

VIROLOGY ANNUAL REPORT 2009

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

Table 1 Summary of viral and mycoplasma pneumoniae infections in 2009

Year 2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
*Influenza A (not subtyped)	1	1	2	8	7	452	741	62	6	4	0	2	1286
*Seasonal Influenza A(H1N1)	1	0	0	8	22	518	170	5	0	0	0	0	724
*Pandemic Influenza A(H1N1) 2009	0	0	0	11	1	762	1764	213	25	10	5	12	2803
*Influenza A H3N2	0	1	0	7	10	38	18	6	0	0	1	0	81
*Influenza B	0	0	0	0	3	1	0	2	0	0	0	0	6
Parainfluenza 1	0	0	0	0	0	0	1	2	1	0	3	1	8
Parainfluenza 2	0	0	0	2	2	5	5	4	2	0	0	0	20
Parainfluenza 3	3	0	0	3	6	3	21	36	72	50	16	5	215
Respiratory Syncytial Virus (RSV)	5	0	2	10	20	52	414	353	168	33	11	8	1076
Rhinovirus	7	1	7	5	6	2	6	8	2	8	4	6	62
Metapneumovirus	0	0	0	0	0	0	0	0	15	12	4	1	32
Measles	0	2	3	0	0	2	21	12	3	2	3	0	48
Mumps	0	1	0	5	0	0	0	1	2	0	0	1	10
Rubella	1	2	0	0	0	0	0	0	0	0	0	0	3
Varicella Zoster Virus (VZV)	72	60	44	79	56	47	80	55	67	52	114	74	800
Rotavirus	37	16	35	36	61	47	36	33	40	49	41	24	455
Mycoplasma Pneumoniae	7	14	13	15	12	13	11	28	33	18	19	17	200
Adenovirus	56	58	65	74	61	33	36	31	57	51	60	53	635
Adenovirus Type 1	2	2	3	2	2	2	0	0	0	2	2	2	19
Adenovirus Type 2	5	1	2	5	5	3	0	2	0	3	2	1	29
Adenovirus Type 3	13	10	4	10	7	2	6	1	5	3	3	1	65
Adenovirus Type 4	0	2	0	0	0	1	2	0	2	1	5	3	16
Adenovirus Type 5	0	1	0	0	2	3	0	0	0	3	0	0	9
Adenovirus Type 6	0	0	0	0	0	0	0	0	0	0	0	1	1
Adenovirus Type 7	0	0	0	0	0	1	0	0	0	1	0	0	2
Adenovirus Type 8	25	19	42	49	23	11	15	5	8	24	14	18	253
Adenovirus Type 9	0	0	0	1	0	0	0	0	0	0	0	0	1
Adenovirus Type 11	0	0	0	0	0	0	0	0	0	0	1	4	5
Adenovirus Type 14	0	0	0	0	0	0	0	0	0	2	0	3	5
Adenovirus Type 15	1	0	0	0	0	0	0	0	1	0	0	0	2
Adenovirus Type 17	1	0	0	0	0	0	0	0	0	0	0	0	1
Adenovirus Type 19	0	0	1	1	0	0	0	0	0	0	0	2	4
Adenovirus Type 21	0	0	1	0	0	0	0	0	0	0	0	0	1
Adenovirus Type 22	0	0	0	3	0	0	0	1	1	1	0	0	6
Adenovirus Type 37	2	0	0	0	0	0	0	0	1	0	0	1	4
Adenovirus Type 41	0	0	0	0	0	0	0	0	0	1	0	1	2
Adenovirus Type 42	0	0	0	1	0	0	0	0	0	0	0	0	1
Adenovirus untypable	0	0	0	0	0	0	0	0	0	0	0	11	11
Enterovirus	35	25	10	25	12	10	10	7	35	29	24	31	253
Enterovirus Coxsackievirus Group A type 5	0	0	0	0	0	0	0	0	0	0	0	1	1
Enterovirus Coxsackievirus Group A type 9	1	2	0	0	1	0	3	0	5	6	1	1	20
Enterovirus Coxsackievirus Group A type 16	1	0	0	0	0	0	0	0	0	1	0	0	2
Enterovirus Coxsackievirus Group B type 2	3	1	0	0	0	0	0	0	0	0	0	0	4
Enterovirus Coxsackievirus Group B type 3	0	0	0	0	0	0	0	0	5	3	4	2	14
Enterovirus Coxsackievirus Group B type 4	0	0	0	0	0	0	0	0	0	1	1	0	2
Enterovirus Coxsackievirus Group B type 5	1	1	0	0	0	0	0	0	0	0	0	0	2
Enterovirus Echovirus type 4	3	3	0	1	4	0	0	1	0	2	0	1	15
Enterovirus Echovirus type 5	0	1	0	0	0	0	0	0	0	0	0	0	1
Enterovirus Echovirus type 6	2	2	0	0	0	0	0	0	0	0	0	0	4
Enterovirus Echovirus type 17	0	1	0	0	0	0	0	0	0	0	0	1	2
Enterovirus Echovirus type 21	0	1	0	0	0	0	0	0	0	0	0	0	1
Enterovirus Echovirus type 27	0	0	0	0	0	0	0	0	1	0	0	0	1
Enterovirus Echovirus type 30	0	0	0	0	0	0	0	0	0	0	1	4	5
Enterovirus Enterovirus type 71	0	0	0	0	0	0	0	0	0	1	0	0	1

