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NEW ZEALAND PAEDIATRIC SURVEILLANCE UNIT

Welcome to the 2012 Annual Report of the New Zealand Paediatric Surveillance Unit (NZPSU).

The NZPSU was established with funding from the Ministry of Health in order to undertake surveillance of acute flaccid paralysis (AFP) for the Ministry of Health's National Certification Committee for the Eradication of Poliomyelitis (NCCEP).

The opportunity was taken for the study of other uncommon high impact conditions, most of which has been undertaken by paediatricians with a particular research interest.

The ongoing success of the NZPSU is largely due to the high level of support from New Zealand paediatricians who have taken the time to provide information on the conditions under surveillance.

We would like to acknowledge the ongoing funding from the Ministry of Health.

INTRODUCTION

The aim of the NZPSU is to facilitate and improve the knowledge of uncommon high-impact childhood conditions in New Zealand. These conditions are of sufficiently low incidence or prevalence that case ascertainment on a national scale is needed to generate adequate numbers for meaningful study. The method was developed in the United Kingdom by the British Paediatric Surveillance Unit (BPSU) and has been used there since 1986. Subsequently, it has been introduced into several other countries, including Australia, and is used by some other specialist groups.

The core activities of the NZPSU are funded through a contract with the Ministry of Health to provide active surveillance of acute flaccid paralysis (AFP). The World Health Organization (WHO), as part of the global eradication process, requires such surveillance to confirm New Zealand is free of poliomyelitis. Since the establishment of the NZPSU, the number of conditions under surveillance has increased and in 2012 includes seven high-impact childhood conditions.

The NZPSU is a member of the International Organisation of Paediatric Surveillance Units (INoPSU).

AIMS

The aims of the NZPSU are:

- To operate a system for monitoring acute flaccid paralysis, as part of the global certification of eradication of poliomyelitis, required by WHO.

- To facilitate national surveillance and improve the knowledge of uncommon high-impact childhood conditions in New Zealand.

Paediatricians in New Zealand gave their support to the surveillance system after the concept was discussed at several annual meetings of the Paediatric Society of New Zealand. A database of eligible clinicians, which included all paediatricians and other specialists working predominantly with children, was developed using the specialist register and the membership list of the Paediatric Society. All eligible clinicians were contacted and invited to participate. Those who agreed were provided with study protocols, which included definitions of the conditions under surveillance, specific reporting instructions, and a contact telephone number. Efforts are made to keep up-to-date with the paediatric specialist work force.

Every month participants are sent either a reply-paid card or an email (depending on their preferred method of reporting) to report whether in the previous month they have seen any cases of the conditions under surveillance. However, cases of AFP are also required to be reported immediately by phone to the NZPSU. When a case of any of the conditions is reported, the reporting clinician is sent a short questionnaire to complete on the case. The identity in

most cases remains anonymous. Duplicate notification is recognised by a code derived from the child's initials and date of birth.

HOW THE SURVEILLANCE SYSTEM WORKS

A Scientific Review Panel (SRP) considers the applications of new conditions into the scheme (see Table 1 for details on members of the SRP) A study is eligible for consideration in the scheme if the condition in the scheme if the condition of interest is:

- A relatively uncommon high-impact childhood condition(or an uncommon complication of a more common disease)
- Of such a low incidence or prevalence as to require ascertainment of cases on a national scale in order to generate sufficient numbers for the study
- The SRP may also consider inclusion of short-term or geographically limited studies of more common conditions.

It is important for the success of the scheme that the work load of the respondents is kept to a minimum. Accordingly, the SRP must be certain that studies conducted through the NZPSU are well designed and worthwhile. The SRP will take into consideration the scientific interest and public health importance of the proposed study, its methodology, and the suitability of the condition for ascertainment through the NZPSU scheme. Studies depending on immediate reporting and/or sample collection, or requiring the participation of other specialties, are less likely to be suitable.

