Table of Contents

Preface

Welcome to the 2007 Annual Report of the New Zealand Paediatric Surveillance Unit (NZPSU). This is the 10th anniversary issue since the Unit was established in 1997.

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.

Barry Taylor

Nigel Dickson

Amanda Phillips

Introduction

Surveillance is important to monitor both the incidence of emerging conditions and the effectiveness of prevention measures. The Paediatric Society of New Zealand (PSNZ) had for some years promoted the establishment of a unit that could regularly request specialist paediatricians to report on a number of conditions. This led to the establishment of the New Zealand Paediatric Surveillance Unit (NZPSU) in October 1997.

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 Organisation (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 2007 includes eight 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.

How the Surveillance System Works

The method of surveillance is based on that developed in the United Kingdom in 1986 by the British Paediatric Surveillance Unit (BPSU). It has subsequently been used for the monitoring of rare childhood conditions in several other countries, including Australia, and also by other specialist groups.

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

Where possible, cases are regularly compared with other data sources such as hospital discharge data, notifications to the local Medical Officer of Health, and the New Zealand AIDS Epidemiology Group. It is envisaged that some of the conditions under surveillance will be ongoing, while others will be for a finite period, usually two or three years.

Regular surveillance reports are made to the Ministry of Health specifically updating the progress with AFP surveillance.

Inclusion of New Conditions

A Scientific Review Panel (SRP) has been established primarily to consider the inclusion 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 of interest is:

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

It is important for the success of the scheme that the workload of the mailing list 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)**

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

* *Replaced Dr Alison Roberts who was involved in the SRP since its inception in 1997.*

First 10 Years of the NZPSU and the Future

The NZPSU was established in October 1997 so this report features the first 10 years of its existence.

MAJOR ACHIEVEMENTS

1. Undertaking surveillance that has satisfied the World Health Organisation (WHO) that New Zealand is polio-free

The NZPSU has been able to provide a service to the Ministry of Health that has allowed them to report to the WHO that New Zealand is polio-free. This has been achieved through establishing a process that captures what WHO believes to be the underlying incidence rate of conditions that can present with acute flaccid paralysis, and confirming that none of these are due to polio virus infection. This has been challenging as it requires pediatricians to report a non-specific condition ("acute flaccid paralysis") and investigate the child for polio virus infection even if an alternative definitive diagnosis has often been made. While the number of cases reported annually has been satisfactory, we have not always met the stool testing criteria – 75% of cases having two samples taken at least 24 hours apart within 14 days of the inset of the paralysis. With the National Polio Eradication Committee, we continue to consider the best strategy to meet this requirement.

2. Establish a network that has been used for

- ongoing surveillance of other 'uncommon but important' conditions
  - identity incidence of diagnosed conditions
  - identity absence of diagnosed conditions

- research into other 'uncommon but important' conditions
  - cases series

The network established with the cooperation of specialist paediatricians throughout the country has allowed ongoing surveillance of a number of other uncommon but important childhood conditions. In particular, this has provided valuable information on children born to HIV–infected women, which has been used to estimate the proportion of such pregnant women who have had their HIV diagnosed prior to delivery. In addition, through monitoring cases of congenital rubella, we have shown this problem appears to currently be under control in New Zealand.

The NZPSU network has been used to determine the incidence of a number of uncommon conditions in New Zealand through individual studies undertaken by paediatricians. These have increased knowledge in a number if areas, including infectious, renal, respiratory and gastrointestinal disease, as well as problems caused predominantly by child abuse. Some of these findings have been combined to those found in similar studied overseas.

Overall, this has increased out knowledge of a number of individually uncommon diseases that can have serious implications for the children affected.

3. ***Been prepared to urgently determine the existence, or otherwise, of uncommon conditions among New Zealand children that might require rapid public health action***

We have recently been able to respond to a request from the Ministry of Health to determine whether it is likely that young children in New Zealand have been affected by melamine contamination. This could be done rapidly through the established network.

