VIROLOGY ANNUAL REPORT 2010

(http://www.surv.esr.cri.nz/virology/virology_annual_report.php)

Table 1 Summary of viral and mycoplasma pneumoniae infections in 2010

Year 2010	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Influenza A	0	0	0	2	1	10	117	229	42	5	1	0	407
Influenza A H1N1	1	0	0	0	0	0	0	0	0	0	0	0	1
Influenza A H1N1 swl	3	1	0	2	5	15	337	1043	211	27	4	0	1648
Influenza A H3N2	0	5	0	0	0	1	0	1	4	3	0	0	14
Influenza B	0	0	0	0	0	0	3	4	1	0	0	2	10
Metapneumovirus	0	0	0	0	1	0	12	39	52	27	2	3	136
Mycoplasma Pneumoniae	14	2	13	16	20	10	23	17	23	18	15	20	191
Parainfluenza 1	1	0	1	5	6	20	26	13	5	2	0	1	80
Parainfluenza 2	0	0	0	0	0	1	2	1	0	0	1	3	8
Parainfluenza 3	0	0	0	2	0	1	2	3	10	18	12	16	64
Respiratory Syncytial Virus (RSV)	1	4	7	6	8	23	230	557	353	101	6	2	1298
Rhinovirus	13	6	6	17	18	21	12	11	21	25	13	17	180
Rotavirus	23	8	8	25	19	25	62	52	32	85	50	41	430
Measles	0	0	0	17	2	1	2	3	5	1	0	0	31
Mumps	0	1	0	2	3	2	4	1	0	0	0	1	14
Varicella Zoster Virus (VZV)	47	66	71	78	53	56	80	60	66	71	61	83	792
Adenovirus	38	35	47	31	45	41	34	32	56	35	40	76	510
Adenovirus Type 1	0	1	0	0	0	2	1	0	4	1	4	2	15
Adenovirus Type 2	2	2	0	0	0	0	2	0	2	1	2	4	15
Adenovirus Type 3	0	7	2	1	4	7	7	0	7	6	4	12	57
Adenovirus Type 4	1	2	2	5	2	0	3	0	7	0	4	13	39
Adenovirus Type 5	0	1	0	0	1	0	1	0	1	1	0	1	6
Adenovirus Type 7	0	0	0	0	0	1	0	0	0	0	0	0	1
Adenovirus Type 8	4	7	10	9	7	12	10	0	6	3	5	5	78
Adenovirus Type 9	0	1	0	0	0	0	0	0	0	0	0	0	1
Adenovirus Type 11	0	0	0	0	0	0	0	0	1	0	0	0	1
Adenovirus Type 14	1	0	0	0	0	0	1	0	8	1	4	8	23
Adenovirus Type 15/29	0	0	1	0	0	0	0	0	0	0	0	0	1
Adenovirus Type 19	0	0	1	1	2	5	6	0	0	1	0	0	16
Adenovirus Type 21	0	0	0	0	0	0	0	0	0	0	0	0	0
Adenovirus Type 22	1	1	0	0	0	0	0	0	0	0	2	0	4
Adenovirus Type 31	0	0	0	0	0	1	1	0	0	0	0	0	2
Adenovirus Type 37	0	1	0	3	1	1	1	0	1	0	0	0	8
Adenovirus Type 41	0	0	0	0	0	0	0	0	0	0	0	0	0
Enterovirus	20	9	7	17	11	23	37	12	12	56	6	73	283
Enterovirus Coxsackievirus Group A type 2	0	0	0	0	0	0	0	1	0	0	0	0	1
Enterovirus Coxsackievirus Group A type 6	0	0	0	0	0	0	0	0	0	1	0	1	2
Enterovirus Coxsackievirus Group A type 9	0	1	0	0	0	0	0	0	0	0	0	0	1
Enterovirus Coxsackievirus Group A type 16	1	0	0	0	1	3	1	0	0	0	0	0	6
Enterovirus Coxsackievirus Group A type 21	0	0	0	0	1	0	0	0	0	0	0	0	1
Enterovirus Coxsackievirus Group B type 1	0	0	1	0	1	0	0	0	0	0	0	0	2
Enterovirus Coxsackievirus Group B type 2	0	0	0	0	0	1	0	0	0	1	0	2	4
Enterovirus Coxsackievirus Group B type 4	0	1	0	2	3	0	2	0	1	6	0	0	15
Enterovirus Coxsackievirus Group B type 5	1	1	0	0	1	1	1	0	3	2	0	1	11
Enterovirus Echovirus type 3	0	2	1	0	0	1	0	0	1	2	0	0	7
Enterovirus Echovirus type 5	0	0	0	0	0	0	0	0	0	2	0	0	2
Enterovirus Echovirus type 6	0	0	0	0	0	0	0	0	1	0	0	0	1
Enterovirus Echovirus type 9	1	1	0	0	0	0	0	0	0	0	0	1	3
Enterovirus Echovirus type 17	0	0	0	0	0	0	0	0	0	0	0	1	1
Enterovirus Echovirus type 19	0	0	0	0	0	0	0	0	1	0	0	0	1
Enterovirus Echovirus type 21	1	0	0	0	0	0	0	0	0	0	0	0	1
Enterovirus Echovirus type 25	0	0	0	0	0	0	0	0	0	1	0	3	4
Enterovirus Echovirus type 30	1	4	0	0	1	1	0	0	0	0	0	0	7
Enterovirus Echovirus type 31	0	0	1	0	0	0	0	0	0	0	0	0	1
Enterovirus Enterovirus type 68	0	0	0	0	1	3	4	1	0	5	0	0	14
Enterovirus Enterovirus type 71	1	2	0	0	0	0	2	1	2	0	0	0	8

