

MMR VACCINATION 2003

No. 35, 2004

According to information from the Danish National Health Insurance, a total of 121,021 children received MMR vaccination in 2003. By the calculation method used hitherto for vaccination coverage, EPI-NEWS 23/00, there was 96% coverage for MMR 1 on a national basis; coverage was <95% in only two counties. For MMR 2, the overall coverage was 88%; no county reached the target of 95%, and in 12 counties, the coverage was <90%, [table 1](#). The figures are not immediately comparable with the coverage in 2002, where a larger number of children were vaccinated who at the time of vaccination were younger or older than the recommended age for MMR 1 and 2, EPI-NEWS 25/03.

In 2003, 90% of MMR 1 vaccinations were given to children aged 1-2 years, and 96% of MMR 2 vaccinations were given to 12-13-year-olds, [table 2](#).

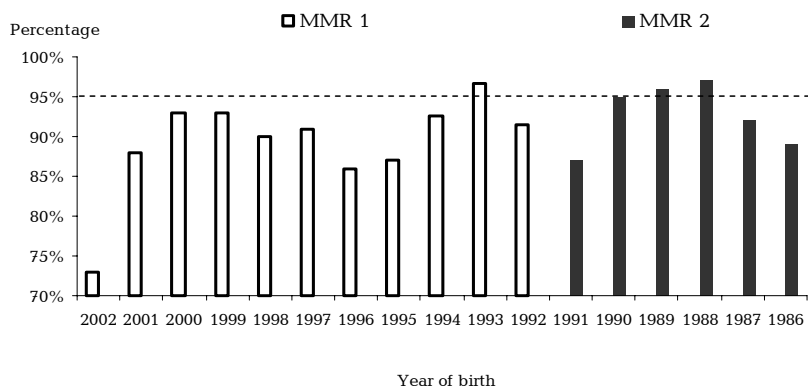
Table 1. Coverage of MMR 1 and 2 vaccination 2003, by county

County	MMR 1		MMR 2	
	No.	%	No.	%
Cph. Municipality	7,058	95%	3,437	89%
Frb. Municipality	1,195	89%	503	81%
Copenhagen	7,051	97%	6,533	82%
Frederiksborg	4,262	97%	4,470	89%
Roskilde	2,727	97%	2,645	84%
West Zealand	3,189	95%	3,400	86%
Storstrøm	2,396	95%	2,732	87%
Bornholm	366	97%	554	92%
Funen	5,042	97%	5,344	89%
South Jutland	2,805	98%	3,009	89%
Ribe	2,556	98%	2,910	91%
Vejle	4,379	100%	4,155	92%
Ringkøbing	3,415	100%	3,464	89%
Aarhus	7,787	95%	7,304	89%
Viborg	2,627	95%	2,923	90%
North Jutland	5,132	92%	5,651	89%
Total	61,987	96%	59,034	88%

Table 2. Age at MMR 1 & 2 vaccination; distribution as percentages, 2003

Age (mths)	MMR 1	Age (yrs)	MMR 2
<12	1%	<11	1%
12-14	12%	11	1%
15-18	67%	12	84%
19-24	11%	13	12%
>24	9%	14-19	2%
Total	100%	Total	100%

Fig. 1. Vaccination coverage for MMR 1 for birth years 1992-2002 and MMR 2 for birth years 1986-1991; calculated on 31 March 2004



New method of calculation

The Department of Epidemiology has set up a vaccination register containing personal data for the doctors' accounts with the Danish national health insurance scheme. The register contains complete data about MMR 1 for children born after 1995 and about MMR 2 for children born after 1985. On the basis of these data, the vaccination coverage for the individual birth-year cohort can be calculated. This calculation of vaccination coverage is more precise and will be used in future in reporting the coverage of MMR vaccination in Denmark.

[Fig. 1](#) shows the vaccination coverage distributed by year of birth. Data about MMR 1 for the birth cohort 1996-2002 and MMR 2 for the birth cohort 1986-1991 are from the vaccination register. Data about MMR 1 for the birth cohort 1992-1995 have previously been used to calculate the annual vaccination coverage. This set of data does not contain informa-

tion that could be used to identify the person, but is here distributed according to the reported age at the time of vaccination, which involves some uncertainty for the years 1992-95.

MMR 1

For birth year 2002, where 9/12 reached the age of 15 months in 2003, an almost equivalent proportion (73%) had received one MMR 1 vaccination.

For birth year 2001, where all were ≥24 months at the end of 2003, the coverage was 88%.

MMR 2

A total of 88% of those children who reached the age of 12 in 2003 (birth year 1991) had received MMR 2 by the end of 2003. The coverage for birth cohort 1988-1990 was at least 95%, which is a pleasant surprise in view of previously published figures for the coverage for MMR 2 in these birth years.