FUTURE POTENTIAL

- ***Continue to be involved in required surveillance for acute flaccid paralysis***

We hope to be able to continue surveillance for polio in New Zealand. Worldwide, there are some countries where this infection continues to exist, and extensive international travel leaves the possibility it being re-introduced into this country. The NZPSU has been involved in the discussion on the development of a response plan if – or maybe when – a case is discovered here.

2. Continue that the NZPSU network be used to study uncommon but important childhood condition

We also hope to be able to be the mechanism that allow study of a number of uncommon but important condition among children in New Zealand.

- ***"Tip of the iceberg" studies***
  Of particular public health importance are conditions that paediatricians see that are a "tip of the iceberg", hence give an indication of a more common but less extreme health problems in the community. Examples of these are hospitalised pertussis as an indication of widespread pertussis, bronchiectasis as an indication – for some children – of under treatment of recurrent chest infection.

- ***Prevalence studies***
  To date the studies undertaken have been of new cases diagnosed (incidence studies). For some uncommon chronic condition, prevalence studies (the proportion of children with a disease at that time) that would only need to be put on the NZPSU report card for one month could be undertaken very efficiently using the network.

- ***International collaboration***
  The NZPSU is part of the International Network of Paediatric Surveillance Units (InOPSU), which has been established to foster international collaboration. This would be an ideal way for paediatricians to be part of – or develop themselves - international comparative studies. We have close links with the Australian PSU in particularly keen to collaborate in this way.

- ***Form the source of national analytical studies of uncommon condition***
  Studies to date have been mainly of case series. The NZPSU could be used as the source of cases of uncommon conditions, the aetiology of which could be investigated through case-control study methods.

Care in balancing "cost and benefit"

The NZPSU is very aware that this form of surveillance can only succeed with the support of the paediatricians nationally and appreciates that that has been given over the past ten years.

In the future it will continue to balance the need to be able to use and provide valuable information, to be responsive to important issues, and not to overload individual paediatricians.

Surveillance Activities in 2007

In 2007, 205 clinicians participated in the system. The average response rate to the monthly report card/email was 95%. We are very pleased with the ongoing high response rate from the whole of the country.

In 2007 the NZPSU monitored eight uncommon childhood conditions *(Table 3).* Some of the protocols and questionnaires used were adapted from those used by the Australian Paediatric Surveillance Unit.

Respondent Workload
Minimising the extra workload that the system imposes on paediatricians is a key factor for its success.

The range of conditions under surveillance and their incidence needs to be kept under review.

Table 2 shows the percentage of clinicians on the mailing list that reported cases during 2006 and 2007. The table shows that in 2007, 146 of the participants did not report any cases, with two reporting five or more, compared to one in 2007.

***Table 2*: Respondents' Workload 2006 & 2007**

Notifications	2006		2007	
	No.	%	No.	%
None	151	73.6	146	71.2
One	34	16.5	44	21.5
2-4	19	9.3	13	6.4
5 or more	1	0.5	2	0.9

Table 3: **Conditions Under Surveillance in 2007**

Condition	Surveillance Started	Surveillance Ended	Principal Investigators
Acute flaccid paralysis	October 1997	Ongoing	Dr 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	Dr Nigel Dickson Dr Lesley Voss
Vitamin K deficiency bleeding	January 1998	Ongoing	Professor Brian Darlow
Inborn errors of metabolism	January 2004	Ongoing	Dr Nikki Kerruish Dr Callum Wilson
Pneumococcal meningitis	April 2005	May 2007	Professor Diana Lennon
Adverse Drug Reactions (ADR's)	May 2007	Ongoing	Dr Desiree Kunac
Acute Post Streptococcal Glomerulnephritis	October 07	Ongoing	Dr William Wong

Brief Reports on Ongoing Studies

ACUTE FLACCID PARALYSIS (AFP)

Dr Nigel Dickson

Ongoing study started in October 1997

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 2007

- There were four cases notified to the NZPSU in 2007.
- Information has been obtained on all of these children including follow-up information two months after diagnosis.
- Three AFP cases were from the North Island, and one was from the South Island.
- One male, three females.
- Age range 3 to 15 years, median age 4 years.
- No seasonal variation.
- The overall incidence was 0.5 per 100,000 children < 15 years.
- A diagnosis of Guillain-Barré Syndrome (GBS) has been made in two of these cases, ADEM (acute disseminated encephalomyelitis) in one, and Brachial Plexus Neuropathy in the other.
- All four 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 three of the four children.

