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## Syphilis Onsite Testing in Dublin

### Introduction

An outbreak of syphilis in men who have sex with men (MSM) was first reported in late 2000, in Dublin.<sup>1,2</sup> The outbreak peaked in 2001 and since then there has been a reduction in the number of notified cases affecting MSM. The Eastern Regional Health Authority (ERHA) Director of Public Health convened an outbreak control team (OCT) in October 2000. Many activities were introduced by the OCT to control this outbreak. The National Disease Surveillance Centre in cooperation with the ERHA developed an enhanced surveillance system to capture data on all syphilis cases.<sup>1</sup> Interventions introduced included extended clinical services, enhanced contact tracing carried out by a health advisor dedicated exclusively to the outbreak, targeted information campaigns, and outreach and community work. As part of case finding and awareness raising, a syphilis blood testing service was also provided in venues (pubs, clubs and saunas) where MSM meet sexual contacts. This was successful in establishing prevalence in different locations and was acceptable to the MSM community. From 2001 to late 2003, four surveys were conducted. The objectives of the surveys were:

- To ascertain the current prevalence of syphilis in MSM in high risk settings in the community.
- To undertake active case finding.
- To use a health promotion exercise to increase awareness of the problem.

This report presents the results of the most recent onsite testing conducted in Dublin in November 2003.

### Methods

Similar methods to those used in earlier surveys were used.<sup>3</sup> A consultation process with owners and managers of the venues occurred prior to testing being carried out. The study was carried out between 9 pm and midnight in saunas and up to 1am in the pubs and clubs. Trained interviewers, who were healthcare workers, offered free syphilis tests to those who volunteered to take part. A short, structured questionnaire was administered by the interviewer requesting information on age, county of residence, phone number and history of previous testing for syphilis. The health advisor was available to answer questions about syphilis and offer further health promotion information. Blood for syphilis serology was taken by healthcare staff from the Gay Men's Health Project and the GUIDE clinic, St James's Hospital.

All those who agreed to test were given a small card with the health advisor's contact details and were invited to phone two weeks later for results. People with a positive serology result were informed by the health advisor and advised to attend the clinic for treatment. There were nine testing sessions conducted over five evenings in four different venues.

### Results

Two hundred and fifty one men volunteered to have the test. The numbers of people testing in each location are outlined in table 1.

The mean age of those testing was 33 years (SD 11.5). The mean age varied between venues (sauna = 42.2 years, club 1 = 29.2, club 2 = 26.6, pub = 37.8). Of those tested, 203 (80.9%) were resident in Dublin. Just over half (50.6%, 127 people) reported never having previously tested for syphilis. Two hundred and thirty eight (94.8%) people gave a contact phone number, while 13 (5.2%) declined to give a phone number.

Five new positive cases (1.9%) were diagnosed of which four had early infectious syphilis. A further fifteen individuals reported receiving previous treatment. Those testing positive were older than those testing negative (mean age positive = 38.3 years compared with mean age negative = 32.7).

### Discussion

From the beginning of this outbreak in 2000, 463 cases of infectious syphilis in MSM have been reported to the Department of Public Health, ERHA. The fourth round of on-site testing has shown that the prevalence of infection in a subsection of people who volunteered for testing in the venues was lower than previous on-site testing studies (from 5.7% in 2001 to 1.9% in 2004). However, while the outbreak has peaked we are still in a hyperendemic phase.<sup>4</sup> Fifty per cent of the men reported that they were never previously tested for syphilis which is a concern given the high number of new cases still being reported. In earlier surveys there was a priority on case finding and the numbers of new cases justified this. The yield from the current round indicates that as the outbreak is in an endemic phase, ongoing surveillance will become more important to determine trends. Point prevalence surveys such as this give useful and timely insights into current trends and help to target education and awareness campaigns where they are most needed.

#### Acknowledgments

The support of the staff of the venues and the many others involved in this intervention has been much appreciated.

