

VIROLOGY ANNUAL REPORT 2008

([http://www.surv.esr.cri.nz/virology/virology\\_annual\\_report.php](http://www.surv.esr.cri.nz/virology/virology_annual_report.php))

Table 1 Summary of viral and mycoplasma pneumoniae infections in 2008

| Year 2008                                  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| *Influenza A                               | 1   | 0   | 1   | 0   | 2   | 11  | 51  | 19  | 4   | 0   | 2   | 2   | 93    |
| *Influenza A (H1N1)                        | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 4   | 1   | 0   | 0   | 0   | 6     |
| *Influenza A (H3N2)                        | 0   | 0   | 1   | 1   | 31  | 107 | 115 | 56  | 13  | 1   | 0   | 0   | 325   |
| *Influenza B                               | 0   | 0   | 2   | 1   | 6   | 32  | 159 | 297 | 124 | 9   | 0   | 0   | 630   |
| Parainfluenza 1                            | 1   | 1   | 3   | 0   | 4   | 7   | 24  | 3   | 2   | 1   | 0   | 0   | 46    |
| Parainfluenza 2                            | 0   | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3     |
| Parainfluenza 3                            | 2   | 0   | 0   | 1   | 0   | 2   | 7   | 8   | 32  | 59  | 16  | 2   | 129   |
| Respiratory Syncytial Virus (RSV)          | 1   | 1   | 1   | 10  | 8   | 25  | 172 | 205 | 179 | 88  | 14  | 3   | 707   |
| Rhinovirus                                 | 1   | 0   | 0   | 4   | 3   | 0   | 0   | 0   | 2   | 15  | 1   | 1   | 27    |
| Measles                                    | 0   | 0   | 0   | 0   | 1   | 3   | 1   | 0   | 1   | 0   | 0   | 1   | 7     |
| Mumps                                      | 4   | 1   | 1   | 1   | 2   | 3   | 1   | 2   | 0   | 0   | 0   | 0   | 15    |
| Rubella                                    | 0   | 0   | 0   | 1   | 0   | 0   | 5   | 1   | 0   | 0   | 0   | 0   | 7     |
| Varicella Zoster Virus (VZV)               | 87  | 75  | 53  | 52  | 83  | 59  | 77  | 57  | 61  | 36  | 48  | 54  | 742   |
| Rotavirus                                  | 32  | 18  | 9   | 19  | 18  | 14  | 13  | 13  | 25  | 56  | 91  | 112 | 420   |
| Mycoplasma Pneumoniae                      | 5   | 6   | 10  | 4   | 10  | 7   | 14  | 16  | 12  | 20  | 20  | 16  | 140   |
| Adenovirus                                 | 46  | 45  | 48  | 40  | 61  | 35  | 33  | 31  | 51  | 53  | 39  | 42  | 524   |
| Adenovirus Type 1                          | 2   | 1   | 0   | 1   | 2   | 3   | 1   | 0   | 4   | 6   | 3   | 3   | 26    |
| Adenovirus Type 2                          | 2   | 3   | 0   | 1   | 2   | 1   | 4   | 1   | 2   | 7   | 6   | 1   | 30    |
| Adenovirus Type 3                          | 29  | 8   | 3   | 4   | 5   | 7   | 1   | 4   | 1   | 10  | 5   | 10  | 87    |
| Adenovirus Type 4                          | 3   | 1   | 1   | 1   | 2   |     | 1   | 0   | 0   | 1   | 0   | 0   | 10    |
| Adenovirus Type 5                          | 0   | 2   | 1   | 2   | 0   | 1   | 1   | 1   | 2   | 1   | 5   | 0   | 16    |
| Adenovirus Type 6                          | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 1     |
| Adenovirus Type 8                          | 18  | 18  | 16  | 15  | 27  | 24  | 14  | 15  | 23  | 29  | 11  | 28  | 238   |
| Adenovirus Type 9                          | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1     |
| Adenovirus Type 11                         | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1     |
| Adenovirus Type 19                         | 1   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3     |
| Adenovirus Type 37                         | 0   | 0   | 1   | 1   | 0   | 3   | 0   | 1   | 0   | 0   | 0   | 2   | 8     |
| Adenovirus Untypable                       | 4   | 1   | 4   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 11    |
| Enterovirus                                | 15  | 7   | 7   | 13  | 17  | 10  | 9   | 9   | 13  | 34  | 29  | 29  | 192   |
| Enterovirus Coxsackievirus Group A type 10 | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     |
| Enterovirus Coxsackievirus Group A type 16 | 0   | 1   | 0   | 1   | 2   | 4   | 0   | 0   | 0   | 0   | 0   | 0   | 8     |
| Enterovirus Coxsackievirus Group B type 1  | 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   | 0   | 1   | 1     |
| Enterovirus Coxsackievirus Group B type 5  | 0   | 0   | 0   | 0   | 1   | 0   | 2   | 0   | 0   | 0   | 0   | 3   | 6     |
| Enterovirus Echovirus type 4               | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 2     |
| Enterovirus Echovirus type 6               | 2   | 1   | 0   | 0   | 2   | 2   | 2   | 1   | 0   | 5   | 2   | 6   | 23    |
| Enterovirus Echovirus type 7               | 1   | 1   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 4     |
| Enterovirus Echovirus type 9               | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 1   | 0   | 3     |
| Enterovirus Echovirus type 11              | 1   | 0   | 2   | 1   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 6     |
| Enterovirus Echovirus type 18              | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1     |
| Enterovirus Echovirus type 25              | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 2   | 0   | 0   | 3     |
| Enterovirus Echovirus type 30              | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1     |
| Enterovirus Enterovirus type 71            | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2     |