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

Category	Stool samples	
	No.	%
2 stool samples within 14 days of onset of paralysis	3	75
2 stool samples, but one or both not within 14 days of onset of paralysis	0	0
1 stool sample	0	0
No stool samples	1	25

COMMENT

The system did not successfully capture the required rate of AFP in 2007. The rate of stool testing was 75%, the WHO criteria is 80%. To try to improve the situation we have changed the name on the card to "Guillain Barre and other causes of acute flaccid paralysis".

The NZPSU appreciates the support from clinicians in making telephone notifications of AFP, and attempts to ensure that timely stool specimens are sent to ESR for appropriate testing.

Ongoing surveillance of AFP, even though the WHO believes Polio to have been eradicated from the Western Pacific region, 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-Barre 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 2007.

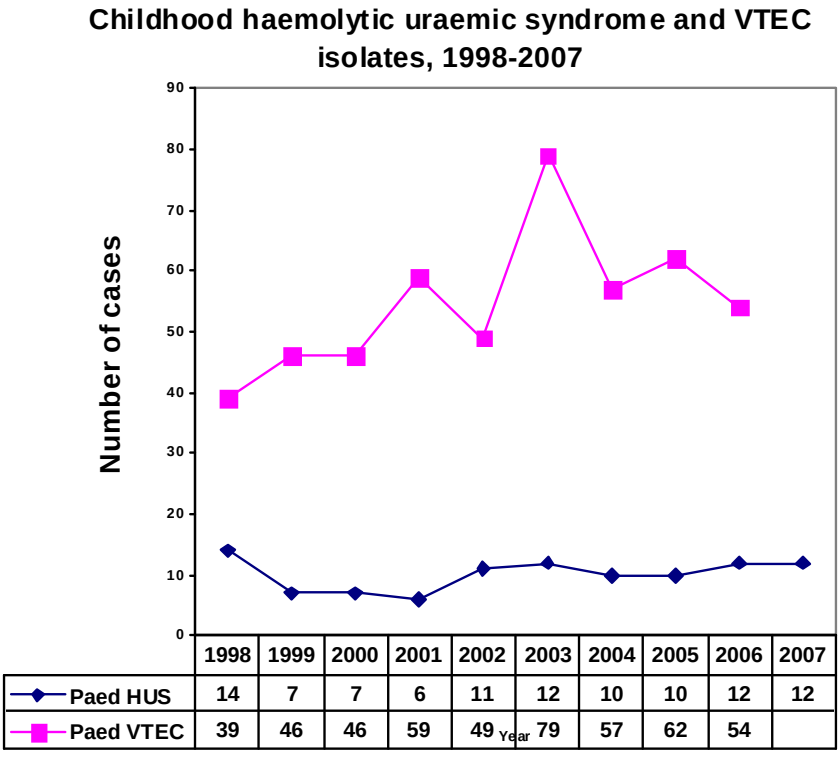
HAEMOLYTIC URAEMIC SYNDROME (HUS)

Dr William Wong

Ongoing study started in January 1998

KEY RESULTS FOR 2007

- 12 cases of HUS reported, 10 had a diarrhoeal prodrome and 2 were atypical (2 pneumococcal associated).
- Geographic distribution of D(+) HUS - 7 in North Island, 3 South Island.
- Incidence of D(+)HUS is 3.07 per 100,000 per year < age 5year and 1.2/100,000 under age 15.
- Mean and median age at presentation of D(+) HUS was 4.4 and 2.7 years respectively, range 0.7 to 10.5years.
- 5/10 of the diarrhoeal group had E coli 0157H7 isolated from their stools, 1 case associated with campylobacter.
- 2/12 needed acute peritoneal dialysis, both regained renal function to come off dialysis.