***Table 1*: The Members of the NZPSU Scientific Review Panel (SRP) 2012**

Member	Institution
Professor Barry Taylor	NZPSU, University of Otago, Dunedin
Associate Professor Nigel Dickson	NZPSU University of Otago, Dunedin
Dr Pat Tuohy	Ministry of Health
Professor Elizabeth Elliott	Australian Paediatric Surveillance Unit
Dr Jeff Brown	Palmerston North Hospital
Professor Brian Darlow	University of Otago, Christchurch
Professor Diana Lennon	University of Auckland

SURVEILLANCE ACTIVITIES IN 2012

In 2012, 226 clinicians participated in the system. The average response rate to the monthly report card/email was 91%. The ongoing high response rate from the whole of the country is very pleasing. Minimising the extra workload that the system imposes on paediatricians is a key factor for its success. Table 2 shows the percentage of clinicians on the mailing list that reported between 2011 and 2012. The table shows that in 2012 150 did not report any cases at all, with 4 reporting 5 or more.

In 2012 the NZPSU monitored seven uncommon childhood conditions *(Table 3)*. Some of the protocols and questionnaires used were adapted from those used by the Australian Paediatric Unit.

***Table 2*: Respondents' Workload 2011 & 2012**

Notifications	2011		2012	
	No.	%	No.	%
None	139	66.2	150	64.7
One	45	21.5	43	18.5
2-4	22	10.4	35	15.0
5 or more	4	1.9	4	1.7

Table 3: **Conditions under surveillance in 2012**

Condition	Surveillance Started	Surveillance Ending	Principal Investigators
Acute Flaccid Paralysis	October 1997	Ongoing	A/Prof Nigel Dickson
Haemolytic Uraemic Syndrome	January 1998	Ongoing	Dr William Wong
Congenital Rubella Syndrome	January 1998	Ongoing	Professor Diana Lennon
Perinatal HIV Exposure	January 1998	Ongoing	A/Prof Nigel Dickson Dr Lesley Voss
Adverse Drug Reactions	May 2008	Ongoing	Dr Desiree Kunac
Vitamin D Deficiency Rickets	July 2011	2012	Dr Ben Wheeler
Moderate and Severe Encephalopathy	January 2011	2012	Dr Malcolm Battin
Severe Neonatal Hyperbilirubinaemia	2011	March 2013	Dr Roland Broadbent Prof Brian Darlow
Varicella and post varicella complications requiring hospitalisation	Dec 2011	Dec 2013	Dr Elizabeth Wilson Dr Emma Best

BRIEF REPORTS ON ONGOING STUDIES

ACUTE FLACCID PARALYSIS (AFP)

Associate Professor Nigel Dickson
Ongoing study started in January 1998

INTRODUCTION

To confirm the absence of poliomyelitis WHO requires a surveillance system to be in place:

1. That captures an annual incidence of acute flaccid paralysis (AFP), not due to poliomyelitis, of at least one per 100,000 children < 15 years.

2. In which 80% of cases of AFP have two stool samples taken at least 24 hours apart, within 14 days of onset tested negative for wild polio virus in a WHO-accredited laboratory.

Telephone notification of all cases of AFP is required by the NZPSU to ensure that the necessary stool containers are dispatched in time to the notifying paediatrician.

KEY RESULTS FOR 2012

- There were eight cases notified to the NZPSU in 2012.
- Information has been obtained on all of these children including follow-up information two months after diagnosis.
- Five were from the North Island, three were from the South Island.
- Three females, five males.
- Age range 2 years to 8 years, median age 3.5 years (range:2-8 years)
- No seasonal variation.
- The overall incidence was 0.9 per 100,000 children < 15 years.
- A diagnosis of Guillain Barré Syndrome (GBS) has been made in six of these cases, acute demyelinating encepfalomyelitis in one, and Miller Fisher Syndrome in the remaining case.
- All eight cases have been discounted as Polio by the National Certification Committee for the Eradication of Polio (NCCEP).
- Timely analysis (< 14 days after onset paralysis) of stool samples, satisfying the WHO criteria, was complete for five of the eight children. (62.5%).

***Table 4*: Percentage of AFP cases with adequate (or otherwise) stool samples**

CATEGORY	Stool samples	
	No.	%
2 stool samples within 14 days of onset of paralysis	5	62.5
2 stool samples, but one or both not within 14 days of onset of paralysis	0	0
1 stool sample	1	12.5
No stool samples	2	25

The required rate of (1.0 per 100,00) expected by WHO in a country without endemic polio. The rate of stool testing was 62.5%, less than the WHO target which is 80%.

We appreciate that this surveillance requirement is a challenge in the absence of endemic polio and wish to thank the paediatricians for vigilance in obtaining timely testing in most instances.

