

VIROLOGY ANNUAL REPORT 2004

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

Table 1 summarises viral identification and mycoplasma infections in New Zealand in 2004. The information is based on weekly data collated from the virology laboratories of Auckland Healthcare, Healthcare Waikato, Canterbury Health Laboratories, Health Otago, Capital Coast Health, Middlemore Hospital and ESR.

Year 2004	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
*Influenza A (not subtyped)	0	2	0	0	1	1	9	10	83	24	0	1	131
*A/New Caledonia/20/99(H1N1)	0	0	0	0	0	0	0	0	1	0	0	0	1
*A/Moscow/10/99 (H3N2)	1	2	0	0	0	0	0	0	0	0	0	0	3
*A/Fujian/411/02 (H3N2)	2	1	0	2	0	5	1	32	230	67	2	0	342
*A/Wellington/1/04 (H3N2)	0	0	0	0	0	0	0	3	166	139	5	0	313
*Influenza B (not typed)	0	0	0	0	0	0	1	0	3	4	4	0	12
*B/Hong Kong/330/01	0	0	0	0	0	0	0	0	0	1	0	0	1
*B/Sichuan/379/99	0	0	0	0	0	0	0	1	1	4	4	0	10
*B/Shanghai/361/02	0	0	0	0	0	0	2	2	14	28	5	0	51
Parainfluenza type 1	0	0	0	1	6	6	17	7	8	9	2	1	57
Parainfluenza type 2	0	1	0	0	0	1	1	1	1	1	1	0	7
Parainfluenza type 3	0	0	0	1	1	0	2	4	10	14	9	12	53
Respiratory Syncytial Virus (RSV)	9	1	1	6	17	87	225	174	78	16	6	1	621
Rhinovirus	0	0	2	15	5	3	10	10	11	15	7	19	97
Mycoplasma	20	15	18	23	13	15	13	20	25	31	19	15	227
Varicella Zoster Virus (VZV)	74	50	29	67	36	55	67	46	31	53	42	62	612
Rotavirus	6	2	3	10	10	10	23	17	38	33	26	16	194
Measles	4	0	2	1	1	1	1	0	0	0	0	1	11
Mumps	1	0	0	2	3	0	2	0	0	1	1	0	10
Rubella	0	0	0	0	0	0	1	0	0	0	2	0	3
Dengue	1	0	0	0	0	0	0	0	0	0	0	0	1
Adenovirus	12	9	8	13	18	27	28	19	25	35	49	35	278
Adenovirus type 1	1	0	1	0	1	2	3	2	1	1	1	3	16
Adenovirus type 2	3	3	1	2	1	2	0	1	3	3	9	6	34
Adenovirus type 3	4	1	2	2	1	3	5	5	4	3	11	14	55
Adenovirus type 4	0	1	0	3	2	0	1	0	0	0	1	1	9
Adenovirus type 5	0	0	2	0	1	0	0	0	1	1	3	0	8
Adenovirus type 6	1	0	0	0	0	0	0	0	0	0	0	0	1
Adenovirus type 7	2	0	0	0	0	1	0	0	0	0	0	0	3
Adenovirus type 8	0	0	2	0	0	1	2	2	1	0	2	1	11
Adenovirus type 9	1	0	0	0	0	0	0	0	0	0	0	0	1
Adenovirus type 10	0	0	0	0	2	0	0	0	1	0	3	15	21
Adenovirus type 11	0	1	0	0	0	0	0	0	0	1	1	0	3
Adenovirus type 13	0	0	0	1	0	0	0	1	0	0	0	0	2
Adenovirus type 14	0	0	0	0	1	0	1	0	0	1	1	0	4
Adenovirus type 15	1	0	0	0	0	0	0	2	0	1	0	0	4
Adenovirus type 17	0	0	0	0	2	1	0	0	0	0	0	0	3
Adenovirus type 19	1	0	0	1	1	0	6	0	1	0	0	1	11
Adenovirus type 23	0	0	0	0	0	0	0	0	0	1	0	0	1
Adenovirus type 25	0	0	0	0	0	0	0	0	0	1	0	0	1
Adenovirus type 26	0	0	0	0	0	1	1	0	0	0	0	0	2
Adenovirus type 29	1	0	1	0	0	0	1	2	0	0	0	0	5
Adenovirus type 41	0	0	0	0	0	0	0	0	0	0	3	0	3
untypable adenovirus	0	0	0	0	3	2	11	7	5	8	9	7	52
Enterovirus	8	11	11	15	14	17	17	30	16	16	31	43	229
Coxsackie B1	0	0	0	0	0	0	0	1	0	0	0	5	6
Coxsackie B3	1	0	0	0	0	0	0	0	0	0	0	0	1
Coxsackie B4	0	0	0	0	0	2	0	1	1	0	0	1	5
Coxsackie B5	0	0	0	0	0	3	1	2	4	0	3	3	16
Coxsackie B6	0	0	0	0	0	0	0	0	0	1	0	0	1
Coxsackie A4	0	0	0	1	0	0	0	0	0	0	0	0	1
Coxsackie A6	0	0	0	0	0	0	1	0	0	0	0	0	1
Coxsackie A8	0	2	0	0	0	0	0	0	0	0	2	0	4
Coxsackie A9	6	3	3	0	2	0	0	1	1	0	0	0	16
Coxsackie A10	0	0	0	1	0	0	0	0	0	0	0	0	1
Coxsackie A16	0	0	0	0	0	0	0	0	0	1	0	0	1
Coxsackie A24	1	0	0	0	0	1	0	0	0	0	0	0	2
Echovirus type 5	0	0	0	0	0	0	1	0	1	1	1	6	10
Echovirus type 6	3	1	0	0	0	0	0	0	0	0	0	0	4
Echovirus type 7	1	0	0	0	0	0	0	0	0	0	0	0	1
Echovirus type 9	2	1	0	1	0	0	1	0	0	0	0	0	5
Echovirus type 11	0	0	0	2	1	1	5	0	0	0	0	1	10
Echovirus type 20	0	0	0	0	0	0	0	0	1	0	0	0	1
Echovirus type 24	0	0	0	1	0	0	0	0	0	0	0	0	1
Echovirus type 30	0	0	1	4	0	0	8	8	1	1	2	8	33
Enterovirus type 71	0	0	1	0	5	0	0	0	0	0	0	0	6
Untypable enterovirus	0	0	0	0	0	0	1	0	1	0	0	0	2