#### References

1. Domegan L, Cronin M. Enhanced surveillance of syphilis in Ireland. *EPI-Insight*, 2001; 2(6).
2. Domegan L, Cronin M, Hopkins S, Thornton L. Syphilis outbreak in Dublin. *EPI-Insight*, 2001; 2(12).
3. Hopkins S, Coleman C, Quinlan M, Cronin M. Interventions in a syphilis outbreak. *EPI-Insight*, 2002; 3(8).
4. Hopkins S, Coleman C, Courtney G., Bergin C, Mulcahy F. Resurgence in infectious syphilis in Ireland: an epidemiological study. *Sexually Transmitted Diseases*, 2004; 31(5).

Table 1. Onsite testing for syphilis- Round 4

Venue	No of clients tested	%
Sauna	45	17.9
Club 1	128	51.0
Club 2	30	12.0
Pub	48	19.1
<b>Total</b>	<b>251</b>	<b>100%</b>

Table 2. Syphilis onsite testing results, 2001 – 2003

Test results	Round 1 2001	Round 2 2001	Round 3 2002	Round 4 2003
Total tested	537	272	97	251
Number new cases	31	11	4	5
Number early syphilis	28	11	4	4
Old, previously treated	13	7	0	15
Prevalence new cases syphilis %	5.7	4.0	4.1	1.9

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# Surveillance of Respiratory Syncytial Virus in Ireland

## Introduction

Respiratory syncytial virus (RSV) is the single most important cause of hospitalisation for viral respiratory tract disease in infants and young children. RSV is a significant cause of infection and outbreaks in hospitals, neonatal units, day units and nursing homes. RSV has a clear seasonality with outbreaks typically occurring in the winter months with peak numbers of infections usually reported in December and January every year, though the size of the peak varies from winter to winter. Since its first isolation in 1956, RSV quickly became recognised as the most important viral agent of serious respiratory disease in the paediatric population worldwide. The impact of RSV in healthy adults and the elderly is less well quantified than it is for infants, but it is certainly under-diagnosed.<sup>1,2</sup>

## Clinical Features

RSV can infect all age groups, causing upper and lower respiratory tract infections ranging in severity from subclinical infections to pneumonia. For the majority symptoms are mild, similar to the common cold. It has a short incubation period of 3 to 5 days with lower respiratory tract symptoms appearing 1 to 3 days after the onset of rhinorrhoea. The risk of serious disease is increased by prematurity, young age, chronic cardiac or lung disease, immunodeficiency or immunosuppression and a family history of allergic disease. However, approximately three quarters of hospitalisations for RSV occur in children who were previously healthy. RSV infection is rarely fatal in children unless there is a severe underlying illness.<sup>1,2</sup>

RSV is the major cause of bronchiolitis and one of the major causes of pneumonia during the first few years of life. Bronchiolitis or pneumonia occurs most frequently between the ages of 6 weeks and 9 months, and the peak incidence of lower respiratory tract disease is between the ages of 2 and 7 months, corresponding with diminishing titres of maternal antibodies. Immunity to RSV is incomplete and short-lived. Repeated respiratory infections can occur, though these are usually mild and become less common with increasing age.<sup>1,2</sup>

## Transmission

Infection is spread via respiratory secretions, through close contact with infected persons or contact with contaminated surfaces or objects. Spread can also occur when infectious material comes in contact with mucous membranes of the mouth, nose or eyes and through inhalation of droplets generated by a sneeze or cough.<sup>1,2</sup>

## Treatment

There is currently no effective antiviral therapy or approved vaccine for RSV. However, effective passive immunoprophylaxis involving administration of RSV neutralising antibodies is now available for high-risk individuals. Prevention of nosocomial transmission is the

mainstay of RSV management in hospitals, with particular emphasis on frequent hand washing. In addition to standard precautions, contact precautions as recommended by the Hospital Infection Control Practices Advisory Committee in the USA should be implemented.<sup>3</sup> These include single room or cohorting of patients with RSV, and gloves and gown for anyone entering the room. Limitation of visitors and active surveillance for RSV infection among patients and new admissions should also be considered.

