



VIROLOGY ANNUAL REPORT 2013

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

The virology annual report is compiled by ESR by collating the data from six virology laboratories: one public health virology laboratory (ESR) and five hospital virology laboratories in Auckland (ADHB and CMDHB laboratories), Waikato and Christchurch and Wellington. The virological surveillance is mainly a passive surveillance for hospital inpatients and outpatients during routine viral diagnosis.

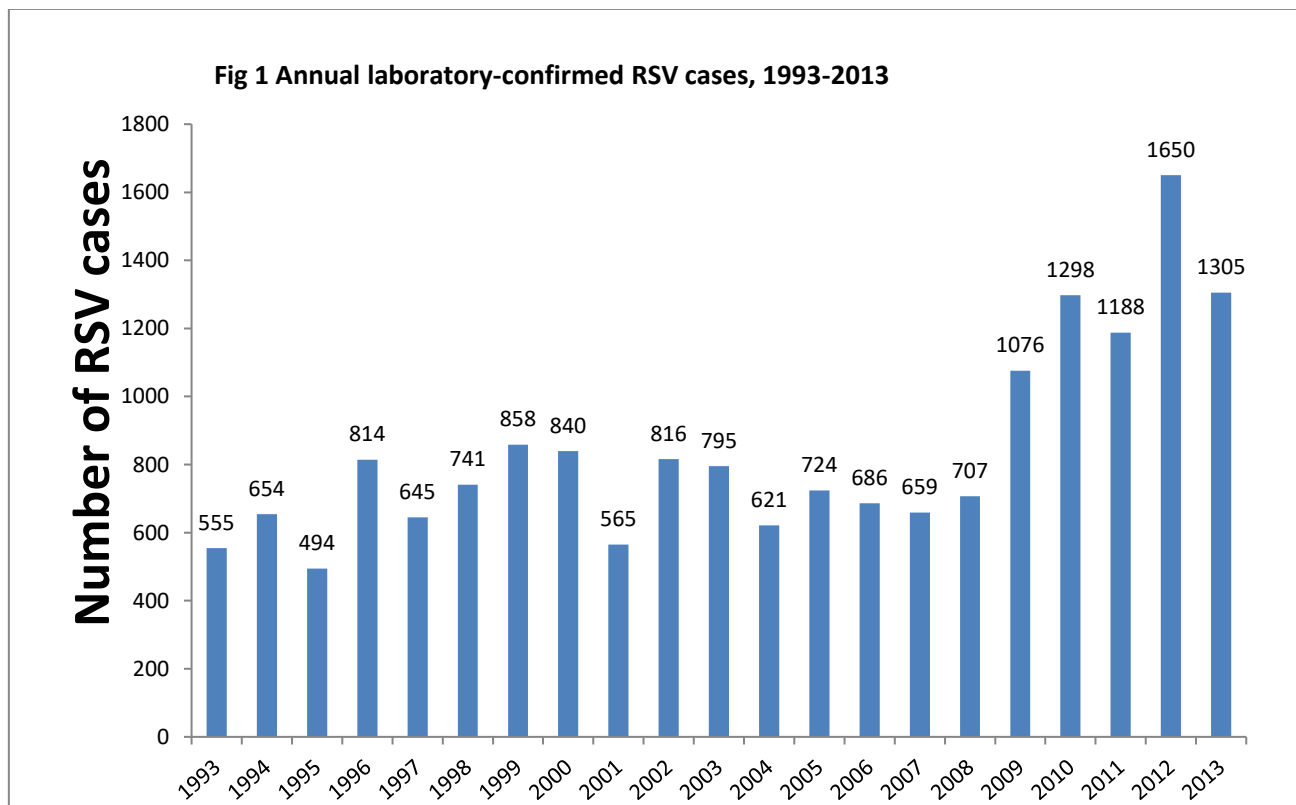
RESPIRATORY VIRUSES

Influenza

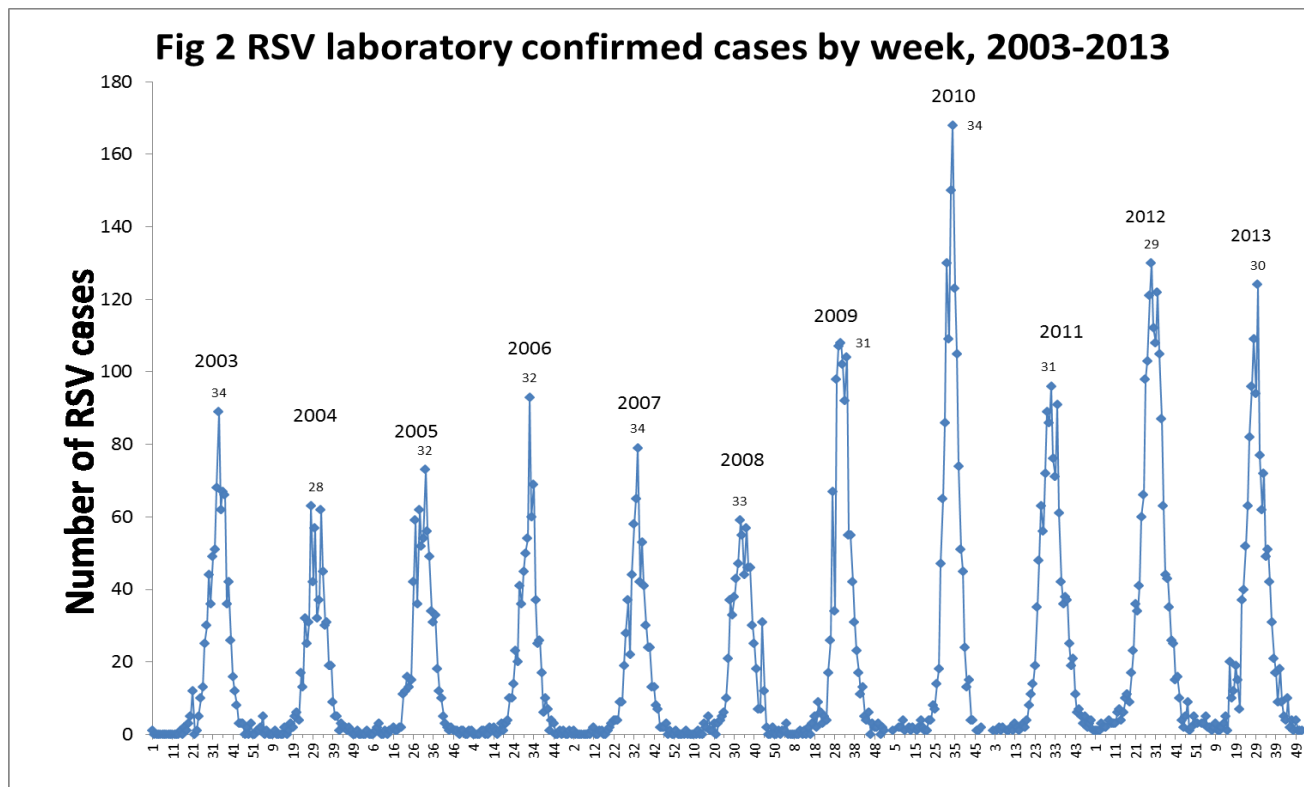
The influenza annual report in 2013 is available at the website:
http://www.surv.esr.cri.nz/virology/influenza_annual_report.php

Respiratory Syncytial Virus (RSV)

Based on laboratory-confirmed RSV cases reported to ESR, the RSV activity in 2013 was lower than last year (Figure 1). During January to December 2013, a total of 1305 RSV infections were reported compared with 1650 cases reported during the same period in 2012.



In 2013, the RSV activity started to increase in June and peaked in Week 30 (middle of July), one week later than the peak in 2012 (Figure 2). The RSV activity remained high until Week 39 (late September). 