Note: Viruses with sign "" were reported based on the specimen taken date, whereas other viruses were based on lab reporting date.

RESPIRATORY VIRUSES

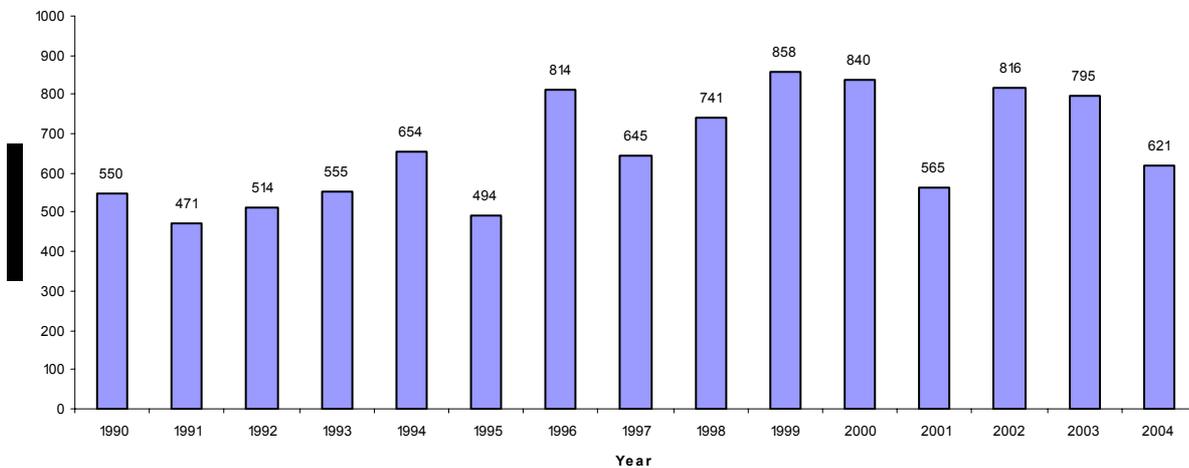
Influenza

The influenza annual report in 2004 is available at the website:
http://www.surv.esr.cri.nz/virology/influenza_annual_report.php

Respiratory Syncytial Virus (RSV)

