PREVENTING CONGENITAL RUBELLA INFECTION IN THE EUROPEAN REGION OF WHO: 2010 TARGET

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The World Health Organization (WHO) Regional Office for Europe has recently published a strategic plan and surveillance guidelines for measles and congenital rubella infection. The strategy prioritises measles control activities but encourages the introduction of rubella vaccine when measles vaccine coverage has reached >90 %; although, many western European countries with suboptimal measles vaccine coverage are already using the combined measles, mumps and rubella (MMR) vaccine. Women in these countries may have an especially high risk of having an infant with congenital rubella syndrome. WHO is seeking to improve the surveillance for rubella and congenital rubella syndrome as a means to obtain better information on the burden of these diseases and engage policy decision makers in the need to support the WHO European Region's strategies for rubella.

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Key words : Rubella, Europe, WHO, congenital rubella syndrome, vaccine

Introduction

HEALTH21 [1], the health policy framework prepared by the WHO Regional Office for Europe and endorsed by the WHO Regional Committee for Europe in 1998, identified a number of targets for communicable disease control, including the target of less than one case of congenital rubella syndrome per 100 000 live births by 2010. Until September 2003 when the 44th Directing Council of the Pan American Health Organization endorsed a rubella elimination goal, the WHO European Region was the only WHO region to have a target for rubella infection. The Regional Office has recently published a strategic plan for measles and congenital rubella infection [2] and companion surveillance guidelines [3].

The current approach taken by the WHO Regional Office for Europe to meet the rubella target, closely links prevention of congenital rubella infection with the interruption of indigenous measles transmission. Priority is given to achieving very high coverage (>95%) with two doses of a measles containing vaccine through strengthening routine immunisation programmes. Countries with measles vaccine coverage of < 90% and who are not already using rubella vaccine in their childhood immunisation programmes are encouraged to first strengthen their routine programmes and increase coverage with measles vaccine before introducing a rubella vaccination programme.

One of the six key strategies in the strategic plan [2] is to use the opportunity provided by supplementary immunisation activities (SIA) for measles to target populations susceptible to rubella. During the past three years, Albania [4], Kyrgyz Republic [5] and Moldova have undertaken national SIA for measles using measles-rubella (MR) vaccine, linking them to rubella vaccination campaignstargeting women of childbearing age. In October 2003, Kosovo authorities conducted an SIA using MR vaccine and are planning a rubella vaccine SIA campaign for women.

In 2003, 42 (82%) of 51 member states included rubella vaccine with the first dose of measles vaccine; 40 countries used measles-mumps-rubella vaccine (MMR). Two additional countries (4%) had rubella vaccine programmes only for adolescent girls, and two others are planning to introduce childhood MMR vaccination in 2004. With the expansion of the WHO European Region to include Cyprus, which currently uses MMR, over 90% of member states will have childhood immunisation programmes for rubella.

Ensuring indirect protection of women of childbearing age by achieving high routine infant coverage with rubella-containing vaccine is another key strategy identified in the strategic plan. As already documented as occurring in Greece [6], women may be at especially high risk of having an infant with congenital syndrome in some western European countries where MMR has been used in childhood programmes with insufficient coverage, which is reflected by their recent outbreaks of measles [7].

Rubella surveillance issues in the WHO European Region

The WHO Regional Office for Europe has collected annual reported rubella incidence although, some member states have not reported incidence as there is no national surveillance for rubella.. From 2004, all member states are strongly encouraged to report rubella cases to the Regional Office on a monthly basis, using the online data entry tool developed for reporting of measles and rubella, although other methods of data transfer using the forms identified in the surveillance guidelines [3] are supported. Persons responsible for measles and rubella surveillance can set up an account on the server at measles@euro.who.int.

Recommendations for reporting of aggregate or case-based data for rubella depend on the current level of measles and rubella control [3]. Countries with measles under some or limited control are

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asked to report aggregate rubella cases by vaccine status and age group. Countries with a comprehensive rubella vaccination programme and countries approaching measles elimination should report case-based data.

