



Public Health
England

**Acute trust toolkit for the early
detection, management and control of
carbapenemase-producing
Enterobacteriaceae**
Frequently Asked Questions for Health
Professionals

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Frequently Asked Questions for Health Professionals

Why have these Frequently Asked Questions (FAQs) been produced?

This FAQ document has been developed to respond to questions already raised since the publication of the '*Acute trust toolkit for the early detection, management and control of carbapenemase-producing Enterobacteriaceae*'¹ in December 2013; and to try to anticipate additional questions that may be asked by practitioners during implementation of the toolkit. The Working Group that developed the toolkit recognises and acknowledges the challenges posed to some trusts by the advice provided in the toolkit. However the Working Group want to re-emphasise the urgent need for trusts to invest time and resources to prevent carbapenemase-producing Enterobacteriaceae becoming established with the inevitable substantial human health and financial consequences.

How should we use the toolkit?

The toolkit is intended to guide clinicians and infection, prevention and control (IP&C) staff in the assessment of risks to their patients from carbapenemase-producing Enterobacteriaceae. The focus is on early detection and early instigation of IP&C measures to quickly prevent and control spread.

Additionally, the toolkit provides supporting materials and information for trust boards to develop a contingency plan and prepare their own policy. This does not preclude the need for trusts to assess local applicability of the toolkit and to prepare their plans and policies based on informed local risk assessment and prioritisation.

If the toolkit does not cover the scenario we have, where can I get further advice?

It is not possible for the toolkit to address every situation that may arise. As such, if the IP&C advice in the toolkit does not 'fit' your situation, IP&C teams can obtain further advice and signposting, particularly in relation to local risk assessment, through their local PHE Centre or Lead Public Health Microbiologist

Why does the toolkit not include all carbapenemase-producing organisms?

In line with equivalent guidelines from elsewhere in the UK and abroad^{2,3,4,5} the toolkit focuses on carbapenemase-producing Enterobacteriaceae, rather than all carbapenemase-producing

¹ Published at:

<http://www.hpa.org.uk/Publications/InfectiousDiseases/AntimicrobialAndHealthcareAssociatedInfections/1312Toolkitforcarbapenemero/>

² <http://www.safetyandquality.gov.au/wp-content/uploads/2013/12/MRGN-Guide-Enterobacteriaceae-PDF-1.89MB.pdf>

³ <http://www.cdc.gov/hai/organisms/cre/cre-toolkit/>

⁴ <http://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf>

organisms. The Working Group recognises the significance of other organisms with demonstrable carbapenemase activity, such as some strains of *Pseudomonas* and *Acinetobacter*. However, these organisms may have a different epidemiology for which separate guidelines are being produced.

Is the toolkit evidence-based?

The toolkit was developed to respond to the urgent need to get ahead of the curve in relation to stemming the spread of carbapenemase-producing Enterobacteriaceae in England. The toolkit sets out a pragmatic approach to preventing and reducing transmission and is based on the best available evidence, expert opinion, guidance, experience and case reports from the UK and abroad as applied to England. It has not been produced following a systematic literature review of the evidence base. However, relevant literature used to inform the toolkit together with other useful resources and recent relevant publications are presented in a separate document.

The toolkit mentions “strict standard precautions” - does this mean contact precautions?

The use of the term “strict standard precautions” in the toolkit is intended to emphasise that staff must adhere to standard precautions (without fail); it does not imply that contact precautions should be used.

How will staff admitting patients know who should be screened without information on which trusts have problems with carbapenemase-producing Enterobacteriaceae?

The toolkit encourages strong intra- and inter-regional communication as a method of keeping abreast of current hotspots in England. This requires a transparent and proactive approach by all trusts including good internal communications, awareness raising and training of admitting staff. Currently, the toolkit contains a list of regions and countries with reported high prevalence of healthcare-associated carbapenemase-producing Enterobacteriaceae.

The Working Group included regional information for England, based on the criterion that, where a significant number of hospitals in that region have had positive cases *and* evidence of transmission identified, these regions should be seen as affected and included in the toolkit. Due to the current lack of structured surveillance across England and therefore a lack of robust prevalence data, it was not possible, within the urgent time frame, to provide a comprehensive account of prevalence at trust level. We are undertaking additional surveillance to understand more fully the extent of the problem; these results will be disseminated as soon as they are available.

Additionally, healthcare providers have a duty of care to proactively communicate any problems they are experiencing with carbapenemase-producing Enterobacteriaceae, not only with colleagues in neighbouring healthcare settings, but with any organisation they deal with on the patient pathway, either routinely or sporadically. This is in keeping with requirements of the

⁵ <http://www.documents.hps.scot.nhs.uk/hai/amr/cpe-toolkit.pdf>

'*The Health and Social Care Act 2008: Code of Practice on the prevention and control of infections*⁶. These local channels of communication should be used to inform screening decisions on admission.

Why does the toolkit recommend a rectal swab rather than a faecal specimen for screening?