PERINATAL EXPOSURE TO HIV

Dr Nigel Dickson, Dr Lesley Voss

Ongoing study started January 1998

In 2007 there were 14 reports to the NZPSU of infants/children born to women infected with HIV.

Of these:

- 1 was a perinatally infected child born overseas

- 13 were infants born in New Zealand in 2007 (10) and 2006 (3) to women with HIV diagnosed prior to giving birth or during their pregnancy. Of these:

    - 4 were born in Auckland, 5 in Waikato, 2 in Wellington, 1 in Hawke's Bay, and 1 in Christchurch.

    - 8 were born to mothers whose HIV had been diagnosed before her pregnancy, and 5 were diagnosed during their pregnancy.

    - 7 of the mothers were African, 2 were Asian, 2 European, 1 Pacific, and 1 was Māori.

    - All of the mothers were given antiretroviral treatment during pregnancy; 6 gave birth by caesarean section, and 7 gave birth vaginally; and 1 of the babies was given an attempt at breastfeeding.

    - None of the children are believed to be infected with HIV (although some are still awaiting final confirmation).

In addition, there were 2 reports to the AIDS Epidemiology Group in 2007 of children infected with HIV born in New Zealand (one in 2007 and one in 2004) whose mothers HIV was undiagnosed at their time of birth.

INBORN ERRORS OF METABOLISM (IEM)
Urea cycle, amino acid, organic acid disorder or fatty acid oxidation defect

Dr Nikki Kerruish, Dr Dianne Webster, Dr Callum Wilson, Dr Esko Wiltshire

Ongoing study commenced January 2004

Disorder	DOB	Age at diagnosis	Sex	Reason for diagnosis
Non-ketotic hyperglycinaemia	2/2007	<1 month	M	Floppy, lethargic, poor feeding
Maple Syrup Urine Disease	05/2006	15/12	F	Vomiting, lethargy
Carnitine Palmitoyltransferase Deficiency 2	08/2007	2 days		Severe hypoglycaemia
3-Methylcrotonylglycinuria	07/2007	10 days	M	Newborn screening (NBS)
Glutaric aciduria Type 1	05/2007	1 week	M	NBS
Medium chain acyl dehydrogenase deficiency	05/2007	1 week	M	NBS, hypoglycaemia, lethargy, poor feeding
Homocysteinuria	09/2001	78 months	M	Myopia, developmental issues
Homocysteinuria	10/1998	102 months	F	Brother with diagnosis, mild developmental delay
Medium chain acyl dehydrogenase deficiency or Multiple acyl-CoA dehydrogenase deficiency	10/2001	60 months	M	Hypoglycaemia with fast
Holocarboxylase synthase deficiency (biotinidase def)	07/2007	1 month	M	NBS
Medium chain acyl dehydrogenase deficiency	09/2007	1	M	NBS

SERIOUS PAEDIARTIC ADVERSE DRUG REACTIONS (ADR's)

Dr Desiree Kunac, Dr Michael Tatley, A/Professor David Reith, Professor Keith Grimwood

Two year study, commenced August 2007.

Over the five month period, August to December 2007, there were 14 notifications made to the NZPSU. No further details for four notifications were received despite request letters being sent.