## Epidemiology

The National Virus Reference Laboratory (NVRL) has been collecting data on RSV positive specimens since September 1988. The NVRL test respiratory specimens for a panel of respiratory viruses including: influenza A and B, RSV, adenovirus, and parainfluenza viruses type 1, 2 and 3. RSV data from the NVRL provide comprehensive surveillance of RSV infection in infants treated in hospitals and is a good indicator of seasonal patterns in Ireland.<sup>4,5</sup>

During the 2002/2003 and 2003/2004 seasons, the number of RSV positive detections from hospital respiratory specimens referred to the NVRL reached the highest levels on record (figures 1 and 2). Three hundred and one RSV positive specimens were detected during the 2002/2003 season, peaking in December 2002. During the 2003/2004 season, 396 RSV positive specimens were detected, peaking in January 2004 (figure 3). Prior to the 2002/2003 season, the largest seasonal outbreak of RSV occurred during the 1998/1999 season, with 250 RSV positive specimens detected by the NVRL. RSV outbreaks generally peak in December or January, as shown in figure 1. The number of positive RSV cases by age group for the 2003/2004 season are detailed in figure 4.

The number of respiratory specimens tested by the NVRL has increased dramatically during the 2002/2003 and 2003/2004 seasons (figure 2). During the 2003/2004, 1857 respiratory specimens were tested by the NVRL, an increase of 79.9% on the previous season. The reasons for the large increases in respiratory specimens tested are multifactorial. They may partly be due to increased awareness among health professionals of the importance of confirming respiratory viruses, particularly in light of SARS, increased levels of RSV observed during 2002/2003 and 2003/2004, early detection of the influenza A/Fujian/411/02(H3N2)-like strain in Ireland in September 2003 and the recent avian influenza outbreaks in Asia, Canada and the US. Although the number of respiratory specimens tested by the NVRL has increased in recent seasons, the proportion of RSV positive specimens decreased during the 2002/2003 and 2003/2004 seasons (figure 2).

