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**Surveillance report  
RUBELLA IN DENMARK**

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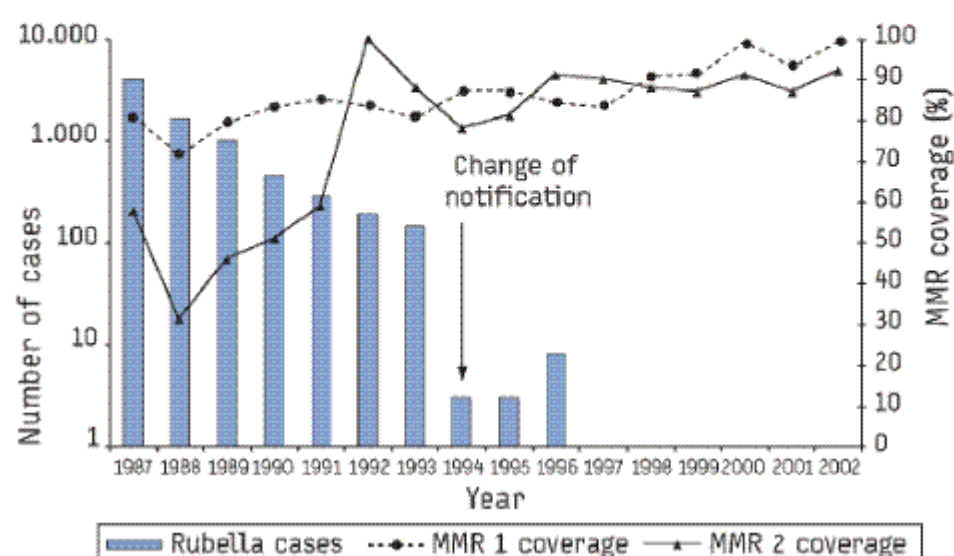
An average of 20 000 rubella cases were recorded annually in Denmark until 1987. In 1989, however, only 1006 cases were reported, and the true current incidence of rubella infection in Denmark is unknown but considered to be very low and <1 per 100 000 population. The significant decrease in the incidence of rubella mirrors the success of vaccination of rubella seronegative women of childbearing age, which was initiated in Denmark in 1980. From 1982 and onwards the national health security scheme also refunded vaccination of children and the MMR vaccine was introduced in the Danish childhood vaccination program in 1987. The low incidence has been sustainable due to these interventions, and since 1994 congenital rubella syndrome and rubella in pregnancy have been listed as notifiable infectious diseases in Denmark. Nevertheless, in order to meet the WHO goal of control of rubella in the Region, the introduction of mandatory reporting of all laboratory diagnosed rubella cases is now being considered.

Until 1987, an average of 20 000 rubella cases were recorded annually in the surveillance system, with most cases being in children. By 1989, however, only 1006 cases were reported, giving an incidence of 20 per 100 000 [1]. In 1994 the mandatory surveillance system was changed to include only congenital rubella syndrome (CRS) and rubella infection during pregnancy.

Vaccination of rubella sero-negative women of childbearing age was initiated in Denmark in 1980 and the National Health Security Scheme has refunded vaccination of children since 1982. The significant decrease in the incidence of rubella since 1985 mirrors the success of this intervention though early coverage data are not available. During the following years the low incidence has been sustainable due to the introduction of MMR vaccine in the Danish childhood vaccination program in 1987 (FIGURE).

## FIGURE

**Reported number of rubella cases and MMR coverage - Denmark, 1987 - 2002**



Between 1975 and 1984 only 51 cases of CRS were reported. The reason for this relatively low number compared to the high incidence of rubella infection was primarily that most women chose legal abortion when they were diagnosed with rubella infection during the first 18 weeks of pregnancy. During the same period, a total of 726 women with clinical symptoms were diagnosed with rubella during the first 18 weeks of pregnancy. This number may not be exhaustive, however, as there was no policy of testing all pregnant women for rubella serology and most of these cases were probably tested because of known or suspected risk of infection.

From 1985 to 1989 a total of 200 rubella cases during pregnancy were diagnosed. Of these, 87 were diagnosed during the first 18 weeks of pregnancy and the remaining 113 were diagnosed later in pregnancy, when there is no risk of CRS and abortion is therefore not indicated. The incidence of rubella in the first 18 weeks of pregnancy decreased during the period and only one case was diagnosed in 1988-1989. From 1990 to 1997, when the most recent case was diagnosed in Denmark, 17 cases of rubella in pregnancy were diagnosed, and 11 of these 17 were diagnosed during the first 18 weeks of pregnancy. During the five year period from 1985 to 1989, a total of seven CRS cases were reported, the last case being in 1988. Some of the manifestations of CRS will show only later in life, and therefore may not be diagnosed as relating to the mother having had a rubella infection during pregnancy. For this reason, when the MMR vaccine was introduced in 1987, it was assumed that the incidence of CRS in Denmark was about a minimum of 20 cases yearly [2]. The incidence of symptoms that may follow congenital rubella is another indicator of the incidence of disease. For example, it has been found that the incidence of severe congenital hearing disability caused by rubella infection has decreased significantly in some countries following the introduction of rubella vaccination. A similar trend was found in Denmark in 1994, when two 10 year cohorts of deaf children were compared, and the incidence of severe hearing disability caused by congenital rubella infection was found to have decreased from 13% to 5% [3].

The true incidence of rubella infection in Denmark is unknown at present but is considered to be very low and < 1 per 100 000 population. Nevertheless, in order to achieve the WHO goal of rubella control in the Region, there are plans to make reporting of laboratory diagnosed rubella mandatory in Denmark.

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