Comments

With the exception of birth year 1993, the target of 95% vaccination coverage for MMR 1 has not been reached for any birth year, and the coverage is particularly low for the birth cohort 1995-96 (87 and 86%, respectively). For both MMR 1 and 2, it is true that at least 10% of the children in all birth-year cohorts were vaccinated later than the recommended date. This emphasises the importance of surveillance of vaccination coverage of the birth-year cohorts. More detailed reporting of the MMR vaccination coverage of the birth-year cohorts, e.g. at county level, will be attempted through combination with other accessible data. The vaccination coverage of the birth years relative to the incidence of disease in Denmark will be discussed in a later issue.

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Individually notifiable diseases

Number of notifications received in the Department of Epidemiology, Statens Serum Institut.

Figures for 2004 are preliminary.

Table 1	Week 34 2004	Cum. 2004 ¹⁾	Cum. 2003 ¹⁾
AIDS	1	30	19
Anthrax	0	0	0
Botulism	0	0	1
Cholera	0	0	0
Creutzfeldt-Jakob	0	6	5
Diphtheria	0	0	0
Food-borne diseases	19	364	297
of these, infected abroad	6	56	60
Gonorrhoea	9	223	96
Haemorrhagic fever	0	0	0
Hepatitis A	16	132	44
of these, infected abroad	6	32	15
Hepatitis B (acute)	4	24	32
Hepatitis B (chronic)	0	105	122
Hepatitis C (acute)	0	0	5
Hepatitis C (chronic)	4	178	176
HIV	5	199	140
Legionella pneumonia	2	51	57
of these, infected abroad	0	12	15
Leprosy	0	0	0
Leptospirosis	0	1	2
Measles	0	0	0
Meningococcal disease	2	78	77
of these, group B	0	33	43
of these, group C	0	6	17
of these, unspec. + other	2	39	17
Mumps	0	3	2
Neuroborreliosis	1	42	17
Ornithosis	0	4	6
Pertussis (children < 2 years)	7	116	80
Plague	0	0	0
Polio	0	0	0
Purulent meningitis			
Haemophilus influenzae	0	1	2
Listeria monocytogenes	0	1	1
Streptococcus pneumoniae	0	64	77
Other aethiology	0	3	2
Unknown aethiology	0	10	11
Rabies	0	0	0
Rubella (congenital)	0	0	0
Rubella (during pregnancy)	0	0	0
Shigellosis	1	45	62
of these, infected abroad	0	36	52
Syphilis	6	98	36
Tetanus	0	0	0
Tuberculosis	9	292	278
Typhoid/paratyphoid fever	0	11	19
of these, infected abroad	0	9	12
Typhus	0	0	0
VTEC/HUS	5	91	64
of these, infected abroad	0	15	14

¹⁾ Cumulative number of cases notified in 2004 and in the corresponding period of 2003

Selected laboratory-diagnosed infections

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

Table 2	Week 34 2004	Cum. 2004 ²⁾	Cum. 2003 ²⁾
Bordetella pertussis (all ages)	17	552	357
Gonococci	6	241	163
of these, females	1	32	22
of these, males	5	209	141
Listeria monocytogenes	0	26	19
Mycoplasma pneumoniae			
Resp. specimens ³⁾	4	105	116
Serum specimens ⁴⁾	6	235	336
Streptococci ⁵⁾			
Group A streptococci	1	89	109
Group C streptococci	0	14	14
Group G streptococci	0	70	80
S. pneumoniae	2	870	808
Table 3	Week 33 2004	Cum. 2004 ²⁾	Cum. 2003 ²⁾
Pathogenic int. bacteria ⁶⁾			
Campylobacter	105	2144	1991
S. Enteritidis	19	315	447
S. Typhimurium	15	272	267
Other zoon. salmonella	13	294	322
Yersinia enterocolitica	5	130	145

²⁾ Cumulative number in 2004 and in the corresponding period of 2003

³⁾ Resp. 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

Hepatitis A: The Department of Epidemiology has received a total of 132 notifications of hepatitis A in 2004. As of 20 August, 104 of these notifications were for men over the age of 18; 73 were from Greater Copenhagen. A total of 60 of the 73 were infected in Denmark, and of these, at least 41 were men who have sex with men (MSM). Of the remaining 31 cases among men aged over 18, 24 were infected in Denmark. Of these, 13 were resident on Zealand outside Greater Copenhagen, nine in Jutland and two on Funen. At least seven out of the 24 cases outside of Greater Copenhagen were MSM. The outbreak of hepatitis A in Denmark was previously described in EPI-NEWS 18/04.

The Department of Epidemiology has commenced a case-control study concerning MSM and hepatitis A. This will be described in a later issue of EPI-NEWS. The Department of Epidemiology has also received a total of five notifications of hepatitis A among persons on a group tour to Hurgada in Egypt.