Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

MRSA

This leaflet explains about Meticillin Resistant Staphylococcus Aureus (MRSA), how it is passed on and how it can be treated. It also explains about things we are doing at Great Ormond Street Hospital (GOSH) to reduce the chance of it spreading.

What is MRSA?

MRSA is short for Meticillin Resistant Staphylococcus Aureus. Staphylococcus aureus (S. aureus) is a bacterium (bug or germ) that about 30 per cent of us carry on our skin or in our nose without knowing about it. This is called 'colonisation'. The inside of our nose and other moist areas of skin are most likely to be colonised by S. aureus. Most types (strains) of S. aureus do not cause any problems and if they do, are easily treated using standard antibiotic medicines.

However, there are some types of S. aureus that cannot be treated with standard antibiotic medicines. This is because the bacterium has 'got used to' the standard medicines (such as flucoxacillin) and changed itself so that the medicines do not work as well any more. This is called 'resistance'. There are other types of bacteria that are resistant to antibiotic medicines, but MRSA is the most well-known type.

How serious is MRSA?

MRSA is not a stronger or more harmful type of bacteria than others. It is different because the standard antibiotic medicines do not work against it. This means that non-standard antibiotic medicines are needed to treat an infection with MRSA, which may have more side effects. MRSA also differs from other types of S. aureus because it has become adapted to survive longer in the environment and to spread easily between people, especially in hospitals. Therefore additional measures are needed to protect others.

How does someone get colonised with MRSA?

S. aureus, including MRSA, is mainly spread by direct skin-to-skin contact, although it can also be spread through dusty and dirty equipment and surroundings. If someone who is colonised with MRSA touches the skin of a person who is not colonised, this can transfer the bacteria from one to the other. If your child has been in hospital or has had antibiotics recently, they are more likely to become colonised with MRSA than other children. Being colonised with MRSA may not cause any problems if a person is well, but they could still pass it on to other people. This is why hand hygiene is so important. You can stop MRSA spreading just by washing hands or using the alcohol hand rub when you enter and leave the room or bed space of your child.

How does someone get infected with MRSA?

MRSA does not usually cause any problems when a person is well, but it can cause problems when someone has had an operation or any other treatment that breaks the skin. This allows the MRSA germs to get inside the body, where they could cause an infection or problems with wound healing. As MRSA is spread by direct skin-to-skin contact, it can be passed on through unwashed hands and then spread into the wound site.

How is MRSA colonisation and infection diagnosed?

There is no way of telling whether someone has MRSA colonisation or infection just by looking. The most reliable way of diagnosing MRSA is to take a swab (like a cotton bud) of the inside of their nose and throat or the skin.

At GOSH, we check all children admitted as an inpatient using swabs. We also ask for a small sample of faeces (poo), which will be sent to the hospital laboratory to check for other antibiotic-resistant germs.

The swabs are sent to the hospital laboratory to see whether the MRSA germ grows or not. If it does, this shows that the person is colonised with MRSA. A full screening is then carried out, taking swabs from the nose, throat, armpits, hairline, groin and any skin lesions, such as sore areas, broken skin or sites of invasive devices (for example, a gastrostomy or tracheostomy).. Laboratory staff then use this sample of the MRSA to work out which medicines will work best if treatment is needed. At GOSH, the results of these tests are available within three or four days. MRSA infection is diagnosed when additional specific samples that are taken during the investigation of possible infection such as a wound swab or a blood sample, grow the bug.

What happens if my child has MRSA?

1. **Antibiotic treatment for MRSA infection** – if your child is colonised with MRSA, they will not usually need treatment. However, we will assess each child individually and discuss any plans for treatment with you, your doctors and the clinical team. If your child has an MRSA infection, they may need antibiotics given directly into a vein (intravenous infusion).
2. **Antiseptic skin washes** – if your child does not need treatment for infection but they are felt to be at risk for S. aureus infection, treatment may be advised to reduce this risk by prescribing special antiseptic skin washes and antiseptic nasal ointment.
3. **Isolation** – because both colonised and infected patients can spread the bacteria to other patients we will need to employ special precautions to reduce this risk:
   - We will nurse your child in a separate room, if possible. On some wards, your child may also be isolated in the bed space of a bay.
   - We will use additional precautions, such as wearing gloves and aprons.
   - We will also put an alert on your child's computer record to indicate that they require, if possible, a separate room when coming to GOSH. This may impact on the timing of appointments or investigations, but your child will not be cancelled just because of this alert.

Do we need to take any precautions at home or school?

S. aureus colonisation is common, so when you are out of hospital there are no additional things you need to do. We always recommend good basic hygiene, such as hand washing before eating and after going to the toilet, and using separate towels.

Do we need to inform other hospitals?

Yes, because MRSA spreads easily between people in hospitals and because patients are more at risk of S. aureus infection, other hospitals should be informed. If your child is seen at a hospital other than GOSH you should let them know that your child has or has had MRSA. They may employ similar precautions as we do at GOSH to prevent the spread of bacteria. Should they require further information, they can contact the Infection Control Team at GOSH via switch board (020 7405 9200).

Can MRSA come back once it has been treated?

Infection with MRSA can be treated, and should not recur if treated sufficiently, but because S. aureus is well adapted to live on the skin of people, colonisation with S.aureus, including MRSA, may persist for months or sometimes years.

Antiseptic skin washes can temporarily reduce the number of MRSA bacteria to a level where it is difficult to detect them through swabbing, but will not usually get rid of them completely. Therefore antiseptic skin washes are useful to reduce the risk of an infection before surgery, for instance. Complete and long term clearance is harder to achieve, especially if there is abnormal skin (such as eczema) or breaks in the skin (such as a gastrostomy for example) due to treatment.

MRSA is easily transferred from person to person, so if your child comes into contact with someone else with MRSA, they can get the germs again, even after decolonisation or treatment. Good hand hygiene can help to reduce the risk of this happening.

When will my child be free from MRSA?

If your child is at risk of developing MRSA infection because of illness and treatment, it is important to know this, so that they can have the correct treatment and so that it does not spread to other children.

As explained above, MRSA is adapted to live on people's skin for months or years and certain factors increase the likelihood of this becoming long term. We have taken these factors in to consideration when developing this policy to help protect you and other children.

At GOSH, we do not declare a child free from MRSA until they meet the following criteria:

- They have had three complete screens clear of MRSA
- They have not been in (any) hospital in the previous six months
- They have not been on antibiotics in the previous six months
- They have no devices that break the skin barrier, such as, for example, a tracheostomy or gastrostomy
- They are not immunocompromised

What is GOSH doing to prevent MRSA spreading?

GOSH has been working hard for a number of years to reduce the spread of MRSA:

- **Screening:** We screen every child that is admitted for MRSA. We detect high numbers of children with MRSA, however when each case is checked, most children have developed MRSA before they came to GOSH. Every child who we find to be colonised with MRSA is nursed in isolation precautions (in a room if possible) to prevent the spread to other patients.
- **Good hand hygiene:** We strongly encourage hand washing or using alcohol hand rub before and after patient contact. We encourage you to ask any member of staff who visits your child whether they have cleaned their hands.
- **Clean environment:** We are working together with our cleaning contractors to ensure that our wards and departments are clean and tidy.

Further Information

Please ask for a copy of our *Infection prevention and control* information sheet, which explains what the Infection Control Team are doing to prevent hospital infections and what you can do to help us to minimise the risk of infections during your child's stay.

If you have any questions about the advice in this information sheet, please speak to the nurse in charge or the ward manager.

Compiled by the Infection Prevention and Control Team in collaboration with the Child and Family Information Group
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