A rectal swab can be obtained quickly. Therefore, if taken well, it is the most pragmatic and rapid method to establish colonisation. However, if available, faecal specimens may also be sent for screening.

Is there any risk associated with rectal screening?

Such risks are believed to be exceptionally small. As with any other clinical procedure, rectal screening swabs should be undertaken by a health professional who is competent to perform the task. In that way, any potential risks from the procedure are minimised.

Why does the toolkit recommend taking more than one screening sample and why space them 48 hours apart?

The Working Group gave a consensus recommendation to take three samples and to space them out (48 hours apart) to give the best chance of detection within a manageable timeframe. The group acknowledges that research is needed to provide evidence that will support or challenge the recommendation.

What should we do if we don't have enough isolation capacity to isolate every high-risk patient while we wait for three negative screens?

Trust boards need to develop a contingency plan and prepare their own policy based on an assessment of local applicability of the toolkit including local risk assessment and prioritisation. Each scenario will be different and the toolkit cannot address the circumstances within each trust. Rather, the Working Group has promoted practices aimed at optimising infection prevention and control to prevent the escalating problems seen in other countries. Further advice and discussions about control measures eg cohorting of patients, can be sought through their local PHE Centre or Lead Public Health Microbiologist.

Should samples in addition to the rectal swab eg throat swab, be taken for contacts who have been in the same bay as a known positive patient (as it may take a while before a rectal swab is positive in a contact)?

Rectal screening is advised as the first choice as the gut is the natural habitat for Enterobacteriaceae. Additional screening of clinical samples from alternative sites *may* provide an extra assurance of a negative site. However, the need for taking additional samples from contacts should be based on individual clinical assessment, in conjunction with advice from your IP&C team.

⁶ <https://www.gov.uk/government/publications/the-health-and-social-care-act-2008-code-of-practice-on-the-prevention-and-control-of-infections-and-related-guidance>

The assessment would include factors, such as (for throat swabs) whether a patient is ventilated, post-ventilated or has had a tracheostomy.

Why does the toolkit recommend screening of hospital contacts weekly for 4 weeks?

Given the lack of evidence, the use of a four week period of screening for hospital contacts of a case is arbitrary, but reasonable and pragmatic, given that both acquisition and carriage duration are likely to be functions of the particular strain and species. We know that when screening is undertaken, silent carriers are detected. The advice is intended to represent a minimum standard, acknowledging that carriage could occur for longer. However, use of the four week period for screening should provide some confidence that further transmission is not occurring and that there are no 'silent' carriers on the ward or unit. It is recognised that trusts are likely to want to undertake their own risk assessment, and possibly apply a more stringent approach, based on their local scenario. Trusts may wish to discuss this with their local PHE centre or Lead Public Health Microbiologist.

Why does the toolkit not recommend the isolation of contacts whilst awaiting screening results?

It is acknowledged that isolation of contacts would provide optimal infection prevention and control. However, recognising the need to apply local risk assessment and risk prioritisation to take account of other competing issues and isolation requirements, the Working Group sought a pragmatic approach. It recommends that contacts should be cohorted if possible. Some trusts may wish to be more stringent, choosing to isolate all contacts; whilst others may not have the capacity. Cohorting may not be applicable in all cases eg where there are differing strains. Nonetheless, strict hand hygiene and environmental cleaning should always be adhered to.

How long are people considered colonised - do they need to be isolated every time they are admitted to hospital?

The toolkit promotes the tagging of a positive patient's medical notes together with good inter-healthcare communication to enable screening and isolation of a patient who has been previously positive, if (re)admitted. This is important as, while it is unclear how long a person may remain colonised, it is known that a previously positive individual with subsequent negative screening results can revert to a positive state, especially after a course of antibiotics. The length of time a person remains colonised is likely to reflect (i) the strain and species carrying the carbapenemase, (ii) the patient's ongoing antibiotic exposure and (iii) the general composition of their gut flora, which varies with the individual and age.

Does this toolkit apply to care homes?

The approach recommended in the toolkit is more rigorous for the acute setting where the risk of spread and its consequences are greater. It is acknowledged that care in non-acute settings cannot, nor need be, subjected to the same stringent measures. A toolkit for non-acute care settings, which will include care homes, is to follow later this year. In the meantime, advice and signposting can be sought through the local community infection control team (where available), local PHE Centre or Lead Public Health Microbiologist. However, use of the Department of Health/Health Protection Agency publication '*Prevention and control of infection*

*in care homes – an information resource*⁷ will assist staff in care homes to take reasonable infection prevention and control steps to address the problem.

Does this toolkit apply to Mental Health trusts?

As mentioned above, a toolkit for non-acute care settings is to follow later this year. However, it is acknowledged that some care in the community may fall between acute and non-acute care eg mental health trusts, some intermediate care, and some care in a hospice. There may be similarities between structures and functions of these organisations and the acute setting, therefore some of the checklists in Section B of the acute toolkit may be helpful and may help trusts to consider how they might start planning.

⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/214929/Care-home-resource-18-February-2013.pdf