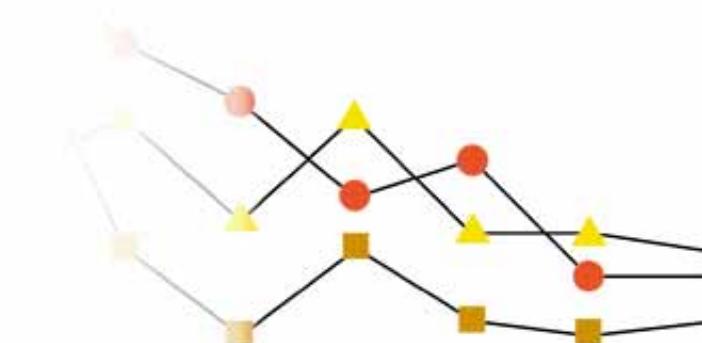
Methods

- case-control study
- cases (n=1000): mothers and fathers of children with selected CM (New Zealand Birth defects Monitoring Programme)
- controls (n=1000): mothers and fathers of children registered on the Maternity and Newborn Information System
- face-to-face or telephone interview
- questionnaire collecting information on work history and occupational exposures



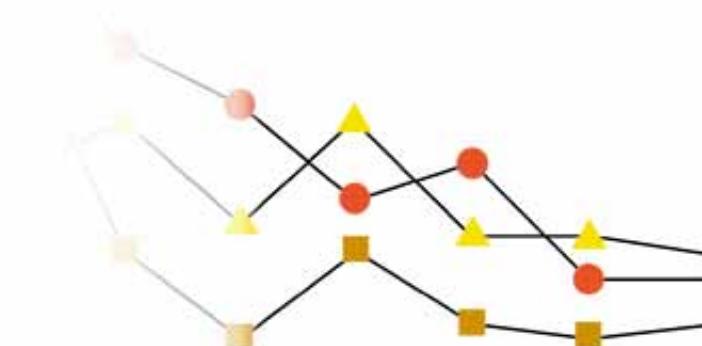
Aims

- to identify occupational teratogens that are relevant for NZ
- after this first study (very broad study) more specific studies can be designed
- With the ultimate aim to contribute towards the prevention of Congenital Malformations in the future



Named Investigators:

- Dr Andrea 't Manetje (Centre for Public Health Research)
- Dr Joanne Dixon (Central Regional Genetics Service)
- Dr Barry Borman (Centre for Public Health Research)
- Professor Innes Asher (Division of Paediatrics, Auckland)
- Ms Amanda Eng (Centre for Public Health Research)
- Professor Allan Smith (School of Public Health, Berkeley)
- Dr Lis Ellison-Loschmann (Centre for Public Health Research)
- Professor Neil Pearce (Centre for Public Health Research)



Funding:

- **Pilot Study:** Massey University Research Fund
- **Full Study:** Health Research Council under the BROHNZ Program Grant (Building Research in Occupational Health in New Zealand)