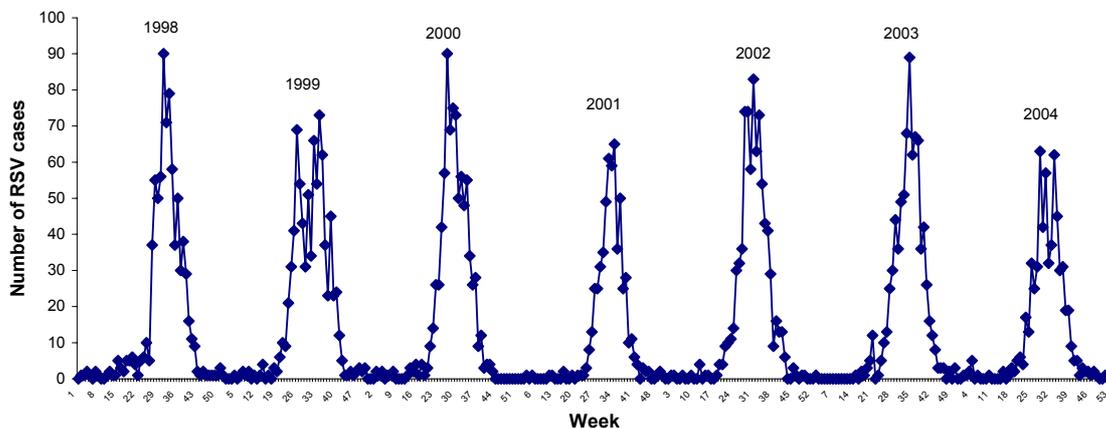
Based on laboratory-confirmed RSV cases reported to ESR, the RSV activity in 2004 was lower than 2003 (Figure 1). During January to December 2004, a total of 621 RSV infections were reported compared with 795 during the same period in 2003. The highest RSV activity occurred in 1999 with 858 cases reported.

Fig 1 Annual laboratory-confirmed RSV cases, 1990-2004



In 2004, the RSV activity started to increase in June and peaked in Weeks 28 (in the middle of July), 6 weeks earlier than the peak in 2003 (Figure 2). The RSV activity remained at the high level till Week 38 (late September). Since then, the number of RSV cases has declined to baseline level.

Fig 2 RSV laboratory confirmed cases by week, 1998-2004



ENTEROVIRUSES

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

There were a total of 229 enteroviruses reported in 2004, compared with 97 in 2003. A total of 128 enteroviruses were serotyped. Among serotyped enteroviruses, Echovirus type 30 was the most predominant serotype with 33 isolations (25.6%), compared with none in 2003. There were 16 isolations of Coxsackie B type 5 (12.5%) and 16 of Coxsackie A type 9 (12.5%), compared with none of Coxsackie B type 5 and 8 of Coxsackie A type 9 in 2003 respectively. In addition, six isolations of enterovirus type 71 were reported in 2005. For the detailed report, please refer to Virology Weekly Report 2004 Week 18, available at http://www.surv.esr.cri.nz/PDF_surveillance/Virology/VirWeekRpt/VirWeek200418_Note1.pdf

MEALSES, MUMPS AND RUBELLA(MMR)

The MMR annual report in 2004 is available in the report "Annual Surveillance Summary 2004" at http://www.surv.esr.cri.nz/surveillance/annual_surveillance.php?we_objectID=632

ADENOVIRUSES

There were a total of 278 adenoviruses reported in 2004, compared with 202 in 2003. A total of 250 adenoviruses were serotyped using adenovirus antisera 1-31 and 41. The predominant serotypes in 2004 were adenovirus type 3 (55 isolates, 22%), type 2 (34, 13.6%), type 10 (21, 8.4%), type 1 (16, 6.4%), type 8 (11, 4.4%), and type 19 (11, 4.4%). There were 52 untypable adenoviruses in 2004, compared with 9 in 2003. Of these, 47 untypable adenoviruses were isolated in the second half of the year, compared with 5 in the first half of the year. 19 out of 52 untypable adenoviruses showed partial neutralisation with adenovirus antisera 10, 13 and 19. Some of these isolates were forwarded to CDC-Atlanta for further characterisations. The molecular typing results from CDC indicated that they were adenovirus type 37 (Ad 37). Adenovirus type 37, as well as Ad 8 and Ad 19, can cause epidemic keratoconjunctivitis (EKC) that is a highly contagious and more serious disease. Ad 37 was first isolated in 1976 in The Netherlands as a newly identified serotype and has been recognised as an important causative agent of keratoconjunctivitis.