



MMR VACCINATION COVERAGE BY THE END OF 2005

No. 6, 2007

This is the first report on MMR vaccination coverage based exclusively on person-identifiable data from the Danish Vaccination Register. Vaccination coverage was calculated as per 31 December 2005. The vaccination coverage as per 31 December 2006 will be published in a future issue of EPI-NEWS.

The Vaccination Register

The Register is based on the GPs' settlements with the Public Health Insurance and includes complete data on all vaccines given as part of the Danish childhood vaccination programme from 1997 and onwards. Vaccination coverage is calculated by birth years. The number of vaccinated children in a birth year is compared to the total number of children in the year who are registered with the Civil Registration System as residing in Denmark at the time coverage is calculated.

Only vaccines administered in Denmark are recorded with the Vaccination Register. Thus, the vaccination status for immigrant children and adolescents is unknown.

Figure 1 shows the vaccination coverage by birth year. Vaccination was expected not to have been completed at the calculation date for MMR 1 for birth year 2004 and MMR 2 for birth year 1993.

MMR 1

Vaccination coverage for the birth years 1996-2003 was 86-90%,

Figure 1.

Assuming that all immigrant children had been vaccinated, the mean MMR 1 vaccination coverage for the period 1996-2003 would have increased by one percentage point.

Vaccination coverage varied between counties, and was highest in Roskilde, Bornholm and Vejle counties, Table 1.

MMR 2

Vaccination coverage for the birth years 1986-1992 was 84-88%,

Figure 1.

Assuming that all immigrant children had been vaccinated, the mean MMR 2 vaccination coverage for the birth cohorts of 1986-92 would increase by approximately two percentage points.

Figure 1. Coverage of MMR 1 vaccination for birth years 1996-2004 and MMR 2 vaccination for birth years 1986-1993, as per 31 December 2005

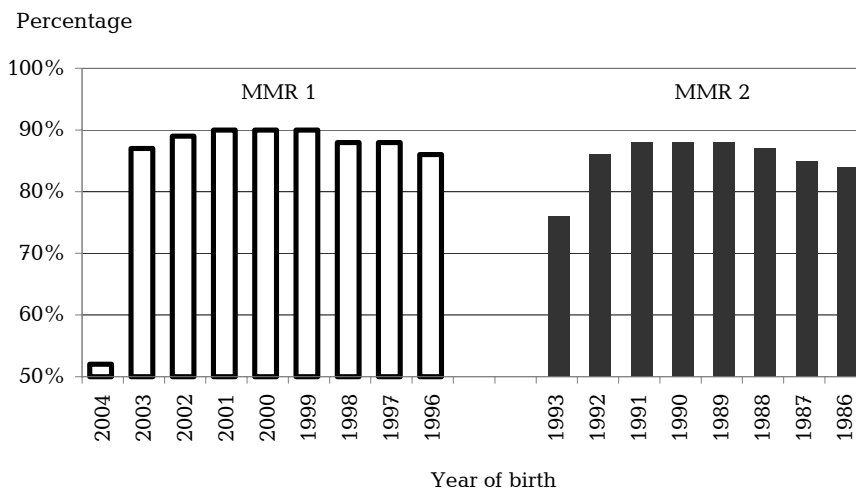


Table 1. Vaccination coverage for MMR 1 as percentages for birth years 2000-2002, by county, as per 31 December 2005

County	2002	2001	2000
Cph. municipality	88	89	89
Frb. Municipality	89	90	87
Cph. County	90	90	90
Frederiksborg	88	89	88
Roskilde	92	92	92
West Zealand	88	89	90
Storstroem	88	88	87
Bornholm	92	92	92
Funen	89	89	89
South Jutland	90	90	91
Ribe	88	87	90
Vejle	91	92	91
Ringkoebing	90	90	90
Aarhus	90	91	91
Viborg	89	89	89
North Jutland	88	89	90
Total	89	90	90

Commentary

Twenty years after the introduction of the MMR vaccine in 1987, the illness incidence for the three conditions covered by the vaccine has decreased considerably. Nevertheless, it is still essential to aim for higher vaccination coverage and ensure that children are vaccinated at the recommended age whenever possible. MMR 1 and MMR 2 vaccination coverage for the stated birth years thus showed an increasing trend without exceeding 90%, and the 95% vaccination coverage goal was not reached for any birth year.

The overall consequence is that an increasing number of children are unprotected in early childhood, and over time a higher number of unprotected children and adolescents will accumulate which will increase the risk of major outbreaks.

Regional differences in MMR vaccination coverage may, in conjunction with other factors such as population density, lead to a corresponding variation in the risk of local outbreaks. The reported vaccination coverage for MMR 1 and 2 is lower than the coverage previously reported. This is due partly to the fact that the calculation only includes MMR vaccinated persons residing in Denmark at the time coverage is calculated, and partly to the continued immigration of children and adolescents whose vaccination status is not registered. Consequently, surveillance would be improved if the vaccination status of immigrant children and adolescents could be reported.