Even though the WHO believes polio to have been eradicated from the Western Pacific region, ongoing surveillance of AFP is likely to be required for some years. This will require the continued telephone notification of all cases of AFP, including those with a definitive diagnosis such as Guillain Barré Syndrome etc.

A challenge has always been to utilise a non-specific case definition – such as 'acute flaccid paralysis' – in a health system where a more definitive diagnosed for children with such symptoms is likely to be made.

CONGENITAL RUBELLA SYNDROME (CRS)

Professor Diana Lennon
Ongoing study started in January 1998

We have not provided a report for Congenital Rubella, as there were no cases reported in 2012.

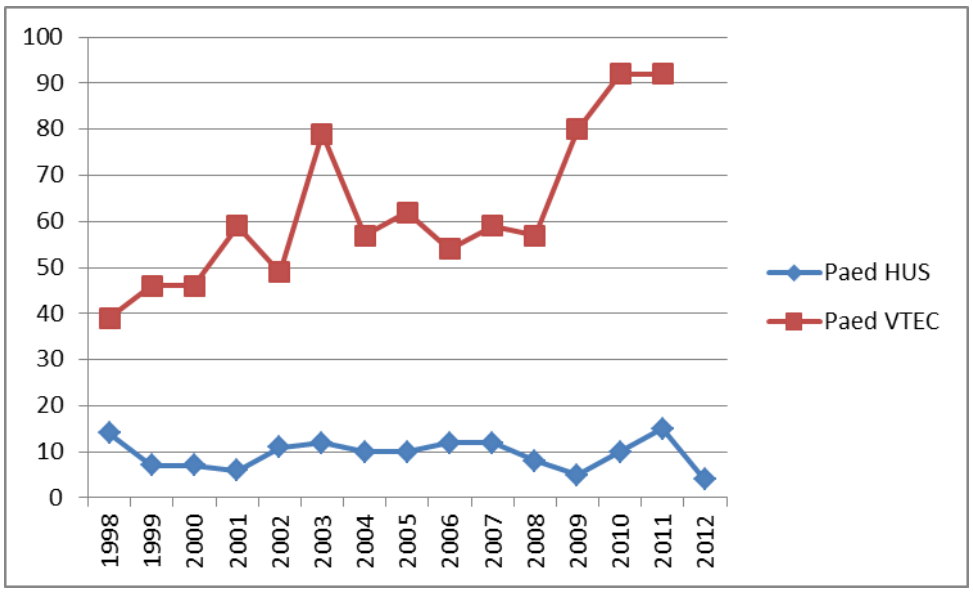
HAEMOLYTIC URAEMIC SYNDROME (HUS)

Dr William Wong
Ongoing study started in January 1998

KEY RESULTS FOR 2012

- 4 cases of childhood HUS reported, all of whom a diarrhoeal prodrome (D+)
- Geographic distribution of D(+) HUS – all from North Island
- Median age at presentation of D(+) HUS was 2.8 years, range 1.2 to 3.6 years
- 2/4 patient lived on a farm
- 3/4 of the diarrhoeal group had E coli 0157H7 isolated from their stools
- 3/4 patients needed acute peritoneal dialysis
- All patients regained renal function to come off dialysis

Note: The 4 cases reported in 2012 may represent under reporting of the disease as there appears to be no reduction of VTEC cases in the paediatric age group.



PERINATAL EXPOSURE TO HIV

Associate Professor Nigel Dickson, Dr Lesley Voss
Study commenced January 1998

In 2012, there were nine reports to the NZPSU of infants born in New Zealand to women infected with HIV who were diagnosed prior to giving birth or during their pregnancy.

Of the nine infants born in New Zealand during 2012:

- Five were born in Auckland, two were born in Waikato, one in Wellington and one in Gisborne.
- All nine were born to mothers whose HIV had been diagnosed before their pregnancy.
- Three of the mothers were African, three were Asian, two were Pacific Island and one was Maori.
- Of the nine mothers, eight mothers were given antiretroviral treatment during pregnancy and one mother was non-compliant with medication; six gave birth by caesarean section and three gave birth vaginally; none of the babies were breastfed.
- No child is believed to be infected with HIV (although most children are still awaiting final confirmation).

