

With a little help from my friends



Professor Stuart Dalziel

Professor of Paediatrics & Emergency Medicine

The University of Auckland & Starship Children's Hospital

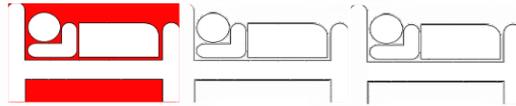
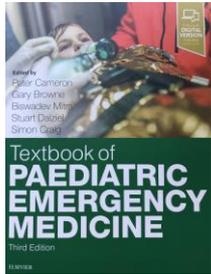


THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tamaki Makaurau
NEW ZEALAND





Paediatric emergency medicine

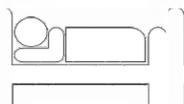
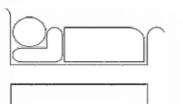


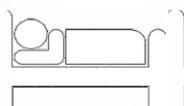
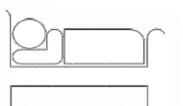
 X1.2 Maori

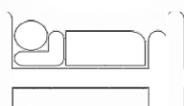
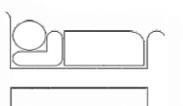
 X1.4 Pacific

 X2.2



   Trauma

   Medical

   Primary care

Isolation

1983



Isolation

1983



1995



Isolation

Paediatric EM is newer still

- 1991 1 PEM specialist in NZ
- Early 2000s training available
- Early 2000s 2 PEM specialists



Isolation

Opportunities

- Establish research within the field
- Unlimited questions

Challenges

- How to train/Mentorship



Isolation

Objectives

- How to build a research career in isolation
- How to build research in a new field





TRACK-BY-TRACK: 'SGT. PEPPER'

WITH A LITTLE HELP FROM MY FRIENDS





Pediatrics

A CONTROLLED TRIAL OF ANTEPARTUM GLUCOCORTICOID TREATMENT FOR PREVENTION OF THE RESPIRATORY DISTRESS SYNDROME IN PREMATURE INFANTS

G. C. Liggins, M.B., Ph.D., F.R.C.O.G., and R. N. Howie, M.B., M.R.A.C.P.

From the Postgraduate School of Obstetrics and Gynaecology, University of Auckland, New Zealand



Developmental origins of health and disease (DOHaD)

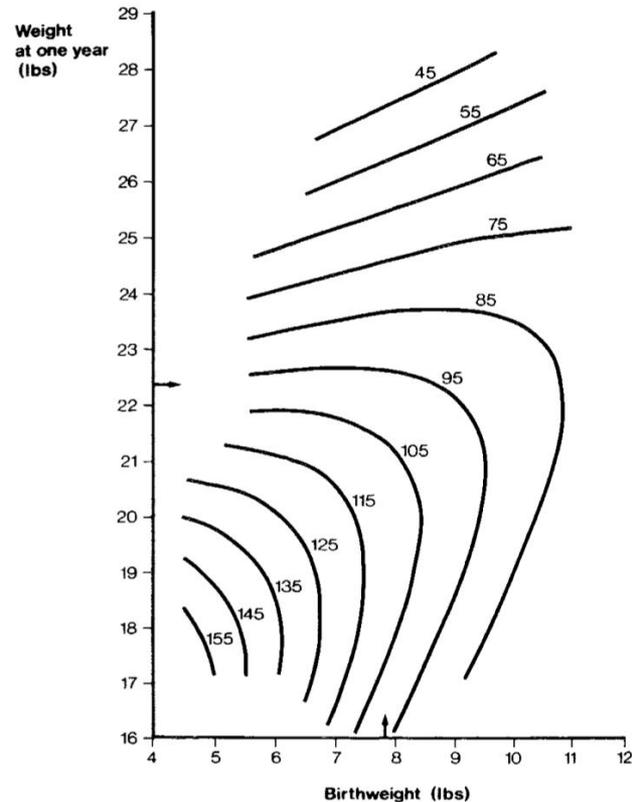


Fig 1—Relative risks for ischaemic heart disease in men who were breast fed according to birthweight and weight at one year.

Lines join points with equal risk. Arrows = mean weights.