For the remaining 10 cases, report summaries are provided below:

Suspect medicine(s)	Adverse drug reaction	Age	Sex	Seriousness / Outcome	Medical Warning
Methylphenidate SR	hallucination generalised spasm myalgia aggressive reaction "brand switch"	11 years	M	unknown	
Methylphenidate SR	aggressive reaction "brand switch"	11 years	M	not yet recovered at time of report	
Methylphenidate SR	aggressive reaction therapeutic response decreased "brand switch"	10 years	M	not yet recovered at time of report	
Acyclovir	interstitial nephritis	6 years	F	Recovered	✓
DTaP/IPV Hib-HepB	convulsions fever	2 months	M	hospitalised recovered	
DTaP/IPV Hib-HepB	pallor hypotonia tonic/clonic convulsions fever	2 months	M	hospitalised recovered	
Sodium valproate	epistaxis platelets abnormal	9 years	F	recovered	
Xylometazoline	stridor nasal obstruction	1month	F	hospitalised recovered	✓
Cefaclor	serum sickness-like disorder	4 years	M	hospitalised recovered	✓
Gentamicin	acute renal failure	13 years	M	hospitalised life threatening recovered	✓

Five of the 10 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 all five cases are now entered into the CARM database to further enhance our understanding of serious ADRs in children.

ACUTE POST STREOTOCOCCAL GLOMERULONEPHRITIS (APSGN)

Dr William Wong, Dr Jocelyn Neutze, Professor Diana Lennon

Two year study, commenced October 2007

The study commenced in September 2007. So far data on 65 cases (41 males) has been received. One patient's data was excluded due to insufficient information to make a diagnosis.

DEMOGRAPHIC FEATURES

Mean age was 7.5yrs, median 6.5yrs, range 1.4 -15. Ethnic groups: European 12/65 (18.4%), Maori 24 (37%), Samoan 21 (32%),Tongan 5 (8%), and others 3 (5%). A family history of renal disease was present in 15 patients.

CLINICAL HISTORY

A history of a sore throat was elicited in 41 (63%), skin infection in 17 (26%) and both in 5 (7.7%). 52/65 patients had the period from infection to onset of PSGN recorded, the mean of which was 9.9±5.8 days (median 10 days).

Fifty-six patients had information recorded as to whether an antibiotic was given for the sore throat or skin infections, but only 29/56 (52%) were prescribed an antibiotic. In 22 no antibiotic was recorded as being given, and in 5 it could not be determined. Only one child had another sibling who also had PSGN at the same time as the index case.

CLINICAL FEATURES ON PRESENTATION

- Gross Haematuria present in 61/65 (93.8%) of patients, oedema in 50/65 (77%), oliguria 31/65 (47%) and anuria in 2.
- Hypertension was recorded in 47/65 (72%), and 6 had encephalopathic features with 1 having seizures at presentation.
- All encephalopathic patients were hypertensive with blood pressures ranging from 155-170/76-120.
- Reduced renal function as judged by raised serum creatinine for age at presentation was evident in 43/65 (66%).
- C3 reduction was seen in 92% (50/64) at presentation, 5 patients normal C3, but had serological evidence of a streptococcal infection either in the form of elevated ASOT or antiDNase B.
- Two patients did not have initial C3 measured. 31/65 (46.9%) had significantly raised initial ASOT (>480), 22/62 (35%) antiDNAase B elevated >680.
- Heavy proteinuria as defined by a urinalysis showing ≥3+ protein or urine protein to creatinine ratio >200mg/mmol) was documented in 26 patients.
- Only 4 patients had severe hypoalbuminemia (albumin <25g/L).
- Of interest, and of significant importance, 17 patients had no record of a urinalysis or Up/Uc ratio done.

TREATMENT
The mean length of hospital stay 4.8 ± 3.5 days. Sixty six percent were treated with frusemide, and 25/64 (39%) were treated for hypertension with a calcium channel blocking agent. Almost all patients were treated with a course of penicillin to eradicate any streptococcal infection.

CONCLUSION
The first 12 months of the study shows that APSGN is a disease that continues to be common, particularly amongst Maori and Pacific Island peoples. Significant morbidity was associated with the disease.

Conditions Ever Monitored by NZPSU

All conditions ever monitored by the NZPSU.