*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 2009. 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.

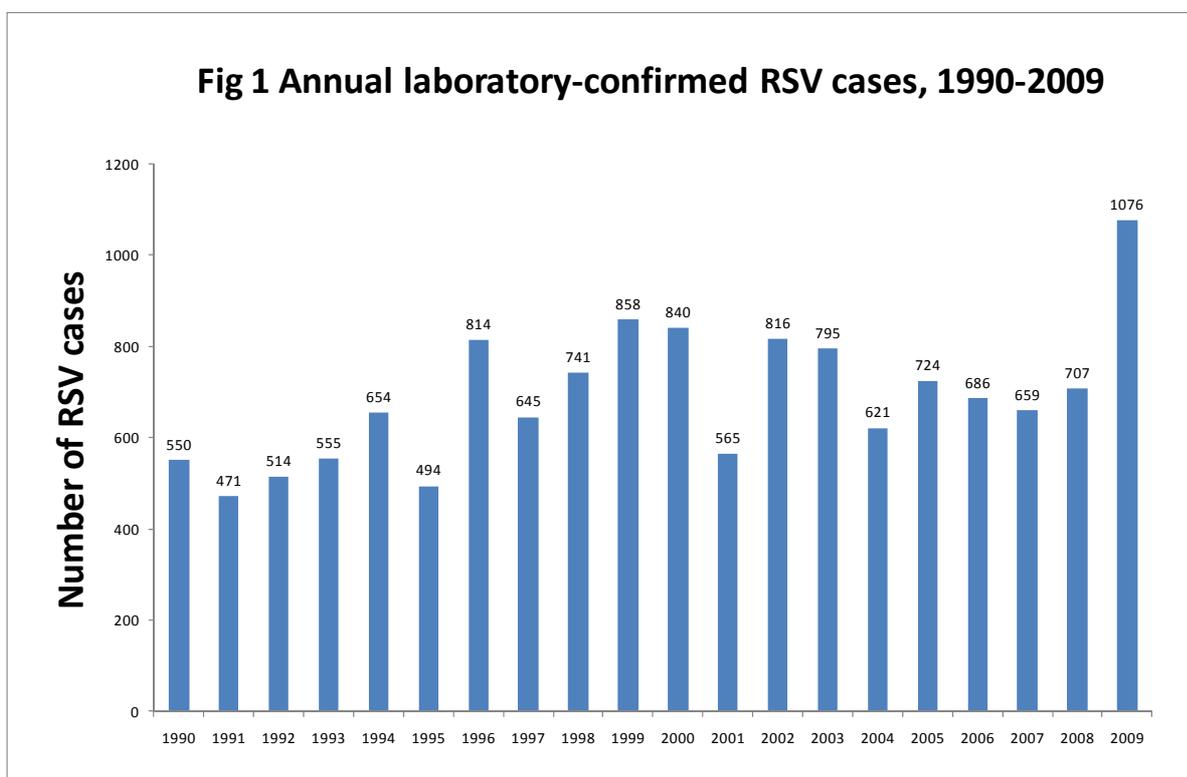
RESPIRATORY VIRUSES

Influenza

The influenza annual report in 2009 is available at the website:
http://www.surv.esr.cri.nz/virology/influenza_annual_report.php