Antenatal steroids & DOHaD



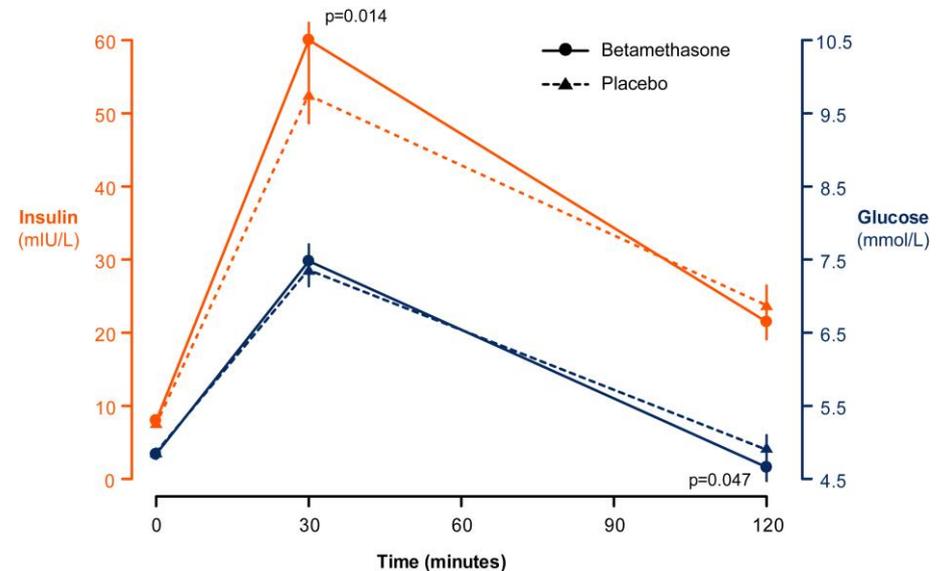
**Steroid
Follow-up Study**



Steroid Follow-up Study Results

Dalziel Pediatrics 2004, Lancet 2005, BMJ 2005, Thorax 2006, JBMR 2006

- No difference between those exposed to betamethasone, and controls, in cardiovascular disease, asthma, body size, lipids, BP, bone density, lung function, cortisol, education, SES, HRQoL or executive functioning
- ↑ Insulin resistance



Training

Training in new/isolated area

- Gain skills from local experts in other areas
- Gain skills from overseas centers and return







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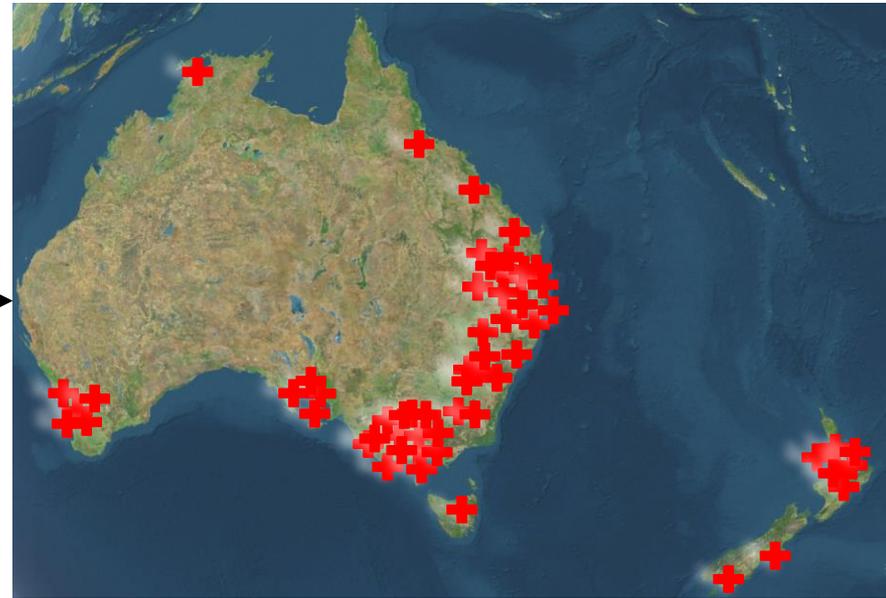
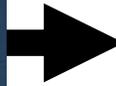
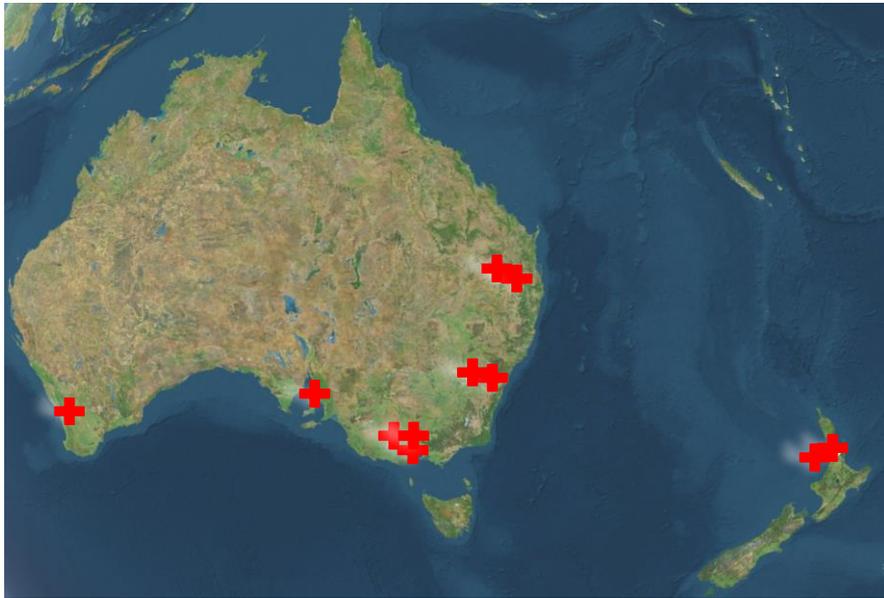
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What we do