## GP Sentinel Scheme

During the 2002/2003 season, the NVRL carried out a pilot study to

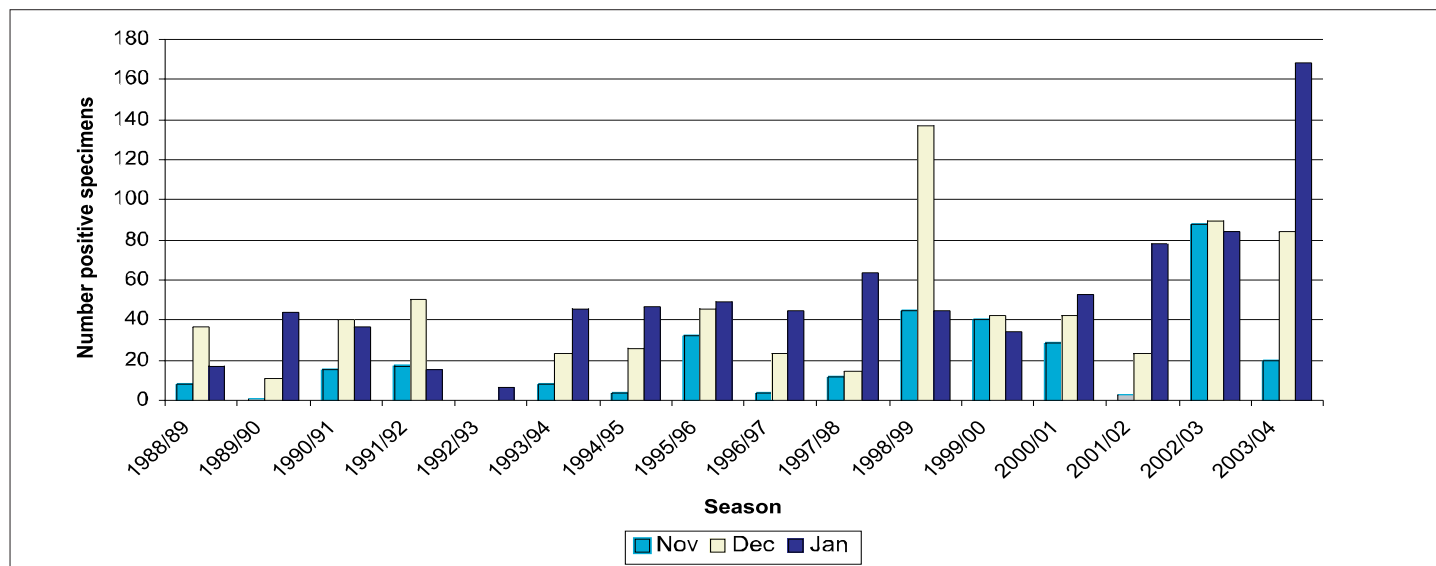


Figure 1: Number of RSV positive specimens by season and month (1988/89-2003/04)

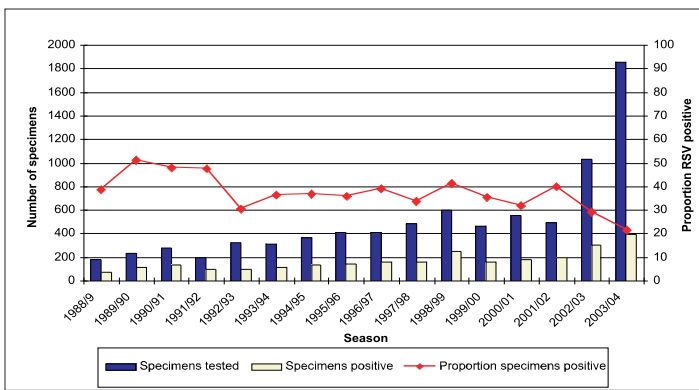


Figure 2: Number of respiratory specimens and number and proportion of RSV positive specimens tested by the NVRL, by season (1988/89–2003/04)

assess the incidence of RSV in specimens taken from patients with influenza-like illness (ILI) by sentinel general practitioners. The National Disease Surveillance Centre (NDSC) is working in collaboration with the Irish College of General Practitioners and the NVRL on a surveillance project using computerised sentinel general practices in Ireland. The project began in October 2000. Thirty-four general practices were recruited to report electronically, on a weekly basis, the number of patients with ILI. Sentinel GPs were requested to send a combined nasal and throat swab on at least one patient per week where a clinical diagnosis of ILI was made. Swabs were sent to the NVRL for influenza testing and results were reported by NDSC.<sup>6</sup>

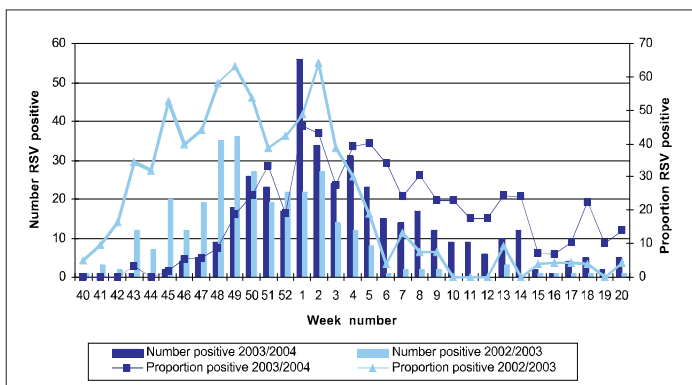


Figure 3: Number and percentage of RSV positive specimens detected during the 2003/2004 and 2002/2003 influenza seasons by week number.