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 616 enteroviruses reported in 2013, compared with 346 in 2012. A total of 141 (22%) enterovirus viruses were identified by serotyping. Among serotyped enteroviruses, Coxsackievirus Group A type 6 was the most predominant serotype (69, 49%), and followed by Echovirus type 7, (16, 11%), while there was only 1 each of Coxsackievirus Group A type 6 and Enterovirus Echovirus type 7 in 2012.

Coxsackie Group A type A6 (CA6) was associated with the first recorded hand-foot-mouth disease (HFMD) outbreak with in NZ that started from March to September 2013. Mostly children less than 3 years and few adults had been infected. CA6 is relatively infrequent serotype to be detected in NZ. ESR's historical record showed detection of 21 CA6 viruses during 1984-2012.

Adenoviruses

There were a total of 1140 adenoviruses reported in 2013, higher than 754 in 2012. Of these, 350 (30%) adenoviruses were identified by serotyping. The predominant serotypes in 2013 were adenovirus type 3 (136, 39%), type 4 (80, 23%) and type 1 (46, 13%).

MEASLES, MUMPS AND RUBELLA(MMR)

The MMR annual report in 2013 is available in the report “Annual Surveillance Summary 2013” at

http://www.surv.esr.cri.nz/PDF_surveillance/AnnualRpt/AnnualSurv/2013/2013AnnualSurvRpt.pdf

In summary, viral and mycoplasma pneumoniae infections in New Zealand in 2013 are shown in Table 1. 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.