Vision: *“to establish an evidence base and improve emergency care for children and adolescents through rigorous research”*



58 Sites







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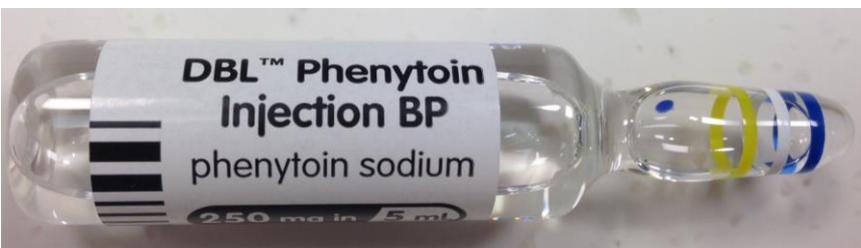
Infrequent presentations



Levetiracetam versus phenytoin for second-line treatment of convulsive status epilepticus in children (ConSEPT): an open-label, multicentre, randomised controlled trial

Stuart R Dalziel, Meredith L Borland, Jeremy Furyk, Megan Bonisch, Jocelyn Neutze, Susan Donath, Kate L Francis, Cynthia Sharpe, A Simon Harvey, Andrew Davidson, Simon Craig, Natalie Phillips, Shane George, Arjun Rao, Nicholas Cheng, Michael Zhang, Amit Kochar, Christine Brabyn, Ed Oakley, Franz E Babl, on behalf of the PREDICT research network

Lancet 2019.



Vs.





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Infrequent outcomes

Accuracy of PECARN, CATCH, and CHALICE head injury decision rules in children: a prospective cohort study



Franz E Babl, Meredith L Borland, Natalie Phillips, Amit Kochar, Sarah Dalton, Mary McCaskill, John A Cheek, Yuri Gilhotra, Jeremy Furyk, Jocelyn Neutze, Mark D Lyttle, Silvia Bressan, Susan Donath, Charlotte Molesworth, Kim Jachno, Brenton Ward, Amanda Williams, Amy Baylis, Louise Crowe, Ed Oakley, Stuart R Dalziel, for the Paediatric Research in Emergency Departments International Collaborative (PREDICT)

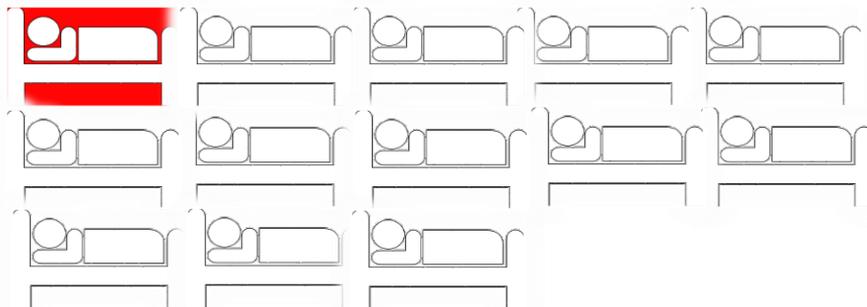
Lancet 2017;389:2393-2402.





