

**Protocol for the  
*Clostridium difficile*  
snapshot  
programme.**

**Version 3.0, 2017.**

# Background

Since 2009, the Scottish Salmonella Shigella and Clostridium difficile Reference Laboratory (SSSCDRL) has been typing isolates of *C. difficile* sent from all the NHS boards in Scotland as part of a representative typing surveillance – also known as the snapshot programme.

The snapshot programme was implemented in order to get a better understanding of the epidemiology of *C. difficile* in Scotland by obtaining a representative collection of isolates originating from patients with mild, moderate and severe disease. The results have been reported in the quarterly and annual reports published by Health Protection Scotland (HPS).<sup>1</sup>

This document is a revised version of the snapshot protocol, which has been influenced by the recommendation to test for *C. difficile* in children aged 3 years and above.<sup>2</sup> Due to this new recommendation, isolates from all children aged 3-14 years who test positive for *C. difficile* are requested to be sent for typing until further notice.

This protocol clarifies the change outlined above and advises laboratories on how the isolates should be collected and submitted.

## Culture of *C. difficile*

*C. difficile* should be cultured only from faecal diarrhoeal specimens that have tested positive for *C. difficile* toxin from symptomatic patients.

Further advice on culturing *C. difficile* from faeces can be found in the UK Standards for Microbiology Investigations B 10: Processing of faeces for Clostridium difficile (issued April 2014): <https://www.gov.uk/government/publications/smi-b-10-processing-of-faeces-for-clostridium-difficile>

## Collection of *C. difficile* isolates

At the start of each quarter all laboratories should submit a defined number of consecutive isolates (see Table 1 for individual laboratories) for CDI patients aged 15 years and above. For example if your laboratory has been assigned to submit 7 isolates per quarter, you should culture *C. difficile* from the first 7 symptomatic patients that have tested toxin positive. If isolates are culture negative (i.e. isolates are not *C. difficile* or not cultivable) additional isolates should be submitted until the defined number has been reached for the laboratory.

**For CDI cases aged 3-14 years, all isolates should be sent for typing.**

Request forms should be clearly labelled “**snapshot**” by ticking the appropriate box.

In some instances isolates might have been cultured to meet the general criteria given in the national CDI surveillance protocol.<sup>3</sup> **If this is the case, please tick the appropriate boxes for the routine submission and for the snapshot submission.**

Should there be no CDI cases during the collection period, or there are fewer cases than are required by the quota, please inform HPS and the SSSCDRL. Arrangements will be made to try to collect the necessary isolates out-with the designated collection period.

## Collection periods

The collection periods start on the following dates:

- 1 January (QT1)
- 1 April (QT2)
- 1 July (QT3)
- 1 September (QT4)

Collection of isolates and submissions from the diagnostic laboratories is staggered to spread the workload for the reference laboratory. Thus, for the first collection period (QT1) some laboratories will collect and submit isolates in January, some in February and some in March (a similar schedules will be followed in QT2, QT3 and QT4). See Table 2 for time schedule.

At the beginning of each collection period, HPS will alert the technical head of each laboratory via email.

## Storage of faecal specimens

Faecal specimens from which *C. difficile* has been isolated should be stored at -20°C. This will make a second culture possible if the first isolate is of insufficient quality for typing.

## Submission of isolates for the snapshot programme

Pure cultures on Robertson's cooked meat medium should be submitted.

## Turn around time for snapshot isolates

As isolates submitted for routine surveillance purposes (severe disease and/or outbreaks) will have priority over isolates for the snapshot programme, it is important to indicate on the request form what type of analysis is requested (routine typing, snapshot typing or both).

The turn around time for typing the isolates for the snapshot programme is estimated to 4 weeks.

Results from the snapshot programme will be analysed and presented in the quarterly and annual CDI reports.

## Further information

Further information about submission of isolates to the snapshot programme can be obtained from the SSSCDRL website: <http://www.nhsggc.org.uk/about-us/professional-support-sites/microbiology/scottish-microbiology-reference-laboratories/scottish-salmonella-shigella-c-difficile-reference-laboratory/>

**TABLE 1: Number of isolates in patients aged 15 years and above each laboratory/hospital should submit to the CDI snapshot programme per quarter.**

Laboratory/Hospital	NHS Board	Number of Isolates to submit*
Crosshouse Hospital	Ayrshire and Arran	10
Borders General Hospital	Borders	2
Dumfries & Gal. Royal Infirmary	Dumfries and Galloway	3
Fife Area Laboratory	Fife	8
Stirling Royal Infirmary	Forth Valley	7
Aberdeen Royal Infirmary	Grampian	13
Royal Alexandra Hospital (incl. Inverclyde Royal Hospital and Vale of Leven)	Greater Glasgow & Clyde	7**
Queen Elizabeth University Hospital	Greater Glasgow & Clyde	14
Glasgow Royal Infirmary	Greater Glasgow & Clyde	8**
Raigmore Hospital	Highland	4
Oban	Highland	2
Monkland's Hospital	Lanarkshire	6
Hairmyres Hospital	Lanarkshire	4
Wishaw General Hospital	Lanarkshire	4
Royal Infirmary of Edinburgh	Lothian	15
St John's Hospital	Lothian	2
Balfour Hospital	Orkney	2
Gilbert Bain Hospital	Shetland	2
Perth Royal Infirmary	Tayside	2
Ninewells Hospital	Tayside	8
Western Isles Hospital	Western Isles	2
Golden Jubilee Nat. Hospital	Gold. Jubil. Nat. Hospital	2

\* This number does not include isolates for children aged 3-14 years, of which all should be submitted for typing in each submission period.

\*\* Where possible, 2 isolates should be from Inverclyde Royal Hospital and 2 from Vale of Leven.

**TABLE 2: Time schedule for submissions of isolates to the snapshot programme.**

Submission group	Laboratories	Collection periods
Group A	Crosshouse Hospital Borders General Hospital Fife Area Laboratory Stirling Royal Infirmary Aberdeen Royal Infirmary (incl. isolates for Balfour Hospital and Gilbert Bain Hospital)	QT1: January QT2: April QT3: July QT4: October
Group B	Dumfries & Gal. Royal Infirmary Royal Alexandra Hospital (incl. Inverclyde Royal Hospital and Vale of Leven) Queen Elizabeth University Hospital Glasgow Royal Infirmary Golden Jubilee Nat. Hospital Raigmore Hospital Lorn and Islands District general Hospital (Oban)	QT1: February QT2: May QT3: August QT4: November
Group C	Monkland's Hospital Hairmyres Hospital Wishaw General Hospital Royal Infirmary of Edinburgh St John's Hospital Perth Royal Infirmary Ninewells Hospital Western Isles Hospital	QT1: March QT2: June QT3: September QT4: December

## References

1. HPS quarterly reports available from: <http://www.hps.scot.nhs.uk/haic/sshairp/quarterlyepidemiologicalcommentaries.aspx>
2. Health Protection Scotland. Recommended protocol for testing for Clostridium difficile and subsequent culture. HPS 2016; Available from: URL: <http://www.hps.scot.nhs.uk/haic/sshairp/resourcedetail.aspx?id=690>
3. Health Protection Scotland. Protocol for the Scottish Surveillance Programme for Clostridium difficile Infection. User Manual. HPS 2017. Available from URL: <http://www.hps.scot.nhs.uk/haic/sshairp/resourcedetail.aspx?id=678>