SEVERE NEONATAL HYPERBILIRUBINAEMIA

Dr Roland Broadbent, Professor Brian Darlow

Study Commenced March 2010

In 2012, there were 12 reports to the NZPSU of severe neonatal hyperbilirubinaemia and there were 9 completed datasets.

Of the 9 infants:

- 3 were male, 6 were female
- The ethnicity recorded was 1 Chinese, 2 Maori, 1 Indian, 4 NZ European, 1 Middle Eastern
- 2 were born at home, the remaining were born in hospital
- All 9 were exclusively breast feed
- 6 were referred from community based midwives, none were self-referred and 1 referral source was unknown.
- The range of the highest bilirubin was from 539 to 451 micromoles/L, median 482
- Two infants required 1 exchange transfusion

SERIOUS PAEDIATRIC ADVERSE DRUG REACTIONS (ADR)

Dr Desiree Kunac, Dr Michael Tatley, Assoc Prof David Reith, Prof Keith Grimwood
Study commenced August 2007.

Key results for 2012

There were 19 notifications made to the NZPSU during 2012 but for 9 notifications, no further details were provided. A total of 10 reports were received; 2 reports were related to the same case, and one case was excluded as it was subsequently determined that the reaction was not related to the medicine and one further case was excluded as the patient outcome was not serious. The remaining 7 reports are summarised below:

Table 5: ADR notifications during 2012

Suspect medicine(s)	Adverse drug reaction	Age	Sex	Seriousness / Outcome	Medical Warning
paracetatmol	Hepatic failure	17 months	F	Died-medicine may be contributory *see case summary	
methyphendiate	Urticaria Chocking visual hallucination	11 years	F	Medically significant / Recovered	✓ Warning
messalazine	Interstitial nephritis	13 years	M	Persisting disability/not yet recovered at time of report	✓ Danger
cefacor amoxicillin	Interstitial nephritis	20 months	M	Intervention to prevent permanent impairment/recovered Hospitalised/recovered	✓ Danger
ethosuxamide	Serum sickness-like disorder	5 years	F	Hospitalised/recovered	✓ Danger
carbamazepine	Urticaria Hepatic enzymes increased Sedation Urine disscolouration	14 years	F	Medically significant / Recovered	✓ Danger
Traditional Chinese medicine	Lead Poisining	10 years	M	Medically significant/not yet recovered at the time of the report	

Four of the ten cases (which appear shaded in the table) are new reports that were not previously notified to CARM, highlighting the value of this active surveillance system. Importantly, three of these cases resulted in a medical warning being entered for the child in the NZ Health Information Service database and are now also entered into the CARM database to further enhance our understanding of serious ADRs in children.

**Case summary: This child who had received paracetamol at the upper limit of daily dosing for 7 days for a febrile illness that was later diagnosed pneumonia and was also found to have developed liver failure requiring transplant. The child died 3 days after transplant having developed sepsis and progressed to multi-organ failure and liver failure.*

VITAMIN D DEFICIENCY RICKETS (VDDR)

Dr Ben Wheeler, Associate Professor Nigel Dickson, Professor Barry Taylor
Completed June 2013

This study was conducted for 3 years from July 2010 – June 2013 inclusive. We are in the process of collecting final reports to begin analysis.

Our suspicion is many cases are not being reported, with some provinces with less than expected numbers (based on expected numbers/population). To look at this further, hospital admission data will also be reviewed.

At study conclusion, there were 73 notifications to the NZPSU of infants/children with VDDR. Of these:

- 57 - confirmed cases
- 8 - Awaiting data
- 6 – excluded – did not meet case definition, or missing significant data

Cases have been reported from most provinces in NZ. Exact numbers will be presented at completion of project. Final data will also be presented in next year's report.

In short, of the 57 confirmed cases:

- The majority of cases are of Indian ethnicity, (this differs from data from other countries), other ethnicities reported include: European, Maori, Tongan, Samoan, Nigerian, Eritrean, Malaysian, Chinese.
- As expected the majority have dark or intermediate skin colour
- The majority of cases were born in New Zealand
- Approximately 20% of mothers were born in New Zealand
- The mean age at diagnosis was approximately 2 years
- >90% were breastfed (for mean duration of 0.8years), approximately 50% have had cow's milk exposure
- Winter/Spring predominance of cases
- Approx. 75% have x-ray confirmation of rickets
- Initial analysis suggests an association with Iron Deficiency