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Definitive answers



 x3 Maori

 x4.3 Pacific



 x4.7



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Definitive answers





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Definitive answers



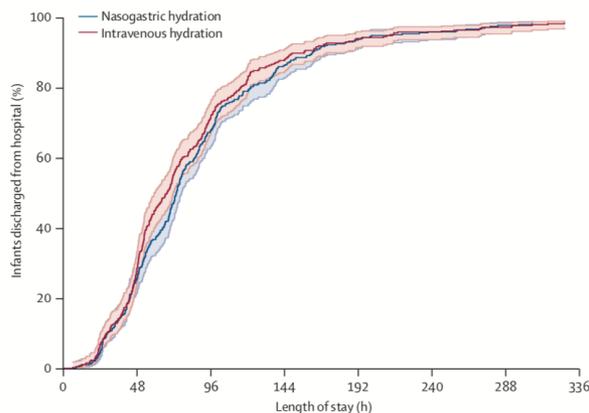
Nasogastric hydration versus intravenous hydration for infants with bronchiolitis: a randomised trial

Ed Oakley, Meredith Borland, Jocelyn Neutze, Jason Acworth, David Krieser, Stuart Dalziel, Andrew Davidson, Susan Donath, Kim Jachno, Mike South, Theane Theophilos, Franz E Babl, for the Paediatric Research in Emergency Departments International Collaborative (PREDICT)

Lancet Resp Med 2013;1:113-20.



Vs.





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Build capacity

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial of High-Flow Oxygen Therapy in Infants with Bronchiolitis

Donna Franklin, B.N., M.B.A., Franz E. Babl, M.D., M.P.H.,
Luregn J. Schlapbach, M.D., Ed Oakley, M.B., B.S.,
Simon Craig, M.B., B.S., M.H.P.E., M.P.H., Jocelyn Neutze, M.B., Ch.B.,
Jeremy Furyk, M.B., B.S., M.P.H.&T.M., John F. Fraser, M.B., Ch.B., Ph.D.,
Mark Jones, Ph.D., Jennifer A. Whitty, B.Pharm., Grad.Dip.Clin.Pharm., Ph.D.,
Stuart R. Dalziel, M.B., Ch.B., Ph.D., and Andreas Schibler, M.D.



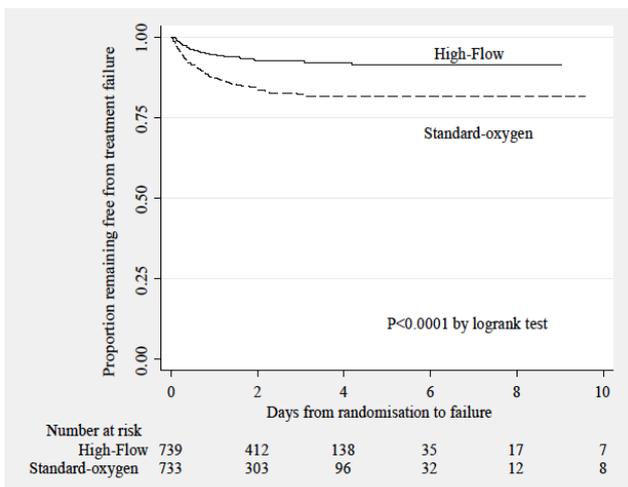
Vs.



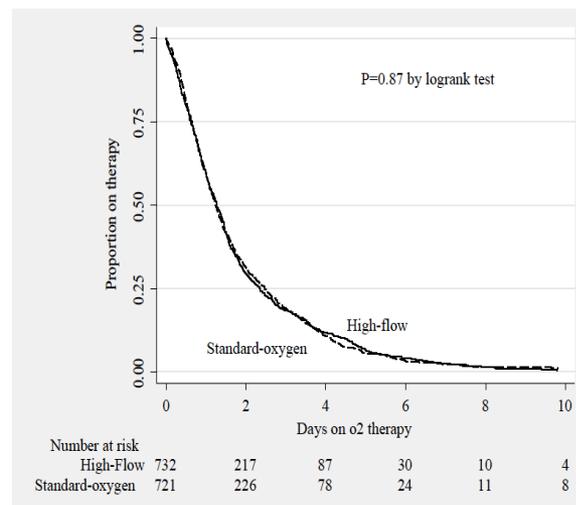
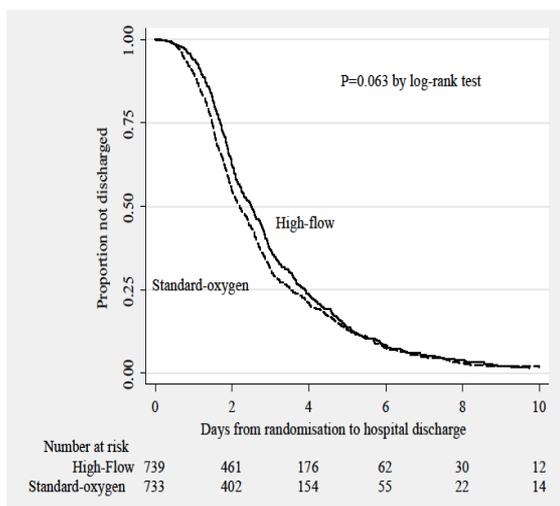