All sentinel specimens received by the NVRL, from week 40, 2002 to week 5, 2003 (n=77), which tested negative for influenza were included in the pilot study. This timeframe coincided with the RSV season for 2002/2003. The pilot was carried out using RT-PCR. Of the 77 sentinel swabs tested, 7 (9.1%) were positive for RSV. Subtype analysis identified 4 of the samples as RSV A, and 3 as RSV B viruses.<sup>6</sup>

The pilot RSV study conducted during the 2002/2003 season, confirmed international experience and suggested that consideration should be given to expanding the respiratory screen in sentinel specimens to include RSV in future surveillance. At the end of the 2003/2004 season a decision was made to test all sentinel specimens for RSV and influenza using real-time PCR. The testing will start in October 2004 and will be reviewed on an annual basis. The inclusion of RSV testing in the GP sentinel surveillance scheme is very timely, particularly in light of the work the European Influenza Surveillance Scheme (EISS) are currently conducting in relation to RSV.

EISS collects and exchanges timely information on influenza activity in Europe, provides relevant information about influenza to health professionals and the general public, contributes to the annual determination of the influenza vaccine content and also contributes to European influenza pandemic preparedness activities. EISS presents clinical and virological data concerning influenza in 22 European countries, including Ireland. Since its inception the focus

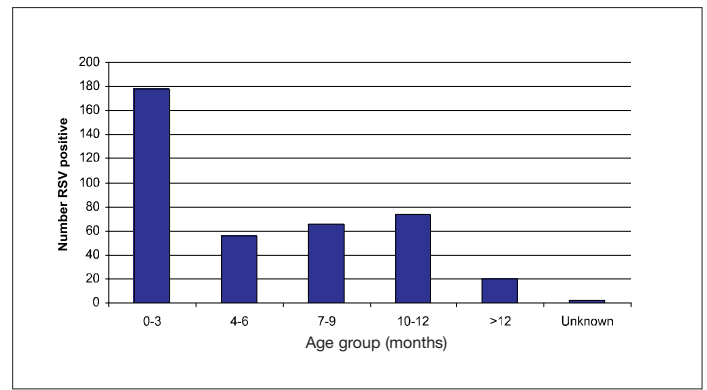


Figure 4: Number of RSV positive cases by age group (in months) during the 2003/2004 season

of EISS was very much on ILI. There has been correspondingly less attention on systematic surveillance of RSV. In order to develop extensive surveillance in all participating EISS countries for RSV, the EISS RSV task group was set up in 2003. The objectives of the EISS RSV task group are to explore the possibility of designing a comprehensive RSV surveillance scheme within the EISS framework, and to plan the development and implementation of such a scheme including a research agenda. Following completion of these objectives, priority areas for RSV surveillance and potential opportunities for cooperation would be developed.<sup>7</sup>

## Conclusion

Currently, RSV data from the NVRL provide comprehensive surveillance of RSV infection in paediatric hospitals and are a good indicator of seasonal patterns in Ireland. The inclusion of RSV testing in the GP sentinel surveillance scheme will provide a more comprehensive dataset on the epidemiology of RSV in all age groups. Most of the available scientific literature on the public health impact of RSV is related to RSV infections in young children. The burden of RSV disease in adults is less well quantified, with available data mostly limited to the US and UK. RSV vaccines are under development and recommendations on vaccination strategies will have to be supported with more comprehensive epidemiological data on target groups. The sizeable impact of RSV infections on acute respiratory diseases justifies the need for a comprehensive RSV surveillance tool in Ireland and elsewhere.

Further information on RSV can be found on the NDSC website: <http://www.ndsc.ie/DiseaseTopicsA-Z/RespiratorySyncytialVirus/>

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## References

- Collins PL, Chanock RB, Murphy BR. Respiratory syncytial virus. In B. N. Fields (ed.), *Virology*. Fourth edition. Philadelphia: Lippincott Williams and Wilkins; 2001.
- CDC. Respiratory syncytial virus. Available at <http://www.cdc.gov/ncidod/dvrd/revb/respiratory/rsvfeat.htm>
- Garner JS. Guideline for isolation precautions in hospitals. The Hospital Infection Control Practices Advisory Committee. *Infect Control Hosp Epidemiol* 1996; **17**(1): 53-80.
- Domegan L, O'Donnell J, Cunney R, O'Kelly E. Respiratory syncytial virus. *Epi-insight* 2002; **3**(12): 1.
- Domegan L, O'Donnell J, Cunney R, O'Kelly E, Dooley S. Increased respiratory syncytial virus activity in Ireland. *Eurosurveillance* 2002; **6**(49).
- NDSC. Summary report of influenza season 2002/2003. Available at <http://www.ndsc.ie/Publications/InfluenzaWeeklySurveillanceReport/20022003Season/>
- EISS website. Available at <http://www.eiss.org/index.cgi>