CONDITIONS EVER MONITORED BY NZPSU

Table 6: All conditions ever monitored by the NZPSU

Condition	Report Period	Findings Reported
Acute Flaccid Paralysis	1997 - ongoing	Grenier D, Elliott EJ, Zurynski Y, Rodrigues PR, Preece M, R Lynn, von Kries R, Zimmermann H, Dickson N, Virella, D, Beyond Counting cases: public health impacts of national Paediatric Surveillance Units, *Archives of Disease in Childhood* 2008; 92:527-533 ST Chambers, NP Dickson Global polio eradication: progress, but determination and vigilance still needed *Journal of New Zealand Medical Association*, 24-June-2012, Vol 124, No 1337
Haemolytic Uraemic Syndrome	1998 - ongoing	
Congenital Rubella Syndrome	1998 - ongoing	
Perinatal HIV Exposure	1998 - ongoing	Dickson N, Paul C, Wilkinson L, Voss L, Rowley S, Estimates of HIV prevalence among pregnant women in New Zealand, *New Zealand Public Health Report, 2002; 9:17-19*
Vitamin K Deficiency Bleeding	1998 - 2008	Darlow BA. Vitamin K deficiency bleeding (VKDB) in New Zealand infants: results of surveillance over five years (1998 to 2002). *Pediatric Research* 56; 474, 2004
Fetal Alcohol Syndrome	1999 - 2001	

Subdural Haemorrhage (<2 years)	1999 - 2002	Kelly P, Farrant, B, Shaken Baby Syndrome in New Zealand, *Journal of Paediatrics and Child Health*, 2008; 44: 99–107
Retinopathy of Prematurity (stage III)	1999 - 2000	
Diabetes Mellitus	1999 - 2000	Campbell-Stokes P, Taylor B, on behalf of The New Zealand Children's Diabetes Working Group Prospective incidence study of diabetes mellitus in New Zealand children aged 0 to 14 years, *Diabetologia* 2005; 48: 643–648
Kawasaki Disease	2001 - 2002	Heaton P, Wilson N, Nicholson R, Doran J, Parsons A, Aiken G, Kawasaki disease in New Zealand, *Journal of Paediatrics and Child Health* 2008; 42: 184–190
Idiopathic Nephrotic Syndrome	2001 - 2003	Wong, W Idiopathic nephrotic syndrome in New Zealand children, demographic, clinical features, initial management and outcome after twelve-month follow-up: Results of a three-year national surveillance study, *Journal of Paediatrics and Child Health* 2008; 43: 337–341
Inflammatory Bowel Disease	2002 - 2003	
Prolonged Infantile Cholestasis	2004 - 2005	
Foregut and hindgut malformations	2004 - 2005	
Pertussis	2004 - 2005	R Somerville R , Grant C, Grimwood K, Murdoch D, Graham D, Jackson P, Meates-Dennis M, Nicholson R, Purvis D, Infants hospitalised with pertussis: Estimating the true disease burden *Journal of Paediatrics and Child Health* 2008; 43:617-622
Inborn Errors Of Metabolism	2004 - 2006	Wilson C, Kerruish N, Wilcken B, Wiltshire E, Webster D, The Failure to Diagnose Inborn Errors of Metabolism in New Zealand: The Case for Expanded Newborn Screening *New Zealand Medical Journal* 2008; 120: U2727
Pneumococcal meningitis	2005 - 2008	

Acute Post Streptococcal Glomerulonephritis	2007 - 2011	
Adverse Drug Reactions (ADR)	2008 - ongoing	Kunac D, Tatley M, Grimwood K, Reith D Active Surveillance of serious drug adverse reactions in New Zealand Children, *Arch Dis Child published online May 6, 2012*
Proven Neonatal Bacterial or Fungal Infection	2011-2012	
Severe Neonatal Hyperbilirubinaemia	2011-2013	
Moderate and Severe Neonatal Encephalopathy	2011 - 2012	
Vitamin D Deficiency Rickets	2011 - 2013	
Renal Stones	2011 - retrospective	Dickson N, Kara T, Tuohy P, Rapid National Survey of Renal Stones in New Zealand Infants, *Journal of Paediatrics and Child Health*; 2011 45, 633-635
Varicella and post-varicella complications	2011-2013	

INTERNATIONAL NETWORK OF PAEDIATRIC SURVEILLANCE UNITS

ESTABLISHMENT OF INOPSU

The network was formed in August 1998 at a meeting of 10 Pediatric Surveillance Units expressing a desire to link with each other. This took place at the 22nd International Congress of Paediatrics in Amstersdam, The Netherlands. The first INoPSU conference was held in 2000 in Canada and was attended by representatives of the existing units. Subsequent meetings have been held in York England, Lisbon, Portugal in 2004, Munich Germany 2008 and Melbourne 2013. Associate Professor Nigel Dickson has attended the meetings in Canada, England, Portugal and Melbourne.