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Build capacity



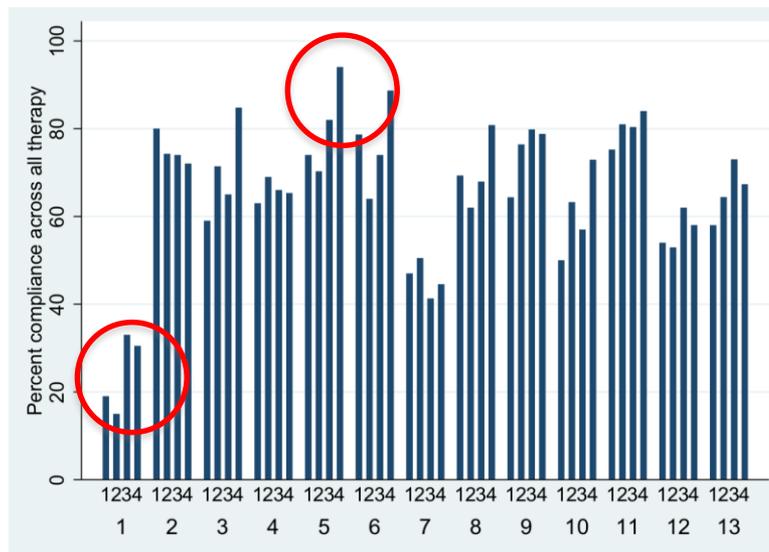
Rescue
only





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Standardise treatment



Journal of Paediatrics and
Child Health



doi:10.1111/jpc.14104

ORIGINAL ARTICLE

Australasian bronchiolitis guideline

Sharon O'Brien,^{1,2} Meredith L Borland,^{1,3} Elizabeth Cotterell,⁴ David Armstrong,^{5,6} Franz Bahl ^{7,8,9}, Paul Bauert,¹⁰ Christine Brabyn,¹¹ Lydia Garside,¹² Libby Haskell,¹³ David Levitt,¹⁴ Nicola McKay,¹⁵ Jocelyn Neutze,¹⁶ Andreas Schibler,^{14,17,18} Kam Sinn,¹⁹ Janine Spencer,²⁰ Helen Stevens,²¹ David Thomas,²² Michael Zhang,²³ Ed Oakley,^{8,9,24,25} and Stuart R Dalziel,^{13,26,27} on behalf of the Paediatric Research in Emergency Departments International Collaborative (PREDICT) Network, Australasia



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International Collaborative

Translating evidence

Haskell et al. *BMC Pediatrics* (2018) 18:218
<https://doi.org/10.1186/s12887-018-1187-7>

BMC Pediatrics

STUDY PROTOCOL

Open Access



Implementing evidence-based
the care of infants
Australia in care settings: study
protocol for a cluster randomised
controlled study

14% improvement in care

Libby Haskell^{1,2*} , Emma J. Tavender^{3,4}, Catherine Wilson³, Sharon O'Brien⁵, Franz E. Babl^{3,6,7}, Meredith L. Borland^{5,8},
Liz Cotterell^{9,10}, Tibor Schuster^{3,11}, Francesca Orsini^{3,11}, Nicolette Sheridan¹², David Johnson¹³, Ed Oakley^{3,6,7},
Stuart R. Dalziel^{1,2} on behalf of PREDICT¹⁴

Paediatric networks (friends)

- Answers to infrequent presentations
- Answers powered for rare outcomes
- Definitive answers for common conditions
- Standardising treatment
- Translating evidence



Research isolation

- Training is possible
- A research career is possible

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Starship
Children's Health