*Note: Viruses designated with an asterisk were reported based on the specimen taken date, whereas other viruses were based on the lab reporting date.

Table 1 summarises viral and mycoplasma pneumoniae infections reported in New Zealand in 2010. The information is based on weekly data collated from the virology laboratories of Auckland Healthcare, Healthcare Waikato, Canterbury Health, Capital Coast Health, Middlemore Hospital and ESR.

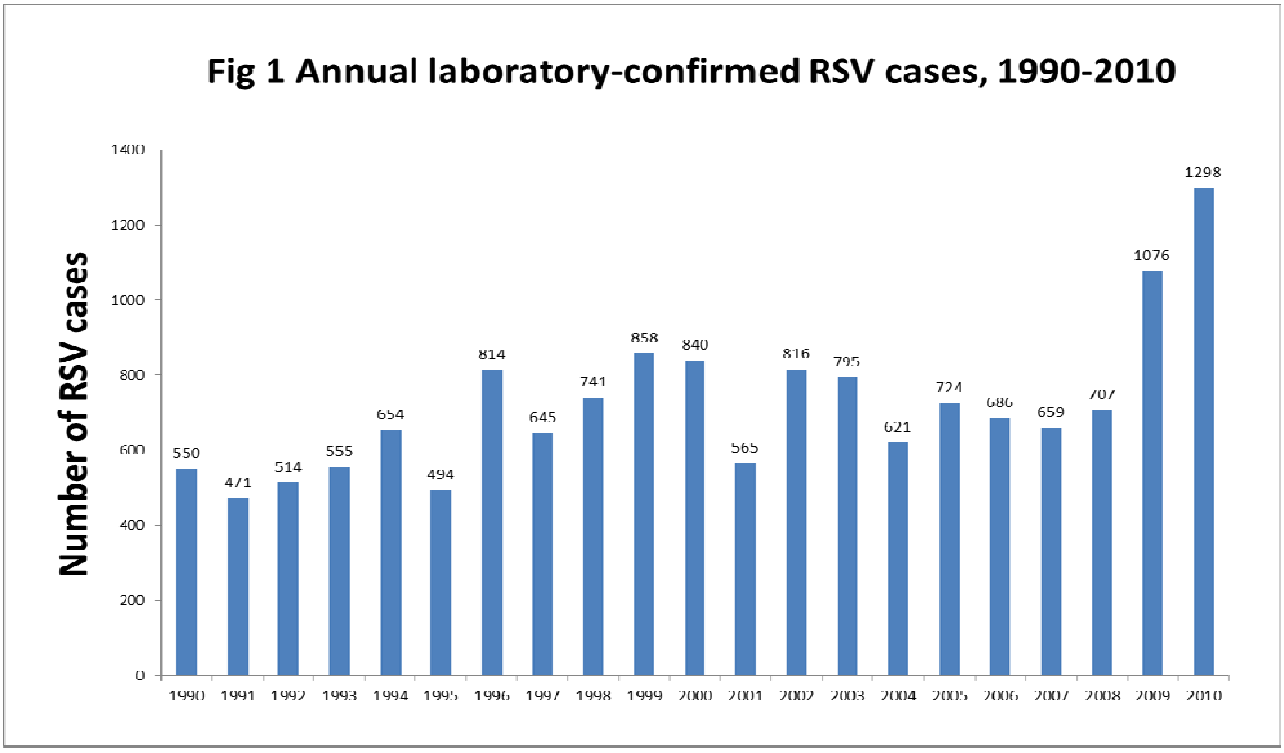
RESPIRATORY VIRUSES

Influenza

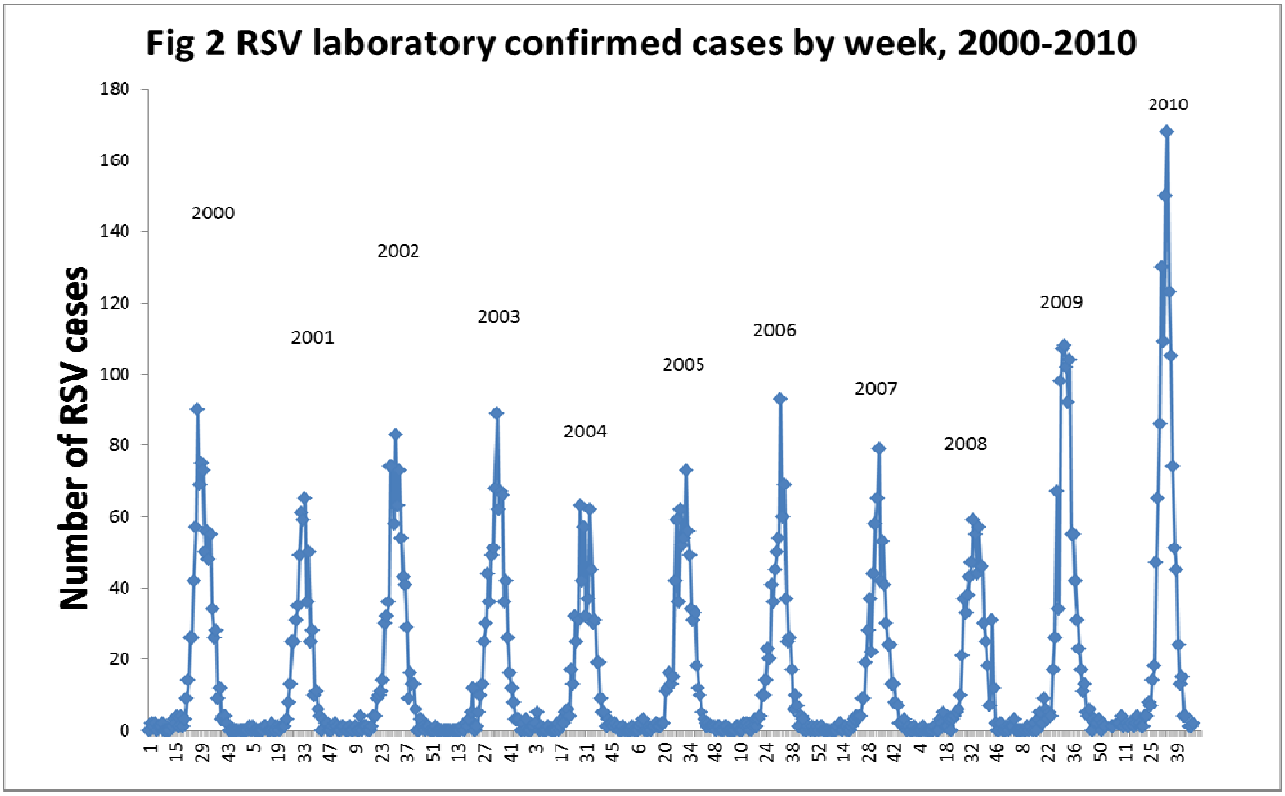
The influenza annual report in 2010 is available at the website:
http://www.surv.esr.cri.nz/virology/influenza_annual_report.php

