

**HOW ROBUST ARE ROUTINELY COLLECTED DATA
ON *CLOSTRIDIUM DIFFICILE* INFECTION FOR NATIONAL
SURVEILLANCE PURPOSES
IN SCOTLAND?**

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ABSTRACT

OBJECTIVES

To examine the consistency and comparability of Scottish laboratories' data on *Clostridium difficile* by comparing the laboratories' selection criteria and testing methods for the detection of *Clostridium difficile* infection and their definitions of 'a case' and 'an outbreak' of the infection. To examine the completeness and accuracy of *Clostridium difficile* reporting to SCIEH by comparing laboratory records with the total numbers of positive laboratory reports and outbreaks of the infection reported to SCIEH for the period 1999-2001.

DESIGN

Observational, descriptive cross-sectional survey using self-administered questionnaire. Data on routine reporting to SCIEH were also obtained.

SETTING

National Health Service (NHS) in Scotland

SUBJECTS

Twenty six clinical microbiology laboratories that receive specimens for testing *Clostridium difficile* infection.

RESULTS

There is no uniformity in selection criteria currently used to test specimens for *Clostridium difficile* infection. The most commonly used criteria were: presence of symptoms and/or high-risk groups (43.8 per cent), and a specific test request (37.5 per cent). Variations exist in the laboratory methods used to diagnose *Clostridium difficile* infection. All laboratories used toxin identification methods. Sixty per cent used only one method in identifying the infection, while the rest employed two methods, usually culture and toxin confirmation. Most of the laboratories agreed on the main features of 'a case' and 'an outbreak' of *Clostridium difficile* infection. The numbers of positive laboratory reports obtained by SCIEH and from questionnaires increased

during the period 1999-2001. Comparison of the limited data obtained from laboratories with data from SCIEH indicated both underreporting and overreporting of the infection.

CONCLUSIONS

The study highlighted the extent of diversity in laboratory diagnostic practices and surveillance practices of *Clostridium difficile* infection. Surveillance data currently available at the SCIEH database are not robust, as they are not illustrating the true incidence of *Clostridium difficile* infection due to lack of standardised and consistent protocols for infection diagnosis and data reporting.

RECOMMENDATIONS

A national consensus has to be reached about standardisation of specimen criteria and testing methods for *Clostridium difficile* infection. Laboratories should adhere to the standardised and consistent definitions when reporting data to SCIEH. They should report first positive laboratory tests within defined time period, in conjunction with some clinical information. A national surveillance system for *Clostridium difficile* infection to provide more precise indicators of the incidence and outbreaks of the infection in Scotland will require improvement in current practices in data reporting. A national consensus is required on the identification and management of outbreaks.