MISSION

The mission of INoPSU is the advancement of knowledge of uncommon childhood infections and disorders, and the participation of paediatricians in surveillance on national and international basis so as to achieve a series of benefits

AIMS

- Facilitating communication and co-operation between existing national paediatric surveillance units;
- To assist in the development of new units;
- To facilitate sharing information and collaboration between researchers from different nations and scientific disciplines;
- To share information and current, past and anticipated studies and their protocols, and on conditions that have been nominated for surveillance but are not selected;
- To encourage the use of identical protocols to potentially enable simultaneous or sequential collection of data on rare paediatric disorders in two or more countries;
- To share and distribute information of educational benefit to constituent units, notably on study and surveillance methodologies;
- To share techniques and models of evaluation for units;
- To peer review and evaluate existing and proposed units;
- To identify rare disorders of mutual interest and public health importance for co-operative surveys through each national unit;
- To collaborate with, and provide information to, other interest groups interested in rare childhood diseases such as parent support groups; and
- To respond promptly to international emergencies relating to rare childhood conditions where national and international studies where national and international studies can make a contribution to science or public health.

ESTABLISHMENT OF INOPSU

There are currently 12 surveillance units from around the globe that form the INOPSU network.

Table 7: **Members of INoPSU** INoPSU Website: www.inopsu.com

Country	Unit	Email	Website
Australia	APSU	apsu@chw.edu.au	www.apsu.org.au
Belgium	BSU	*under development*	*under development*
Britain	BPSU		www.bpsu.inopsu.com
Canada	CPSP	danielleg@cps.ca	www.cps.ca/cpsp
Germany	ESPED	Prof.von.kries@gmx.de	www.esped.uni-duesseldorf.de
Greece and Cyprus	GCPSU	xhatzi@med.uth.gr	
Ireland	IPSU	robert.cunney@malix.hse.ie	
Netherlands	NSCK	rob.rodriguespereira@tno.nl	www.nvk.pedianef.nl
New Zealand	NZPSU	nzpsu@otago.ac.nz	www.otago.ac.nz/nzpsu
Portugal	PPSU	uvp-spp@ptnetbiz.pt	www.spp.pf/ingl/index_17.html
Switzerland	SPSU	mirjam.maeusezahl@bag.admin.ch	www.bag.admin.ch/infekt/melde/spsu/d/index/.htm(German)
Wales	WPSU	cerri.terrington@cardiffandvale.wales.nhs.uk	www.welsh-paediatrics.org

Table 8: **Characteristics of the Paediatric Surveillance Units**

Country	Population ($x10^6$<15 years)	Established	Approximate number of respondents
Australia	4.1	1992	1360
Belgium			
Britain	12.8	1986	3300
Canada	7.5	1996	2500
Germany	12.0	1992	460*
Greece and Cyprus	1.6	2001	
Ireland	1.3	1996	150
Netherlands	3.0	1992	780
Portugal	1.67	2000	1506
New Zealand	0.86	1997	210
Switzerland	1.3	1995	250
Wales	0.65	1994	135*