\*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 2008. 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

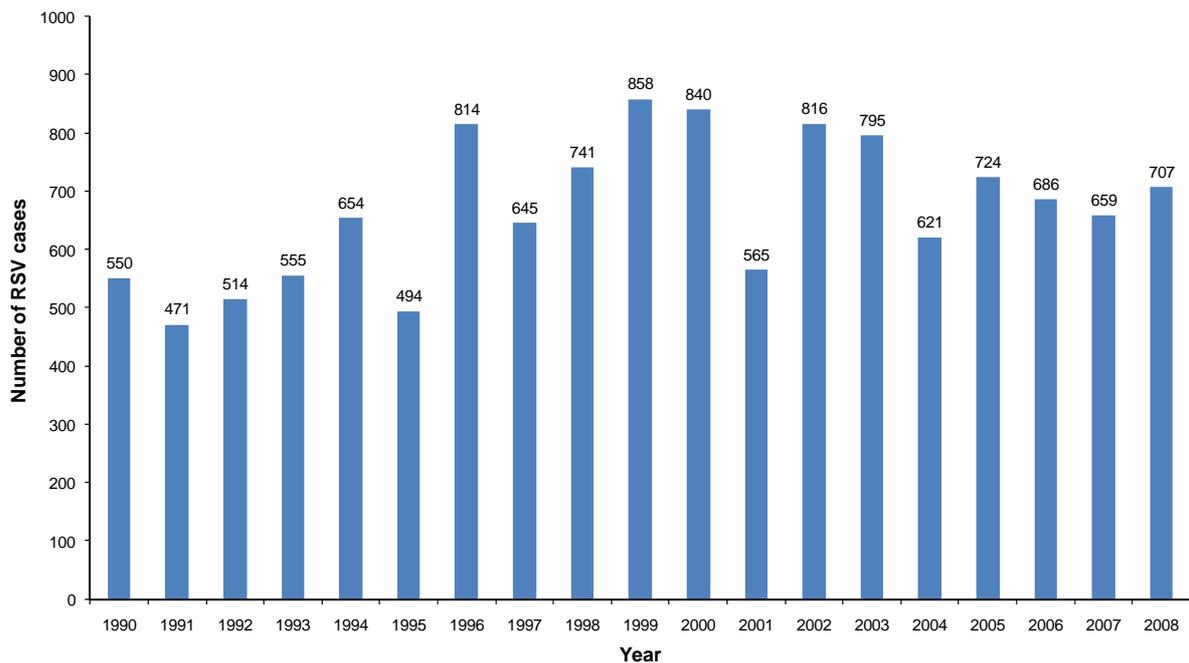
### *Influenza*

The influenza annual report in 2008 is available at the website:  
[http://www.surv.esr.cri.nz/virology/influenza\\_annual\\_report.php](http://www.surv.esr.cri.nz/virology/influenza_annual_report.php)