Condition	Abb.	Commenced	Concluded
Acute flaccid paralysis	AFP	October 1997	Ongoing
Haemolytic nephritic syndrome	HUS	January 1998	Ongoing
Congenital rubella syndrome	CRS	January 1998	Ongoing
Perinatal HIV exposure	HIV	January 1998	Ongoing
Vitamin K deficiency bleeding	Vit K	January 1998	Ongoing
Neonatal herpes simplex infection	HSV	January 1998	December 2000
Subdural haemorrhage (<2 years)	SDH	January 1999	December 2002
Retinopathy of prematurity (stage III)	ROP	January 1999	December 2000
Diabetes mellitus	DM	January 1999	December 2000
Fetal alcohol syndrome	FAS	July 1999	December 2001
Kawasaki disease	KD	January 2001	December 2002
Bronchiectasis	BE	January 2001	December 2002
Idiopathic Nephritic syndrome	INS	July 2001	July 2003
Inflammatory bowel disease	IBD	January 2002	December 2003
Prolonged Infantile Cholestasis	PIC	January 2004	December 2005
Foregut and Hindgut Malformations	FHM	January 2004	December 2005
Pertussis	Pert	July 2004	July 2005
Inborn Errors of Metabolism	IEM	January 2004	Ongoing
Pneumococcal Meningitis	Pneu Meng	April 2005	May 2007
Adverse Drug Reactions(ADR's)	ADR's	May 2007	Ongoing

Publications

Shaken Baby Syndrome in New Zealand
P Kelly, B Farrant
Journal of Paediatrics and Child Health, 44, 2008; 99–107

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.
W Wong
Journal of Paediatrics and Child Health 2007; 43: 337–341

The Failure to Diagnose Inborn Errors of Metabolism in New Zealand: The Case for Expanded Newborn Screening
C Wilson, N Kerruish, B Wilcken, E Wiltshire, D Webster
New Zealand Medical Journal 2007;120:U2727

Infants hospitalised with pertussis: Estimating the true disease burden
R Somerville, C Grant, K Grimwood, D Murdoch, D Graham, P Jackson, M Meates-Dennis, R Nicholson, D Purvis
Journal of Paediatrics and Child Health 2007; 43:617-622

Kawasaki disease in New Zealand
P Heaton, N Wilson, R Nicholson, J Doran, A Parsons, G Aiken
Journal of Paediatrics and Child Health 2007; 42: 184–190

Beyond Counting cases: public health impacts of national Paediatric Surveillance Units
D Grenier, EJ Elliott, Y Zurynski, PR Rodrigues, M Preece, R Lynn, R von Kries, H Zimmermann, N Dickson, D Virella
Archives of Disease in Childhood: 2007; 92:527-533

New Zealand national incidence of bronchiectasis "too high" for a developed country
J Twiss, R Metcalfe, E Edwards, C Byrnes
Archives of Disease in Childhood 2005; 90:737–740.

Prospective incidence study of diabetes mellitus in New Zealand children aged 0 to 14 years
P Campbell-Stokes, B Taylor on behalf of
The New Zealand Children's Diabetes Working Group
Diabetologia 2005; 48: 643–648

Estimates of HIV prevalence among pregnant women in New Zealand
N Dickson, C Paul, L Wilkinson, L Voss, S Rowley
New Zealand Public Health Report, 2002; 9:17-19

The New Zealand Paediatric Surveillance Unit: Establishment and First Year of Operation
N Dow, N Dickson, B Taylor
New Zealand Public Health Report, 1999; 6: 41-44.

Research Opportunities - Call for New Studies

WANTED
Investigators to initiate new NZPSU studies.

THE PROGRAMME
Well-established, timely and cost-effective.
Effective at monitoring low-high frequency, high-impact diseases and conditions.

TRACK RECORD
95% response from over 200 paediatricians.

If you are interested in these or other studies, or for more information about surveillance please contact NZPSU, phone: (03) 474-7825 or email: nzpsu@otago.ac.nz

International Network of Paediatric Surveillance Units (INoPSU)

Establishment of INoPSU
The network was formed in August 1998 at a meeting of 10 Paediatric Surveillance Units expressing a desire to link with each other. This took place at the 22nd International Congress of Paediatrics in Amsterdam, 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 in 2002, Lisbon, Portugal in 2004 and Munich Germany 2008. Dr Nigel Dickson has attended the meetings in England and Portugal.