Table 1. Summary of viral and Mycoplasma pneumoniae infections in 2013 in New Zealand

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Influenza A*	2	8	12	1	1	7	16	59	80	55	12	7	260
Influenza A H1N1 swI*	0	7	6	3	5	8	34	43	108	63	18	5	300
Influenza A H3N2*	2	9	9	4	6	19	88	240	350	102	9	7	845
Influenza B*	7	2	3	7	20	58	193	236	285	94	14	2	921
Bocavirus	3	1	0	1	4	1	8	7	9	10	14	2	60
Coronavirus	0	0	1	0	3	30	56	23	22	17	12	0	164
Metapneumovirus	0	3	0	1	17	10	23	33	62	46	17	11	223
Mycoplasma Pneumoniae	21	12	29	20	32	33	29	37	31	39	32	42	357
Parainfluenza 1	2	1	0	0	2	0	6	6	9	3	4	1	34
Parainfluenza 2	0	2	0	2	9	17	39	19	18	4	5	2	117
Parainfluenza 3	2	2	0	5	5	8	47	79	98	110	35	10	401
Parainfluenza 4	2	0	0	1	3	4	2	3	3	1	4	1	24
Parechovirus	0	0	1	3	4	3	5	1	3	0	5	2	27
Parvovirus	1	1	0	0	0	1	0	1	0	2	0	0	6
Picornavirus	54	73	96	97	106	134	144	179	203	163	101	22	1372
Respiratory Syncytial Virus (RSV)	13	8	7	36	90	237	500	234	111	45	17	7	1305
Rhinovirus	12	18	42	61	181	224	290	157	244	243	180	136	1788
Rotavirus	16	10	5	8	25	40	61	48	56	43	30	21	363
Varicella Zoster Virus (VZV)	74	83	66	49	90	55	82	68	60	73	49	64	813
Adeno Total	77	55	55	44	102	124	145	108	143	135	92	60	1140
Entero Total	54	30	27	21	70	50	75	62	69	61	50	47	616
Measles	0	3	1	1	1	1	3	1	0	1	2	1	15
Mumps	5	1	1	1	0	1	3	2	5	0	4	1	24
Rubella	0	0	0	0	2	0	1	1	0	1	0	0	5
Adenovirus Type 1	2	4	2	4	2	1	7	1	13	6	2	2	46
Adenovirus Type 2	1	2	2	1	3	1	5	4	9	5	3	2	38
Adenovirus Type 3	8	11	1	10	10	4	24	7	20	14	12	15	136
Adenovirus Type 4	7	6	7	8	1	7	10	5	7	8	10	4	80
Adenovirus Type 5	1	0	2	0	0	0	1	0	0	4	0	1	9
Adenovirus Type 6	0	0	0	0	0	0	0	0	1	0	0	0	1
Adenovirus Type 7	0	1	0	2	0	0	0	0	0	1	4	0	8
Adenovirus Type 8	0	0	1	0	0	0	2	0	1	0	0	2	6
Adenovirus Type 14	0	0	0	1	1	0	2	0	0	0	0	0	4
Adenovirus Type 19	0	1	1	1	0	0	0	0	0	0	0	0	3
Adenovirus Type 22	0	0	0	0	0	0	0	0	5	1	0	0	6
Adenovirus Type 37	1	1	2	0	0	3	3	0	1	0	0	2	13
Enterovirus Coxsackievirus Group A type 6	0	1	0	1	41	5	15	2	2	0	0	2	69
Enterovirus Coxsackievirus Group A type 9	1	0	0	1	0	0	0	0	0	0	0	1	3
Enterovirus Coxsackievirus Group A type 16	0	0	0	0	0	0	0	0	0	0	0	1	1
Enterovirus Coxsackievirus Group B type 2	0	0	0	0	0	0	0	0	0	0	1	0	1
Enterovirus Coxsackievirus Group B type 3	0	1	4	1	0	0	0	1	0	0	0	0	7
Enterovirus Coxsackievirus Group B type 4	1	2	2	0	0	0	1	1	0	0	0	0	7
Enterovirus Coxsackievirus Group B type 5	0	0	0	0	0	0	1	0	0	0	0	0	1
Enterovirus Echovirus type 6	2	2	3	0	1	0	1	0	2	3	0	0	14
Enterovirus Echovirus type 7	0	0	0	0	0	0	1	0	5	8	1	1	16
Enterovirus Echovirus type 9	0	0	0	1	0	0	2	0	1	0	0	1	5
Enterovirus Echovirus type 11	0	1	2	0	0	0	0	0	0	0	0	0	3
Enterovirus Echovirus type 30	0	2	0	0	2	1	0	0	2	2	1	1	11
Enterovirus Enterovirus type 71	0	0	0	0	0	0	0	0	2	0	0	0	2
Enterovirus Enterovirus type 74	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.