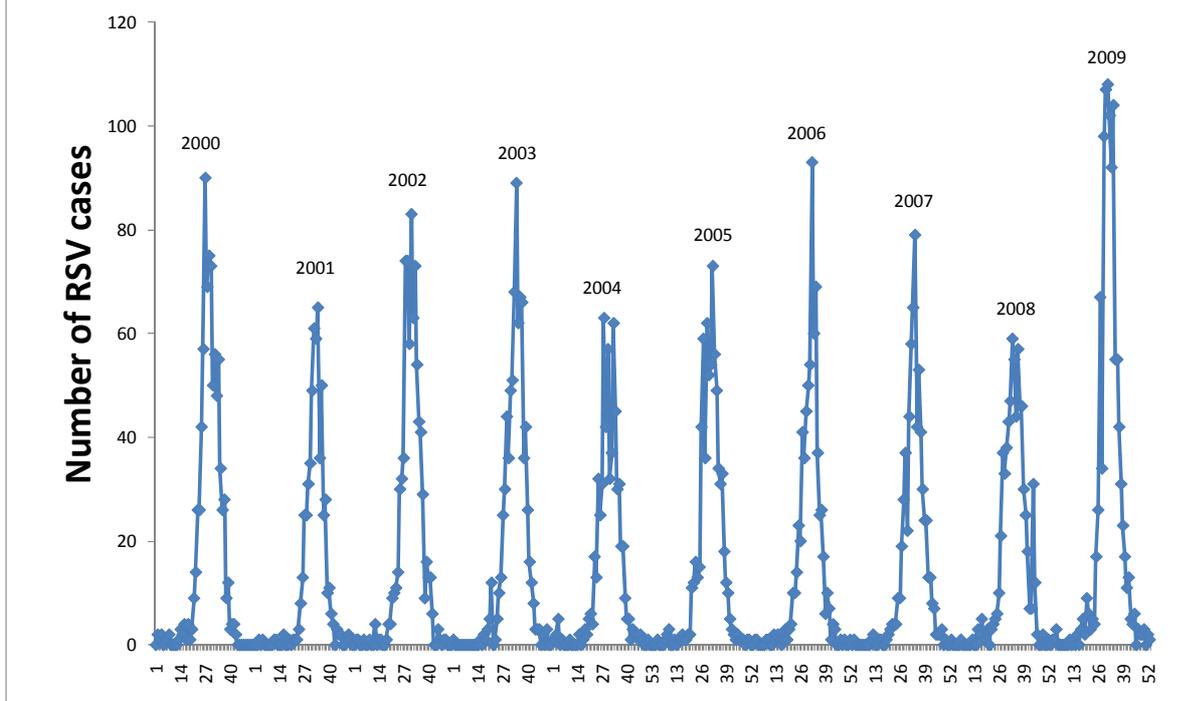
Respiratory Syncytial Virus (RSV)

Based on laboratory-confirmed RSV cases reported to ESR, the RSV activity in 2009 was much higher than previous years (Figure 1). During January to December 2009, a total of 1076 RSV infections were reported compared with 707 cases reported during the same period in 2008. This is the highest RSV activity reported in the past twenty years from 1990-2009.



In 2009, the RSV activity started to increase in July and peaked in Week 31 (middle of August), 2 weeks earlier than the peak in 2008 (Figure 2). The RSV activity remained high until Week 37 (middle of September). Since then, the number of RSV cases declined to a baseline level.

Fig 2 RSV laboratory confirmed cases by week, 2000-2009



ENTEROVIRUSES AND ADENOVIRUSES

The New Zealand enterovirus and adenovirus laboratory network comprises four laboratories: one public health virology laboratory (ESR, Wellington) and three hospital virology laboratories in Auckland, Waikato and Christchurch. These four 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 isolations 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 identification.

Enteroviruses

There were a total of 253 enteroviruses reported in 2009, compared with 192 in 2008. A total of 75 (30%) enterovirus viruses were referred for serotyping. Among serotyped enteroviruses, coxsackie A type 9 was the most predominant serotype with 20 viruses (27%, 20/75), compared with none in 2008. There were 15 of echovirus type 4 (20%, 15/75) and 14 of coxsackie B type 3 (19%, 14/75), compared with 2 of echovirus type 4 and none of coxsackie B type 3 in 2008 respectively.

Adenoviruses

There were a total of 635 adenoviruses reported in 2009, higher than 524 in 2008. Of these, 437 (69%) adenoviruses were referred for typing. The predominant serotypes in 2007 were adenovirus type 8 (253, 58%), type 3 (65, 15%) and type 2 (29, 7%).

MEASLES, MUMPS AND RUBELLA(MMR)

The MMR annual report in 2009 is available in the report “Annual Surveillance Summary 2009” at

http://www.surv.esr.cri.nz/PDF_surveillance/AnnualRpt/AnnualSurv/2009/2009AnnualSurvRpt.pdf