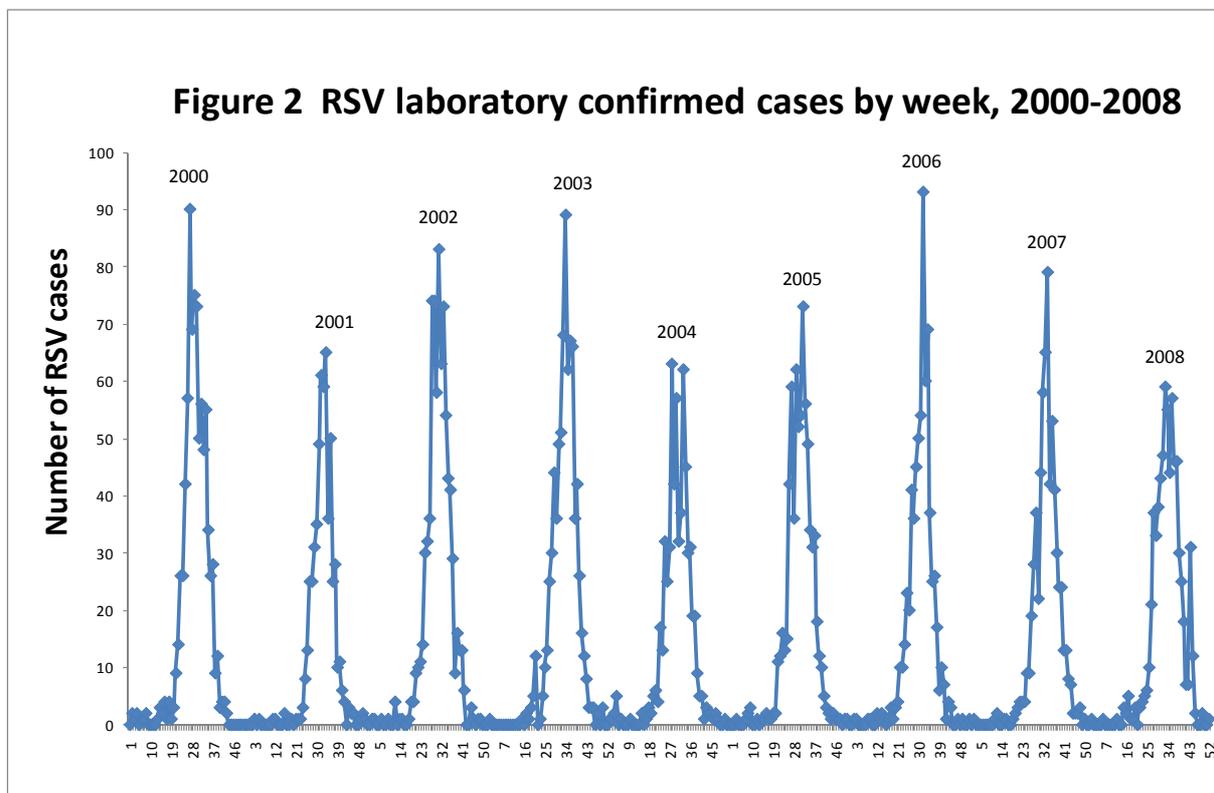
### *Respiratory Syncytial Virus (RSV)*

Based on laboratory-confirmed RSV cases reported to ESR, the RSV activity in 2008 was higher than that of 2007 (Figure 1). During January to December 2008, a total of 707 RSV infections were reported compared with 659 cases reported during the same period in 2007. Over the previous 19 years, the highest RSV activity occurred in 1999 with 858 cases reported.

**Fig 1 Annual laboratory-confirmed RSV cases, 1990-2008**



In 2008, the RSV activity started to increase in July and peaked in Week 33 (middle of August), one week earlier than the peak in 2007 (Figure 2). The RSV activity remained high until Week 38 (middle of 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 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 192 enteroviruses reported in 2008, compared with 148 in 2007. A total of 62 (32 %) enterovirus viruses were referred for typing. Among typed enteroviruses, echovirus type 6 was the predominant serotype with 23 isolations (37%, 23/62), compared with 11 viruses in 2007. There were eight of coxsackievirus A type 16 viruses (13%, 8/62), compared with two viruses in 2007.

### *Adenoviruses*

There were a total of 524 adenoviruses reported in 2008, lower than 654 in 2007. Of these, 432 (82%) adenoviruses were referred for typing. The predominant serotypes in 2007 were adenovirus type 8 (238, 55%), type 3 (87, 20%) and type 2 (30, 7%).

## MEASLES, MUMPS AND RUBELLA(MMR)

The MMR annual report in 2008 is available in the report “Annual Surveillance Summary 2008” at [http://www.surv.esr.cri.nz/surveillance/annual\\_surveillance.php?we\\_objectID=1987](http://www.surv.esr.cri.nz/surveillance/annual_surveillance.php?we_objectID=1987)