# Immunisation Uptake in Ireland, 2003

## Introduction

Immunisation uptake statistics for 2003 are presented. These statistics relate to children who were 12 and 24 months of age in 2003 (cohorts born between 01/01/2002 & 31/12/2002 and 01/01/2001 & 31/12/2001 respectively) and who have completed the recommended primary childhood immunisation schedule.<sup>1</sup> The current schedule recommends that children receive three doses of vaccines against diphtheria (D<sub>3</sub>), pertussis (P<sub>3</sub>), tetanus (T<sub>3</sub>), Haemophilus influenzae type b (Hib<sub>3</sub>), polio (Polio<sub>3</sub>) and meningococcal group C (MenC<sub>3</sub>) at 2, 4 and 6 months of age. It is also recommended that children receive one dose of BCG vaccine (uptake measured at 12 months only) and one dose of vaccine against measles, mumps and rubella (MMR<sub>1</sub>; uptake measured at 24 months only).

## Immunisation Uptake Rates at 12 Months

Overall, immunisation uptake rates at 12 months in 2003 were 81% for D<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> and 80% for P<sub>3</sub> and MenC<sub>3</sub>. Uptake rates for BCG vaccinations were available for the first time in quarter (Q) 3, 2003. Five of the health boards were in a position to report figures for BCG in Q3 and Q4, 2003. Where data were available, the uptake rate was 87% and 91% for Q3 and Q4 respectively. Annual immunisation uptake rates at 12 months in 2003, by health board, are presented in Table 1.

The annual immunisation uptake rates at 12 months increased by 6% for all vaccines when compared with the 2002 figures. In 2003, immunisation uptake rates reported in Q4, 2003 represent the highest national uptake rates at 12 months reported since collection of these data began in Q3, 2000.

## Immunisation Uptake Rates at 24 Months

Annual immunisation uptake rates at 24 months in 2003 were 86% for D<sub>3</sub>, T<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>, 85% for P<sub>3</sub> and 84% for MenC<sub>3</sub>. The national uptake rate for MMR<sub>1</sub> was 78%. These uptake rates represent an increase of 3% on the figures reported in 2002 for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub>. The uptake rate for MMR<sub>1</sub> improved by 5% from 73% in 2002 to 78% in 2003. The MenC<sub>3</sub> uptake rate increased by 9% from 75% in 2002 to 84% in 2003 (data were only available for Q3 and Q4 in 2002).

Health board immunisation uptake rates are presented in Table 1. Uptake rates for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub> and Polio<sub>3</sub> at 24 months in 2003 ranged from 83% (ERHA) to 92-94% (NWHB: the target rate of 95% uptake was reached in Q3 and Q4 for D<sub>3</sub>, and T<sub>3</sub>). MenC<sub>3</sub> uptake ranged from 80% (ERHA) to 91% (MHB and NWHB) while MMR<sub>1</sub> uptake ranged from 74% (ERHA and WHB) to 88% (MHB).

Over the course of 2003, national quarterly uptake rates for D<sub>3</sub>, T<sub>3</sub>, P<sub>3</sub>, Hib<sub>3</sub>, Polio<sub>3</sub> and MenC<sub>3</sub> improved from 81-85% in Q1 to 85-87% in Q3 and Q4. Uptake rates for MMR<sub>1</sub> increased from 77% in Q1 and Q2 to 80% in Q3 and Q4. Figure 1 presents national quarterly immunisation uptake rates at 24 months from Q1, 1999 to Q4, 2003.

