

## Control of measles outbreaks

*Date updated: 26.02.2010*

*Version 1.1*

### General control measures

- Measles control depends on high levels of measles immunity with two doses of MMR.
- For non-immune, healthy individuals > 6 months of age, MMR vaccine, if given within 72 hours of exposure, may prevent measles infection.
- For non-immune, high risk individuals (e.g. children < 1 year, pregnant women, immunocompromised individuals), additional control measures (administration of human normal immunoglobulin [HNIG]) may be needed to protect them from measles.
- In some outbreak situations, non-immune individuals will be advised to stay away from schools/child care/hospital for 21 days after the last case to protect themselves and others from measles

The control of measles in the following settings is outlined in the following sections:

1. Control of outbreaks in schools
2. Control of outbreaks in day care centres
3. Control of outbreaks in health care settings
4. Control of outbreaks in the home and community

### **1. Control of outbreaks in schools**

Measles outbreaks are unlikely to occur in schools with high uptake of two doses of MMR.

Recommendations:

- All school children who are older than 6 years of age should already have two doses of MMR;
- Schools should make parents aware that measles can be prevented with two doses of MMR;
- In the event of an outbreak in a school any child without two doses of MMR vaccine should complete the two-dose schedule of MMR (the second dose given at least a month after MMR<sub>1</sub>);
- Staff born before 1978 have a high probability of measles immunity due to exposure to wild type virus;
- Staff born since 1978, if they do not have a history of measles, should have two doses of MMR.

Students attending schools in the area of the outbreak should also receive MMR if they are incompletely vaccinated. For persons born after 1978, adequate vaccination consists of two doses of measles containing vaccine separated by at least 28 days with the first dose administered no earlier than the first birthday.

## **2. Control of outbreaks in day care centres/crèche**

- Following notification of possible measles case in a crèche or day care centre a risk assessment should be undertaken.
  - If risk assessment indicates low risk, e.g. unlikely to be a measles case, consider issuing a letter to parents recommending routine MMR while awaiting swab results.
  - If risk assessment indicates high risk, e.g. confirmed or highly suspicious case, or an outbreak situation, the following actions should be considered.
- Vaccination with MMR is recommended for all those attending the crèche, and their siblings, who have not received two doses of MMR on, or after, the first birthday.
- MMR vaccine may be given to children as young as six months of age. Children vaccinated before their first birthday should have a repeat vaccination at 12 months of age, at least one month after the first vaccine with a further dose at 4-5 years of age.
- Staff born after 1978, who do not have documented evidence of 2 doses of MMR also should be vaccinated with MMR.
- MMR vaccination should also be considered for children attending unaffected childcare facilities in the community as they may be at risk of measles exposure and transmission in the community.

## **3. Control of outbreaks in health care settings**

### **Protecting hospitalised children from measles:**

- All elective admissions to an institution associated with a current measles outbreak should be immunised prior to admission – preferably with two doses of MMR. Ideally, children on the waiting lists should be written to and informed of this recommendation prior to admission letter/phone call. There is no reason to defer surgery/anaesthetic on the basis of recent vaccination (National Immunisation Guidelines 2008).
- Unimmunised children who require urgent admission should be immunised if there are no contra-indications.
- All long-term patients born after 1978 attending the health care facility should have their immunisation status checked and be vaccinated if necessary.

### **Protecting health care staff from measles**

#### **Ensure staff are measles immune before exposure occurs:**

- All health care workers born after 1978 should have proof of immunity or evidence of 2 doses of MMR vaccination.
- If an outbreak occurs in an institution or in an area served by the institution all personnel should receive a dose of MMR if they cannot satisfy the above criteria.
- Serological testing of staff during an outbreak is not generally recommended. But may be considered for staff that are unable to receive the vaccine due to pregnancy or other contraindications.

#### **Non-immune staff exposed to measles**

- Susceptible staff should be excluded from contact with suspect cases.
  - Susceptible personnel who have been exposed to measles
    - should be removed from patient contact and excluded from the 5<sup>th</sup> to the 21<sup>st</sup> day after exposure, regardless of whether they received vaccine or immunoglobulin after the exposure.

- Staff who become ill
  - should be removed from all patient contact and excluded from work for at least 4 days after they develop the rash, until illness resolves.

#### **4. Control of outbreaks in the home and community**

- MMR vaccine given within 72 hours of exposure may provide protection against infection.
- All household contacts born since 1978 who have not received two doses of MMR vaccine should complete the two-dose schedule of MMR (the second dose given at least a month after MMR).
- Household contacts born before 1978 are likely to have had measles infection. MMR vaccine can be offered to such individuals on request if they are considered at high risk of exposure.
- MMR vaccine may be given to children as young as six months of age. Children vaccinated before their first birthday should have a repeat vaccination at 12 months of age, at least one month after the first vaccine with a further dose at 4-5 years of age.
- Immunoglobulin may be indicated in certain circumstances. Further information on HNIG is available [here](#).
- Parents should be advised that unimmunised siblings may be incubating measles and it is recommended that they to stay out of school from 5-21 days after first exposure. This is to avoid transmitting measles to other children in the school.