Introduction
The fact sheet is aimed at providing parents and carers with information about CRE. CRE stands for Carbapenem Resistant Enterbacteriaceae.

What causes this condition?
CRE are bugs (bacteria) that live in the bowel and are resistant to many commonly used antibiotics, most notably the family of antibiotics called Carbapenems which are often used for treating severe infection in the hospital settings.

What are the signs and symptoms of CRE?
In most people CRE bugs are carried in the gut harmlessly (this is called ‘colonisation’) and does not cause any symptoms. In these circumstances the bug is identified when surveillance swabs are taken and sent to the laboratory. These swabs are taken in areas such as Critical Care weekly, and also taken when patients are transferred to Alder Hey from another Hospital. These swabs help the Doctors decide which antibiotics to prescribe initially, if your child develops an infection.

If a child develops an infection caused by a CRE bug, the symptoms will depend on the area of the body affected e.g Urine infections may cause a high temperature, infection, urinary frequency, lower abdominal pain and pain on passing urine. CRE can also cause infections such as kidney infections and blood stream infections.

What treatment(s) are available?
There is a limited choice of antibiotics available to treat infections with CRE. Antibiotics should only be given for a very good reason to children carrying this bug. There is no treatment required for colonisation of the gut with CRE.

What are the side effects of my child getting or not getting treatment?
Colonisation with CRE doesn’t require treatment as it isn’t harmful to the patient. Infection with a CRE bug might require treatment with antibiotics known to have some side effects. Please discuss this with your child’s Doctor.

Does anything increase the risk of someone acquiring CRE?
Children that have already taken lots of antibiotics are more at risk of acquiring a CRE bug. This is because the more the bugs are exposed to antibiotics, the more likely it is that they will develop resistance to these antibiotics (so that a particular antibiotic no longer works).

Are there any implications for others i.e. infecting other people?
CRE can be spread between patients through direct contact with each other, or by touching items or surfaces that the person with CRE may have touched such as cot sides, toilets, equipment or...
toys. As patients in hospital are more vulnerable to infection than people in their own homes, special precautions are required to prevent the spread of CRE between patients in hospital.

**What are the special precautions required for patients with CRE?**

Any child found to have CRE should be placed in an isolation room, preferably with their own toilet facilities (if they use a toilet), if one is available. All staff should clean their hands before and after any contact with your child (this is best practice whether a child carries the CRE bug or not).

Staff looking after your child should wear a disposable apron and gloves while in contact with your child. They will remove these and wash their hands before leaving your child’s room.

Children carrying the CRE bug should not mix with other hospitalised children on the ward, to stop the bug being spread to other children.

**What are the risks to other family members?**

Patients with a CRE do not pose a risk to their families or to other healthy people. Family and friends can visit but they should wash their hands, or use an alcohol-based handrub (sanitizer) before leaving the room. Visitors may still have close contact such as hugging, kissing and hand holding.

**Can a person be cleared of an CRE-producing strain?**

Sometimes the strain will be lost naturally.

In some children with serious illnesses, CRE-producing strains may be present for months or even years. Antibiotics can treat infections but do not necessarily eliminate the bacteria from the body, especially if they are in the gut.

**Who to contact for further information or support?**

The Infection Prevention and Control Team in the Hospital can also be contacted on the number below.

Infection Prevention & Control Nurses: 0151 252 5485

This leaflet only gives general information. You must always discuss the individual treatment of your child with the appropriate member of staff. Do not rely on this leaflet alone for information about your child’s treatment.

This information can be made available in other languages and formats if requested.