

## APPENDIX 11: Specific Advice for Patients with VTEC

### What is VTEC?

Verotoxigenic *Escherichia coli* (or VTEC) are a type of bacterium (bug) that is found in the bowels of many farm animals. VTEC bugs produce a toxin (called verotoxin) that can cause a common and potentially serious infection of the bowel in humans. It is most common and serious in the elderly and small children, although anyone of any age can contract VTEC.

### Can I go to work/School?

If you/your child have VTEC you should be off work/school. And you/your child should remain off work/school for at least two days after you/your child's bowel motions return to normal. It only takes a couple of VTEC bugs spread from one person to make another person ill. Sometimes, in the case of children under the age of five attending a crèche<sup>25</sup>, or people whose work involves preparing food<sup>27</sup> or people who work in hospitals and residential homes or childcare facilities<sup>25</sup>, your local public health physician may want to undertake further stool tests and in that case you would have to remain off work/school, until there had been a couple of stool samples that were clear of VTEC. Occasionally, in children, it can take a number of weeks (and occasionally months) for the bowel to clear out the VTEC bugs, before a child is allowed back to their crèche/childcare provider.

### How do you catch VTEC?

VTEC is spread in a number of ways: by drinking water contaminated with the VTEC bug, by eating food (raw, or ready to eat) contaminated with the VTEC bug, by coming in close contact with someone who is suffering from VTEC infection (this is especially common in families with small children or where groups of young children come together (e.g. in crèches and play schools), by coming in contact with farm animals such as cattle and sheep (or by coming in contact with their faeces including slurry) or by touching objects (light switches, clothing, footwear, handles, TV remote controls, pens, cups, plates, cutlery, toys etc.) things that have been contaminated with VTEC (for example spread from contaminated water or food, dirty hands or farm animals' bowel motions).

### What are the symptoms of VTEC?

Occasionally, some patients infected with VTEC develop no symptoms at all (these patients are called *asymptomatic*). Most people however do develop some symptoms. The main symptom is diarrhoea which can be quite heavy. In about one quarter of cases the diarrhoea is bloody (blood is mixed throughout the child's loose bowel motions and not just coating the surface of a solid stool), so bloody that it can stain clothes and bedding. The verotoxin from the VTEC damages the lining of the bowel which leads to the bloody diarrhoea. The diarrhoea generally comes on about 4 to 7 days after the person has taken the VTEC into their body. Patients often complain of abdominal cramps that can be quite painful. There is also loss of appetite and often a feeling like flu; heavy-limbed, headache, no energy and achy muscles.

### How is VTEC diagnosed?

The VTEC bugs are detected in a stool sample by the laboratory. A GP, a Public Health Physician or an Environmental Health officer on suspecting that your/ your child's symptoms suggested the possibility of VTEC or on suspecting that you/your child has had close contact with someone with VTEC (e.g. with the items mentioned above) putting you/your child at greater risk of developing VTEC, will organise to send off a sample of your/your child's stool (bowel motions) for examination in the laboratory. Once VTEC is identified, this means you have VTEC infection.

### Is there a treatment for VTEC?

The vast majority of cases of VTEC get better with no treatment. Drinking plenty of fluids is all that is needed. Antibiotics are not necessary (they can sometimes make the situation worse).

### How do I protect my family and friends?

The most important thing to remember with VTEC is that regular handwashing markedly reduces the risk of spreading it to others. Hands should be washed with soap and running HAND HOT water especially:

- After using or cleaning the toilet
- After attending to anyone with diarrhoea or vomiting
- After touching anything contaminated by diarrhoea or vomiting
- After handling contaminated clothing or bedding (including nappies)

If you have been diagnosed as having VTEC, you should not prepare the family's food until you have been symptom-free for at least two days. While you are unwell, get someone else to cook for you.

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27. These groups of people are known as Risk Groups (they have a higher risk of passing on VTEC to others)

**What are the complications of VTEC Infection?**

Most people with VTEC infection get better uneventfully. However, in Ireland, about 10% of patients (mainly the elderly and children under the age of 10) go on to develop a serious complication known as **HUS (Haemolytic Uraemic Syndrome)**. The toxin produced by VTEC that leads to the bloody diarrhoea can also damage the kidneys and occasionally the heart and nervous system, producing HUS. HUS often leads to temporary renal failure. In children the outlook is excellent but in the elderly, HUS can be a very serious complication. HUS generally develops about a week after the diarrhoea of VTEC starts but it can begin within 2-3 days or may not appear for up to a fortnight.

**My child has VTEC, what should I look do?**

If your child has been diagnosed as having VTEC, the outlook is excellent. If s/he goes on to develop HUS it is important that s/he would be seen in hospital as quickly as possible. The important thing to do is to contact your GP as soon as symptoms of HUS appear; then s/he can organise to have your child seen by a specialist (once a child or elderly person develops HUS, they may need to be given fluids by a drip – this helps protect the kidneys from further damage). In addition, if your child should develop blood in the stools, you should take your child to your local Emergency Department for urgent assessment. The majority of children who have VTEC infection and who go on to develop HUS and virtually all children who have VTEC infection and who develop bloody diarrhoea make a full recovery, but it is important to have your child assessed to ensure that they receive any necessary treatment.

**What is HUS?**

HUS is a disease that affects the blood. Red blood cells are destroyed in a process called “haemolysis”. The toxin makes the lining of small blood vessels “sticky” and they become clogged up with tiny clots. When red blood cells meet these clots they are split and broken. In the kidneys, the toxin damages the lining of the kidney’s blood filtration units leading to acute renal (or kidney) failure – the kidneys can no longer filter the blood or produce urine properly. In addition, the blood become less effective at clotting and bleeding takes place more easily.

**What are the symptoms and signs that mean my child may be developing HUS?**

In people who have VTEC Infection, HUS generally develops about seven days after the onset of diarrhoea (it ranges from two to 14 days). A child who is developing HUS will probably show some or all of the following:

- Feeling weak/tired (due to anaemia)
- Dry nappies/visiting the toilet to urinate (pee) less and less (due to renal failure)
- Urine (pee) may become pink or brown in colour (due to blood being passed in the urine).
- Small bruises in the skin (due to poor clotting of blood)
- Nosebleeds (due to poor clotting of blood)
- Pallor (due to anaemia - the child’s skin becomes pale, the inside of the eyelids look pale pink instead of normal red)
- Swelling of face hands, feet, tummy (due to water retention)

**If I see these symptoms what should I do?**

If your child develops any of the above symptoms, you should call your GP immediately and talk to her/him. If you cannot contact your GP you should call your local A/E Department and speak to the duty doctor telling her/him that your child has VTEC and that you were advised to contact a doctor if the symptoms of HUS (above) develop. If the staff in the A/E Department diagnose HUS, your child will be admitted for more blood, kidney and stool tests. They may decide to give fluids by a drip. For seriously ill children there are other, more specialised treatments that can be started in the hospital.

**Will my child be ok?**

The great majority of children with VTEC who go on to develop HUS recover fully and require only a short stay in hospital.