Respiratory Syncytial Virus (RSV)

Based on laboratory-confirmed RSV cases reported to ESR, the RSV activity in 2010 was much higher than previous years (Figure 1). During January to December 2010, a total of 1298 RSV infections were reported compared with 1076 cases reported during the same period in 2009. This is the highest RSV activity reported in the past twenty years from 1990-2009.



In 2010, the RSV activity started to increase in July and peaked in Week 34 (end of August), 2 weeks later than the peak in 2009 (Figure 2). The RSV activity remained high until Week 39 (early October). Since then, the number of RSV cases declined to a baseline level.



ENTEROVIRUSES AND ADENOVIRUSES

The New Zealand enterovirus and adenovirus laboratory network comprises five laboratories: one public health virology laboratory (ESR, Wellington) and four hospital virology laboratories in Auckland (ADHB and CMDHB laboratories), Waikato and Christchurch. These five virology laboratories cover 100% of the population and all geographical areas of the country. The enterovirus and adenovirus surveillance is a year-round routine diagnostic surveillance for hospital in-patients and out-patients. Hospital laboratories report all enterovirus and adenovirus detections and/or typing results weekly to ESR and this data is then available nationally. Untyped or untypable enteroviruses and adenoviruses are referred to ESR for further identification.

Enteroviruses

There were a total of 283 enteroviruses reported in 2010, compared with 253 in 2009. A total of 93 (33%) enterovirus viruses were referred for serotyping. Among serotyped enteroviruses, Coxsackie B type 4 were the most predominant serotype with 15 viruses (16%, 15/93), while there were only 2 Coxsackie B type 4 in 2009. There were 14 of enterovirus type 68 (EV68) (15%, 14/93), compared with none of EV68 detected in previous years.

EV68 was first time identified in 2010 here in New Zealand. EV68 is associated with respiratory illness more common on young children and shares biological and molecular properties with both the enteroviruses and rhinoviruses. EV68 was originally isolated in California in 1962 from four children with respiratory illness. Since that time, reports of EV68 isolation have been very uncommon. Out of the 15 samples isolated with EV 68, 11 (73%) are from children less than 2 years of age. Majority came from South Auckland (87%, 13/15) and a small proportion from Waikato (13%, 2/15). Bronchiolitis is the most common symptom. They were isolated from April to October and were submitted as respiratory samples.

Adenoviruses

There were a total of 510 adenoviruses reported in 2010, lower than 635 in 2009. Of these, 267 (52%) adenoviruses were referred for typing. The predominant serotypes in 2010 were adenovirus type 8 (78, 15%), type 3 (57, 11%) and type 4 (39, 8%).

MEASLES, MUMPS AND RUBELLA(MMR)

The MMR annual report in 2010 is available in the report "Annual Surveillance Summary 2010" at
http://www.surv.esr.cri.nz/PDF_surveillance/AnnualRpt/AnnualSurv/2010/2010AnnualSurvRpt.pdf