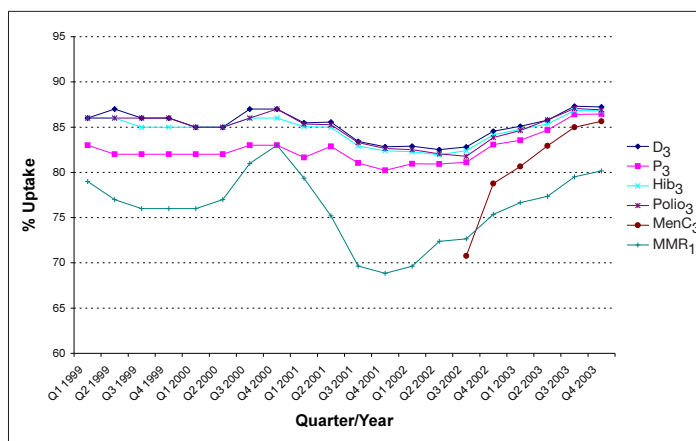


Figure 1. National quarterly immunisation uptake rates at 24 months in Ireland (Note scale ranges from 60-95% on this figure)

## Discussion

Annual immunisation uptake figures at 12 months in 2003 (80-81%) displayed an improvement on those recorded in 2002 (74-75%).<sup>2</sup> Uptake figures at 24 months also improved in 2003 when compared with the previous year with increases of 3-9% reported. At the end of 2003, immunisation uptake rates for P<sub>3</sub>, Hib<sub>3</sub> and MenC<sub>3</sub> were the highest reported since figures were first collected in this format in 1999. Similarly, uptake rates in quarters 3 and 4 for D<sub>3</sub>, T<sub>3</sub> and Polio<sub>3</sub> (87%) were the highest reported since Q4, 2000 (87%). MMR<sub>1</sub> uptake is still 3% below that reported in Q4, 2000 (83%). Despite these increases, immunisation uptake rates in Ireland are still well below the recommended target rate of 95%. While uptake levels have increased in 2003, the uptake levels reported are insufficient to prevent outbreaks of these vaccine-preventable diseases in Ireland in the future.

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## References

1. Immunisation Guidelines for Ireland, 2002. A report by the National Immunisation Committee of the Royal College of Physicians of Ireland. Available at <http://www.ndsc.ie/Publications/Immunisation/ImmunisationGuidelines/>
2. Immunisation uptake in Ireland, 2002. NDSC Annual Report 2002. Available at <http://www.ndsc.ie/Publications/AnnualReports/>

Table 1. Annual immunisation uptake rates in children 12 and 24 months of age, 2003

Health Board	% Uptake at 12 months Cohort born 01/01/2002 - 31/12/2002							% Uptake at 24 months Cohort born 01/01/2001 - 31/12/2001						
	D <sub>3</sub>	P <sub>3</sub>	T <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	MenC <sub>3</sub>	BCG*	D <sub>3</sub>	P <sub>3</sub>	T <sub>3</sub>	Hib <sub>3</sub>	Polio <sub>3</sub>	MenC <sub>3</sub>	MMR <sub>1</sub>
ERHA	77	77	77	77	77	78	na	83	83	83	83	83	80	74
MHB	86	85	86	86	86	85	83	91	89	91	92	92	91	88
MWHB	83	82	83	83	83	82	90	87	85	87	86	87	84	80
NEHB	81	81	81	81	81	81	na	91	91	91	91	93	88	81
NWHB	89	87	89	88	88	86	91	94	92	94	92	94	91	83
SEHB	85	85	85	85	85	84	92	88	87	88	88	88	86	83
SHB	83	82	83	82	83	82	87	85	84	85	85	85	84	80
WHB	76	76	76	76	76	73	na	85	84	85	85	84	81	74
ROI	81	80	81	81	81	80	89	86	85	86	86	86	84	78

\*Data available for Q3 and Q4 only  
na = not available at this time

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