Draft recommendations for vaccination of health workers against measles and rubella

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Outline

• Background
• Review of existing WHO recommendations
• Review of literature concerning experience with nosocomial transmissions of measles and rubella and infection control measures
• Discussion
• Draft recommendations
Background

• Health workers (HW) are critical to the promotion of health globally
• Health workers:
  – persons who engage in the promotion, protection or improvement of the health of the population
  – Health care workers (HCWs), nurses, laboratory, janitors, secretaries, etc. and persons in public health such as field workers, epidemiologists, laboratorians, community workers, etc.
• In both developed and developing countries,
  – transmission of vaccine-preventable diseases continues to occur in health care settings
    • health care workers (HCWs) being the source of exposure for susceptible patients or other HCWs.
Background - 2

• For measles and rubella, several outbreak reports document this risk of transmission of measles and rubella among HCWs and patients.

• Health workers who investigate or respond to suspected cases of infectious diseases are at risk of contracting and/or transmitting the disease.
Background - 3

• All six WHO regions have goals for measles elimination and two have rubella elimination goals
  – Nosocomial outbreaks continue to occur even in countries close to or post elimination.

• To interrupt the transmission of measles and rubella,
  – uniform and high levels of immunity must be ensured in the population including HWs.

• To ensure immunity among HWs in order to reduce or prevent nosocomial transmission,
  – WHO global and regional recommendations.
Methods

• Headquarters
  – Data sources: online IVB policies catalogue, IVB documents and publication, fact sheets, position papers, WER
  – Keywords: terms containing or related to HCWs (HCP, HCW, HW, HP, Health staff, HC staff and health professional)

• Regional
  – publication section websites, recommendations for vaccination of HCWs
Results - Global

• 12 documents were identified
  – Measles vaccine position paper (2009)
    • The importance of vaccinating health workers is underlined by the numerous measles outbreaks occurring in health institutions, affecting both health workers and patients.
  – Rubella vaccine position paper (2011)
    • The importance of vaccinating health workers has been demonstrated by outbreaks that occurred in health institutions and affected both health workers and patients.
Results - Regional

• **AFR** – (1st consultation – Measles TAG) (2005)
  – Countries are strongly encouraged to implement WHO/AFR recommendations on vaccination for all health workers, regardless of previous vaccination status or history of measles.

• **AMR**
  – “all health care workers must be immune to measles and rubella.” (measles elimination field guide – 2005)
  – IEC recommendations – HCW must be immune to measles and rubella
Results - Regional - 2

- EMR-
  - No recommendations

- EUR
  - 2005-2010 Strategic Plan
    - Such people include those attending schools or universities, those in the military and those working in health care settings.

- SEAR
  - No recommendations
Results - Regional - 3

• WPR
  – 2011 TAG –
    • TAG recommends that all countries implement measures to prevent or reduce nosocomial transmission of measles virus, including ensuring immunity against measles among health care workers

– Accelerated rubella/CRS Strategic Plan
  • for all countries and areas:- ensure immunity in health care workers to prevent nosocomial transmission of rubella
Literature Review

• Review of Nosocomial Measles Outbreak
  – Identified 35 papers reporting nosocomial transmission since 1998-2010
  – Compared to the previous review published in 1997
    • 25 papers over a 22 years period

• Review of HCW policies for vaccination in EURO
  – Measles
    • 12 of the 30 countries recommend measles vaccination for all HCWs.
      – In Finland HCW vaccination against measles is mandatory.
    • 15 countries no recommendations for HCW vaccination against measles.
  – Rubella
    • 11 countries of the 30 countries recommend rubella vaccination for all HCW.
      – In Finland, vaccination of HCWs against rubella is mandatory.
    • 15 remaining European countries have no recommendations
Literature review

• Articles from several countries (e.g., Bulgaria, Singapore, Korea, China, Australia, U.S., etc) on recent nosocomial measles outbreaks. One example:
  – Bulgaria
    • 326 cases of nosocomial transmission
      – 286 cases among non-healthcare workers who acquired the disease in a hospital setting.
    • Between October 2009 and April 2010, 40 healthcare workers contracted the disease. Mean age was 38 years.

• Several rubella outbreaks document the risks of exposing pregnant women to rubella.
Cost of health-care associated outbreak

• In 2008 in the US,
  – 14 patients with confirmed cases,
    • 7 (50%) acquired measles in health care settings
    • Only 1 of the 11 with health care access were appropriately isolated resulting in multiple exposures/contacts

• In US, recommendations on evidence for immunity in HCWs
  – 2 hospitals confirmed that 1776 (25%) of 7195 HCWs lacked evidence of measles immunity.
    • 139 (9%) of 1583 tested seronegative for measles immunoglobulin G, including 1 person who acquired measles.
  – The 2 hospitals spent US$799,136 responding to and containing 7 cases in these facilities.
Infection Control Measures

• Infection control measures have evolved in the 20th and 21st century.
  – Many countries have their own guides/guidelines for infection control
  – Despite the availability of guidelines*, one risk factor associated with nosocomial outbreaks, inadequate implementation of infection control measures

Summary

• While both HQ and Regional policies and guidelines highlight the importance of vaccination of health workers,
  – there is a need to be more explicit and pro-active in ensuring HWs are immune
• Some regions recommend that HCW be immune; however some regions have no recommendations
• Nosocomial transmission outbreaks continue to occur and can be costly
• Infection control measures should be enforced.
Draft Recommendations

• Health workers should be immune to measles and rubella, as soon as rubella vaccine is introduced into the national program
  – All HW must provide proof of immunity either through receipt of 2 doses of MCV and at least 1 dose of RCV containing vaccine or serologic test results.
  – As serologic screening is not recommended in most settings because it is more costly than vaccination

• Standard infection control measures should be enforced to prevent or reduce the spread of measles and rubella.

• Regions and countries should develop plans to operationalize these recommendations.
Question for SAGE WG

• Does the evidence presented support the draft recommendations to vaccinate health workers against measles and rubella?