

Experience with cocoon implementation and impact: Australia

Associate Professor Stephen Lambert
*Senior Research Fellow, Medical Epidemiology
Queensland Children's Medical Research Institute &
Queensland Health Immunisation Program*



Queensland Childrens
Medical Research Institute 



WESTERN
AUSTRALIA

NORTHERN
TERRITORY

QUEENSLAND

SOUTH
AUSTRALIA

NEW
SOUTH
WALES

VICTORIA

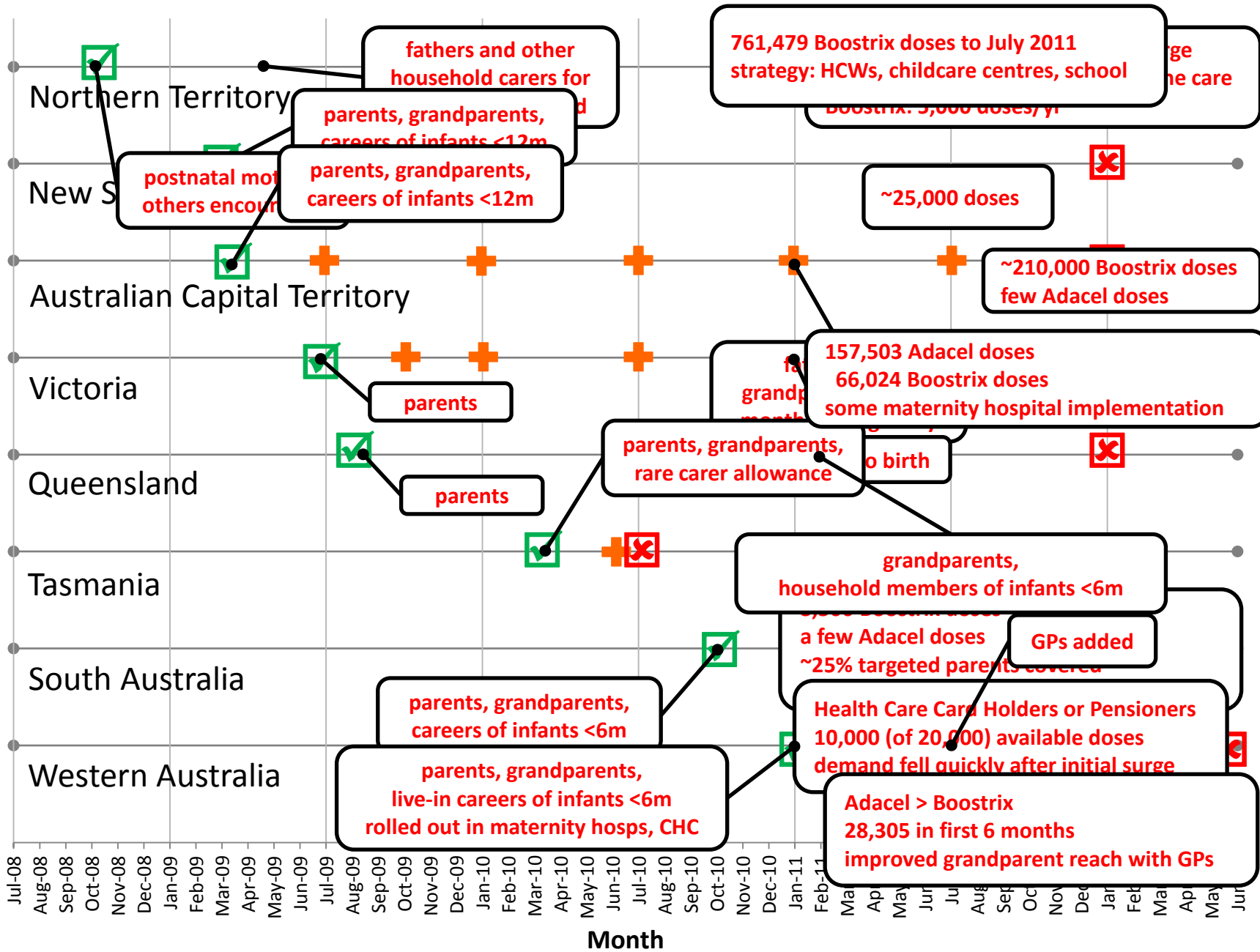
AUSTRALIAN CAPITAL TERRITORY

TASMANIA

Implementation

Cocoon implementation, Australia

State/Territory



Impact assessment

Before we start

- what vaccine effectiveness might be reasonably expected for cocoon strategy?
 - parent as source of infection for infant
 - where source identified (~50-70%)
 - mother + father maximum value ~60%
 - sibling value often similar or higher than mother
- modeling
 - 50 to 70% reduction in infant cases (0 to 3m) when used in combination with childhood + adolescent programs

Planned assessments

New South Wales

- case-control study
- cases and controls: deaths excluded (BDM linkage)
- cases: notifications <12m after 01 April 2009
- controls:
 1. perinatal data collection (n=1)
- matching: dob +/- 1 day (not same day) and SSD
- 1:1 cases:controls
- ~635 per group
n = 1,270

Queensland

- case-control study
- cases and controls: deaths excluded (BDM linkage)
- cases: notifications <12m after 01 May 2009
- controls:
 1. perinatal data collection (n=2)
 2. test negative (n=2)
- matching:
 1. date/hospital of birth
 2. date of birth/test
- 1:4 cases:controls
- ~225 cases + 900 controls
n = 1,125

Samples sizes

p (controls %)	p (cases %)	OR	NSW (1:1) n (cases), N (total)	QLD (1:4) n (cases), N (total)
40	20	0.38	83, 166	102, 510
40	25	0.5	152, 304	128, 640
40	30	0.64	356, 712	184, 920
30	10	0.26	59, 118	107, 535
30	15	0.41	119, 238	122, 610
30	10	0.58	292, 584	168, 840

Issues

- study conduct
 - complex process for identifying controls
 - privacy and logistic issues in contacting cases and controls
 - mail and telephone contact time consuming
 - unable to locate
 - consent refusal
 - validating vaccination status
- timeframes
 - aiming to have data available by mid to late-2012

Other options

- use notification and hospitalisation data
 - pre- and post- comparison
 - state-by-state comparison
 - different programs with different periods of introduction

Conclusions

- marked variation in state/territory programs
 - timing and duration
 - eligibility
- opportunity to provide impact data
 - NSW and QLD case-control studies
 - challenges in design and implementation
 - results available 2012
 - similar methods should allow comparison/pooling

Acknowledgements

- act: Carolyn Banks
- nsw: Sue Campbell-Lloyd, Dennis Meijer
- nt: Chris Nagy, Ros Webby
- qld: Vicki Bryant, Karen Peterson
- sa: Maureen Watson, Anne Kohler
- tas: Mark Veitch, Simone Duncombe
- vic: Michael Batchelor
- wa: Paul Effler, Debbie Turner
- NCIRS: Andrew Habig, Helen Quinn, Clayton Chui, Peter McIntyre
- QH: Niall Conroy, Michael Nissen