*Heads of Paediatric Centres

List of Clinicians with 100% Return Rate 2012

Clinicians who had 100% return rate in 2011 and 2012 are underlined

Aiken, Richard	Cole, Nyree	Garrett, John	Lees, Hugh
Alexander, Steve	Corban, Jenny	Gavin, Raewyn	Lennon, Diana
Armishaw, Jeremy	Corbett, Rob	Gentles, Tom	Leversha, Alison
Asher, Innes	Coulter, Belinda	Goldsmith, John	Liang, Allen
Ayers, Rosemary	Craig, Angela	Goodwin, Mick	Longchamp, Danielle
Baker, Nicholas	Craine. Karina	Graham, Dave	Lourens, Roelof
Bates, Giles	Cunningham, Sussanah	Grangaard, Erik	Lynn, Adrienne
Battin, Malcolm	Cunningham, Vicky	Grant, Cameron	Lyver, Amanda
Beard, Rachel	Currie, Srah	Grant, Shaun	Maikoo, Rajesh
Beasley, Spencer	Dalton, Marguerite	Gunn, Alistair	Marks, Rosemary
Best, Emma	Dalziel, Stuart	Hainsworth, Oliver	Marshall, Andrew
Bishop, Jon	Daniel, Alison	Hall, Anganette	Matsas, Richard
Blair, Nikki	Darlow, Brian	Hall, Kate	Maxwell, Fraser
Blakelock, Russell	Day, Andrew	Harding, Jane	McArthur, John
Bloomfield, Guy	Dickson, Cameron	Hector-Taylor, James	McCarthy,Karen
Bond, David	Dixon, Bronwyn	Hegarty, Jo	McCay, Hamish
Bourchier ,David	Dixon, Joanne	Hewson, Michael	McFarlene, Scott
Bradley, Stephen	Doocey, Claire	Hoare, Simon	McIllroy, Peter
Breen, Felicity	Doran, John	Hofman, Paul	McKie, Jill
Bremner, Catherine	Drage, Alan	Hornung, Tim	Meadows, Caroline
Broadbent, Roland	Drake, Ross	Hunter, Warwick	Meyer, Michael
Broomfield, Frank	Edmonds, Liza	Hunter, Wendy	Mildenhall, Lindsay
Brown, Jeff	Edwards, Liz	Jackson, Pam	Mitchell, Anne
Brynes, Cass	Elder, Dawn	Jefferies, Craig	Momsen, Tracey
Buckley, David	Emery, Diane	Jellyman, Timothy	Moore, Philip
Buskh, Mariam	Evans, Helen	Jordan, Nicola	Morris, Max
Campanella, Silvana	Ferguson, Janet	Kara, Tony	Moyes, Chris
Campbell-Stokes, Priscilla	Fleming, John	Kelly, Andrew	Muir, Collette
Carmicheal, Eleanor	Ford, Rodney	Kelly, Patrick	Nair, Arun
Chin, Simon	Forster, Richard	Langdana, Anu	Neas, Katherine
Clark, Philippa	Gangakhedhar, Arun	Leadbitter, Philip	Nel, Jaco
Clarke, Rachel	Gapes, Stephanie	Lear, Graham	Neutze, Jocelyn
Newman, David	Robertson, Stephen	St John, Martyn	Walls, Tony
Nicholson, Ross	Rowley, Simon	Stanley, Thosten	Walsh, Jonathon

Nobbs, Peter	Sadlier, Lynette	Steinmann, Kai	West, Clare
Nolan, Melinda	Sandhu, Jag	Stonehouse, Mary	Weston, Phil
Nutthal, Gabrielle	Schmiti-Uli, Meia	Sullivan, Michael	Whale, Janine
O'Donnell, Clare	Selby, Robyn	Swan, Catherine	Wheeler, Ben
Ostring, Genevieve	Sharpe, Cia	Taylor, Barry	Wilde, Justin
Pattemore, Philip	Shaw, Ian	Teague, Lochie	Wills, Justin
Percival, Teuila	Shaw, Robyn	Tomlinson, Paul	Wills, Russell
Perira, Nicola	Shepherd, Michael	Townsend, Tom	Wilson, Callum
Peterson, Christopher	Shillito, Paul	Trenholme, Adrian	Wilson, Elizabeth
Porteous, Louise	Sinclair, Jan	Tsang, Adrian	Wilson, Nigel
Prestige, Chanel	Siversten, Louise	Tuck, Roger	Wilson, Ross
Pringle,Kevin	Skeen, Jane	Twiss, Jacob	Wilson, Toni
Purvis, Diana	Skinner, Jon	Van de Boom, Jutta	Wiltshire, Esko
Ramadas, Ram	Sloper, Juliet	Voss, Lesley	Wong, Maisie
Reith, David	Smith, David	Walker, Wendy	Wong, Sharon
Robertshaw, Kate	Smith, Warwick	Wallace, Alexandra	Wong, William

Congratulations to

Cameron Grant

who was selected to win a $50 book token to be presented at the ASM of the Paediatric Society of New Zealand