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

Aims
- facilitating communication and cooperation 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 on 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 school 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 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 can make a contribution to science or public health.

Members of INoPSU

Founding members:

- Australian Paediatric Surveillance Unit (APSU)
- British Paediatric Surveillance Unit (BPSU)
- Canadian Paediatric Surveillance Programme (CPSP)
- German Paediatric Surveillance Unit (ESPED)
- Latvian Paediatric Surveillance Unit (LPSU)
- Malaysian Paediatric Surveillance Unit (MPSU)
- Netherlands Paediatric Surveillance Unit (NSCK)
- New Zealand Paediatric Surveillance Programme (NZPSU)
- Papua-New Guinea Paediatric Surveillance Unit (PNGSU)
- Swiss Paediatric Surveillance Unit (SPSU)

Additional Members:

- Welsh Paediatric Surveillance Unit (2000)
- Portuguese Paediatric Surveillance Unit (2001)
- Irish Paediatric Surveillance Unit (2001)
- Greece and Cyprus Paediatric Surveillance Unit (2004)

Associate Members:

- Trinidad and Tobago Paediatric Surveillance Unit (2004)
- British Ophthalmological Surveillance Unit

Administration of the Association

In order to carry out the aims and direct the activities of INoPSU a secretariat has been set up. From 2004 Professor Rudi von Kries (ESPED) has acted as convenor, Dr R Pereira (NSCK) has acted as deputy convenor and Richard Lynn (BPSU) has acted as communications liaison.

International Collaboration

New Zealand paediatricians who are interested in undertaking international studies, or compare the rates of uncommon disease between countries, are encouraged to consider using INoPSU for this purpose. Please contact Nigel Dickson for further information.

Table 6: **Members of INoPSU** INoPSU Website: www.inopsu.com

Country	Unit	Email	Website
Australia	APSU	apsu@chw.edu.au	www.apsu.org.au
Britain	BPSU	bsu@rcpch.ac.uk	www.bpsu.inopsu.com
Canada	CPSP	cpsp@cps.ca	www.cps.ca/cpsp
Germany	ESPED	Prof.von.kries@gmx.de	www.esped.uni-duesseldorf.de
Ireland	IPSU	robert.cunney@malix.hse.ie	
Latvia	LPSU	aspedlat@com.latnet.lv	
Malaysia	MPSU	jho@pc.jaring.my	
Netherlands	NSCK	rob.rodriguespereira@tno.nl	www.nvk.pedianef.nl
New Zealand	NZPSU	nzpsu@otago.ac.nz	www.otago.ac.nz/nzpsu
Papua New Guinea	PNGPSU	hopepng@datec.com.pg	
Portugal	PPSU	uvp-spp@ptnetbiz.pt	www.spp.pf/ingl/index_17.html
Switzerland	SPSU	hans-peter.zimmermann@ bag.admin.ch	www.bag.admin.ch/infekt/melde/spsu /d/index/.htm(German)
Wales	WPSU	John.Morgan@eglam-tr.wales.nhs.uk	www.link-wales.org.uk
Trinidad and Tobago	T &TPSU		
Greece and Cyprus	GCPSU	xhatzi@med.uth.gr	n.persianis@cytanet.com.ay

Table 7: **Characteristics of the Paediatric Surveillance Units**

Country	Population ($x10^6$<15years)	Established	Approx number of respondents
Australia	3.98	1992	1000
Britain/Eire	12.8	1986	2500
Canada	7.5	1996	2400
Germany	12.0	1992	460*
Greece and Cyprus	1.6	2001	
Ireland	1.3	1996	150
Latvia	0.4	1996	22
Malaysia	7.6	1994	400
Netherlands	3.0	1992	640
Papua New Guinea	1.92	1996	40
Portugal	1.67	2000	300*
New Zealand	0.83	1997	205
Switzerland	1.3	1995	250
Trinidad & Tobago	0.5	2005	
Wales	0.65	1994	135*

* Heads of Paediatric Centres

List of Clinicians with 100% Return Rate 2007

Clinicians who had a 100% return rate in both 2006 and 2007 are underlined

Thank you to those clinicians who returned all of their cards in 2007!