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NOTIFICATION OF CASES OF ILLNESS DUE TO CONTAMINATED WATER IN KØGE

(See reverse).

Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, SSI (2007 figures are preliminary)

Table 1	Week 5 2007	Cum. 2007 ¹⁾	Cum. 2006 ¹⁾
AIDS	1	5	7
Creutzfeldt-Jakob	3	6	3
Food-borne diseases	33	60	43
of these, infected abroad	0	5	8
Gonorrhoea	17	41	43
Hepatitis A	2	5	2
of these, infected abroad	0	2	0
Hepatitis B (acute)	1	2	3
Hepatitis B (chronic)	2	21	20
Hepatitis C (acute)	0	1	0
Hepatitis C (chronic)	16	44	21
HIV	5	26	16
Legionella pneumonia	4	12	12
of these, infected abroad	0	1	2
Leptospirosis	3	4	3
Meningococcal disease	0	1	8
of these, group B	0	0	5
of these, group C	0	0	0
of these, unspec. + other	0	1	3
Mumps	1	4	4
Neuroborreliosis	0	13	8
Ornithosis	0	0	3
Pertussis (children < 2 yrs)	6	14	10
Purulent meningitis			
Haemophilus influenzae	0	0	1
Listeria monocytogenes	0	0	3
Streptococcus pneumoniae	0	2	7
Other aethiology	0	0	1
Unknown aethiology	0	0	3
Under registration	2	19	-
Shigellosis	1	3	11
of these, infected abroad	0	0	10
Syphilis	2	12	11
Tetanus	0	0	0
Tuberculosis	7	37	30
Typhoid/paratyphoid fever	0	0	5
of these, infected abroad	0	0	5
VTEC/HUS	5	8	10
of these, infected abroad	0	2	3

Selected laboratory diagnosed infections

Number of specimens, isolates, and/or notifications received at Statens Serum Institut

Table 2	Week 5 2007	Cum. 2007 ²⁾	Cum. 2006 ²⁾
Bordetella pertussis (all ages)	3	19	31
Gonococci	7	40	37
of these, females	1	6	7
of these, males	6	34	30
Listeria monocytogenes	0	9	4
Mycoplasma pneumoniae			
Resp. specimens 3)	20	121	105
Serum specimens 4)	16	74	72
Streptococci 5)			
Group A streptococci	2	12	11
Group B streptococci	3	11	11
Group C streptococci	0	1	5
Group G streptococci	2	12	14
S. pneumoniae	29	144	165

Table 3	Week 3 2007	Cum. 2007 ²⁾	Cum. 2006 ²⁾
Pathogenic int. bacteria 6)	44	145	108
Campylobacter	6	11	10
S. Enteritidis	3	6	23
S. Typhimurium	6	28	36
Other zoon. salmonella	6	13	11
Yersinia enterocolitica			
Verocytotoxin-prod. E.coli	4	8	6
Enteropathogenic E. coli	9	16	14
Enterotoxigenic E. coli	3	6	12

Table 1, notes

In 2007, none of the following cases have been reported: Anthrax, botulism, cholera, diphtheria, haemorrhagic fever, leprosy, plague, polio, rabies, rubella, and typhus exanthematicus.

1) Cumulative no. 2007 and corresponding period 2006

Tables 2 & 3, notes

2) Cumulative no. 2007 and corresponding period 2006

3) Respiratory specimens with positive PCR

4) Serum specimens with pos. complement fixation test

5) Isolated in blood or spinal fluid

6) See also www.germ.dk

Notification of cases of illness caused by contaminated water in Køge

At present, approximately 120 cases of gastrointestinal infection acquired from a contaminated drinking water supply in a part of Køge town during January 2007 have been registered. A number of these cases have already been notified, see Table 1 on the front page.

It is important to continue to notify cases that may have been caused by the contamination. Notifications should include date of disease onset, date of any hospital admission, clinical picture, record of any samples taken; presumed address of infection and information of other cases. Form 1515 should be used for notification. Stool samples from a total of 85 patients have presently been examined, 46 of which were positive for one or more pathogenic bacteria, virus or parasites.

The most frequent findings are norovirus, Campylobacter and various types of diarrhoeagenic E. coli. Furthermore, several intestinal parasites have been detected, the majority of which are generally categorised as non-pathogenic.

The parasite Giardia lamblia was detected in a patient with severe diarrhoea in Aarhus. The patient is believed to have been infected while visiting relatives in Køge during the contamination period. This underlines the importance of thoroughly examining all patients with relevant symptoms who may have been exposed to the contaminated water.

The outbreak will be reported in a future edition of EPI-NEWS. Please refer to www.koerge.dk for background information (in Danish language).

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Sentinel surveillance of the influenza activity

Weekly percentage of consultations, 2005/2006/2007