The number of congenital rubella syndrome (CRS) cases reported from countries in the WHO European Region is very low and most likely due to weak surveillance programmes for this condition. The number of CRS cases reported over the last three years were: 2000, 53 cases; 2001, 19 cases; and 2002, 8 cases; 38% of these cases were reported from Romania. Effective surveillance for CRS requires inclusion of, and participation by paediatricians, obstetricians, cardiologists and ophthalmologists.

The WHO Regional Office for Europe held a technical consultation on measles and rubella surveillance issues in March 2003. Participants identified the following needs for applied research with regard to surveillance for CRS:

1. Frequency, aetiology and sensitivity of methods for detection of rash fever in pregnancy need to be assessed over time in areas with moderate to high rubella control

2. Optimal methods (sensitivity and cost) need to be defined for identification of cases of CRS

3. Optimal definitions to identify circulation of rubella virus in the community are needed, i.e. what is the size of a cluster that would suggest a rubella outbreak in a community, supporting further public health interventions

4. Ethical and legal implications of serologic testing for susceptibility to rubella in antenatal care and after diagnosis of rash-fever need to be assessed regarding possible errors of a misclassification and their potential impact on the integration of surveillance activities into routine antenatal services.

Reporting of outbreaks of both measles and rubella is being introduced within the WHO European Region. An outbreak reporting form has been developed [3]. Member states are strongly encouraged to use the online entry tool developed for this purpose and available at the Regional Office website http://www.euro.who.int/vaccine.

References

1. HEALTH21 - the health for all policy for the WHO European Region. Copenhagen, WHO Regional Office for Europe, 1999 (European Health for All Series, No.6)
2. Strategic plan for measles and congenital rubella infection in the European Region of WHO. Copenhagen, WHO Regional Office For Europe, 2003 (http://www.euro.who.int/document/e81567.pdf, accessed 4 November 2003).
3. Surveillance guidelines for measles and congenital rubella infections in the WHO European Region. Copenhagen, WHO Regional Office For Europe, 2003.
4. Bino S, Kakarriqi M, Xibinaku M, et al. Measles-rubella mass immunization campaign in Albania, November 2000. *J Infect Dis* 2003; 187 (Suppl 1):S223-9.
5. Dayan GH, Zimmerman L, Shteinke L, et al. Investigation of a rubella outbreak in Kyrgystan in 2001: implications for an integrated approach to measles elimination and prevention of congenital rubella syndrome. *J Infect Dis* 2003; 187 (Suppl 1):S235-40.
6. Panagiotopoulos T, Antoniadou I, Valassi-Adam E. Increase in congenital rubella occurrence after immunization in Greece: retrospective survey and systematic review. British Medical Journal, 1999; 319:1462-1467.
7. Muscat M, Glismann S, Bang H. Measles in Europe in 2001-2002. *Euro surveill* 2003; 8:123-9.

ORIGINAL ARTICLES

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SEROLOGICAL SURVEILLANCE OF RUBELLA IN EUROPE: EUROPEAN SERO-EPIDEMIOLOGY NETWORK (ESEN2)

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Serological surveillance is an important resource to evaluate vaccine programmes, especially for diseases such as rubella, where a suboptimal programme can lead to an increase in morbidity. A coordinated vaccine policy in Europe is needed and the aim of the European Sero-Epidemiology Network (ESEN2) is to standardise serological surveillance in 22 countries for eight diseases, including rubella.

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Key words : Rubella, Europe, surveillance, European network

Rubella vaccines were first licensed in the late 1960s [1], since when immunisation programmes have been implemented in many European countries. The chief strategies for rubella immunisation are universal vaccination of children, selective vaccination of adolescent females, or a combination of these [2]. The universal vaccination of children with a two-dose measles, mumps and rubella (MMR) vaccine has been adopted in all countries of western Europe. However, a universal MMR immunisation programme has been implemented in only some of the other countries of the World Health Organization (WHO) European Region, and in many there is no rubella immunisation programme [3].

Serological surveillance is an important tool for the evaluation of vaccination programmes as it monitors immunity in the population, thus providing information with which to identify further control measures [4, 5]. Serological surveillance data are an important supplement to coverage data and avoid many of the limitations of pas-

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