Aftimos	Salim
Aho	George
Aiken	Richard
Asher	Innes
Baker	Nicholas
Barker	David
Bates	Giles
Battin	Malcolm
Best	Emma
Bhatia	Sat
Nikki	Blair
Bourchier	David
Bowkett	Brendon
Bradley	Stephen
Broadbent	Roland
Brooks	Jeanine
Broomfield	Broomfield
Brown	Jeff
Brynes	Cass
Buchanan	Leo
Buckley	David
Campanella	Silvana
Caseley	Terry
Clarkson	John
Cole	Nyree
Corban	Jenny
Coulter	Belinda
Dalton	Marguerite
Daniel	Alison
Darlow	Brian
De Sylva	Tony
Denny	Simon
Dickson	Cameron
Dixon	Joanne
Doocey	Clare
Doran	John
Leadbitter	Philip
Lees	Hugh
Lennon	Diana
Leversha	Alison
Drage	Alan
Drake	Ross
Edwards	Liz
Elder	Dawn
Evans	Juliana
Farrell	Alan
Ford	Rodney
Forster	Richard
Gangakhedhar	Arun
Gavin	Raewyn
Grangaard	Eric
Gapes	Stephanie
Gentles	Tom
Goldsmith	John
Grant	Cameron
Grangaard	Erik
Gunn	Alistair
Hall	Anganette
Hall	Kate
Hewson	Michael
Harding	Jane
Hoare	Simon
Hassall	Ian
Hofman	Paul
Heron	Peter
Hornung	Tim
Hunter	Warwick
Hunter	Wendy
Hector –Taylor	James
Jackson	Pam
Jacquemard	Raimond
Jankowitz	Peter
Jefferies	Craig
Jellyman	Timothy
Jones	David
Kelly	Andrew
Ramadas	Ram
Reith	David
Richardson	Vaughan
Robertson	Stephen

Liang	Allen
Longchamp	Daniele
Lourens	Ralph
McArthur	John
Maikoo	Rajesh
Marks	Rosemary
Manikkam	Noel
Marshall	Andrew
Matas	Richard
Maxwell	Fraser
McCarthy	Karen
McCay	Hamish
McFarlene	Scott
McIlroy	Peter
Meates- Dennis	Maude
Meyer	Michael
Mitchell	Ed
Mitic	Schuman
Moore	Philip
Morreau	Johan
Morris	Max
Morrison	Philip
Moyes	Chris
Mullane	Michelle
Nagel	Fred
Nair	Arun
Nel	Jaco
Neutze	Jocelyn
Newman	David
Nichols	Wayne
Nicholson	Ross
Nobbs	Peter
Nutthall	Gabrielle
Palmer	Penny
Parsons	Alan
Pattemore	Philip
Percival	Teuila
Pereira	Nicola
Pinnock	Ralph
Pringle	Kevin
Rowley	Simon
Shaw	Robyn
Shillito	Paul
Skeen	Jane
Skinner	Jon
Stanley	Thorsten
Smith	David
Smith	Warwick
Spooner	Claire
Russell	Glynn
Selby	Robyn
Shaw	Ian
Steinmann	Kai
Stonehouse	Mary
Swan	Catherine
Taylor	Barry
Tomlinson	Paul
Teague	Lochie
Tuck	Roger
Twiss	Jacob
Vogel	Alison
Wendy	Walker
Watt	Mike
Wills	Russell
Wilson	Nigel
Wilson	Ross
Wilson	Callum
Wiltshire	Esko
Wilson	Toni
Wong	Maisie
Wong	William
Wong	Sharon

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