

# C. difficile surveillance

# Quarterly report

# January – March 2025

#### **Key points**

- CDI reports for hospital inpatients aged 2 years and over decreased by 29% (from 111 to 79 episodes) during January-March 2025 compared to October-December 2024.
- CDI rate per 100,000 bed days also decreased by 29% during January-March 2025 compared to October-December 2024.
- CDI reports for community patients aged 2 years and over decreased by 34% (from 111 to 79 episodes) during January-March 2025 compared to October-December 2024.
- During January-March 2025 the most prevalent CDI ribotypes are 002 (12%), 078-Like (11%), 014 (8%) and 015 (8%) (Table 3).
- Bed day data were not available for NHSCT hospitals and South Tyrone hospital (SHSCT) and provisional figures were used this quarter (figures taken from Jan-Mar 2024).
- For data from 1<sup>st</sup> April 2023 onwards, "Inpatient episodes" refers to all patients categorised as hospital inpatient <u>and</u> ED episodes where the patient tested positive >= 2 days after the decision to admit date.

For further information or clarification on HCAI definitions, please refer to previous reports or contact <u>hcaini@hscni.net</u>

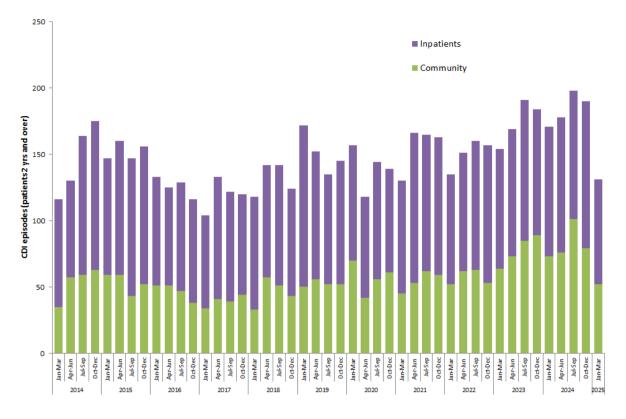


Figure 1: Total CDI episodes, <u>inpatient and community</u>, in Northern Ireland, by quarter (patients ≥ 2 years), between 2014 and 2025

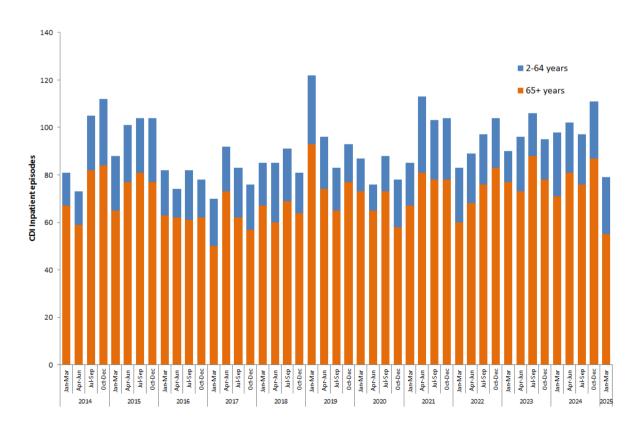


Figure 2a: Total CDI inpatient episodes, by age band, in Northern Ireland, by quarter, between 2014 and 2025

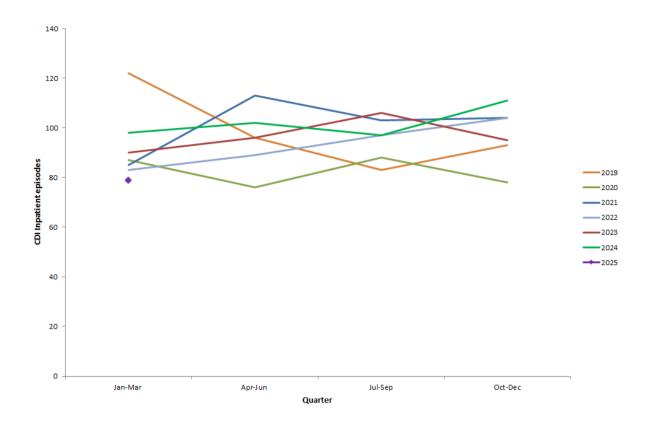


Figure 2b: Total CDI <u>inpatient</u> episodes in Northern Ireland, by quarter (patients ≥ 2 years), between 2018 and 2025

#### Statistical process control (SPC) charts

• SPC charts allow a distinction to be made between natural variation and 'special cause variation', where something unusual may be occurring. Trends in CDI rates since Jan 2014 are shown for each HSCT in appendix B.

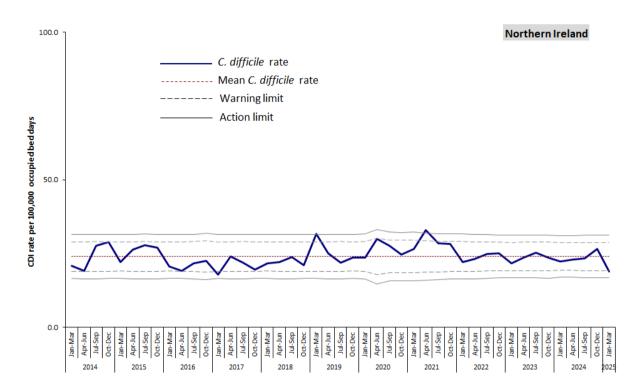


Figure 3: Statistical process control chart for quarterly *C. difficile* rates among <u>inpatients</u> in Northern Ireland aged 2 years and over (for HSCT level, see appendix B)

#### Results from the NI Ribotype Surveillance Programme

Table 1: A summary of *C. difficile* ribotypes in <u>Hospital Inpatients</u> aged 2 years and over, and thepercentage of each against the overall total, in Northern Ireland during routine surveillance,Apr 2024 – Mar 2025.

|                      | Apr - Ju | n 2024 | Jul - Se | p 2024 | Oct - De | c 2024 | Jan - Ma | ar 2025 |
|----------------------|----------|--------|----------|--------|----------|--------|----------|---------|
| Ribotype             | Number   | %      | Number   | %      | Number   | %      | Number   | %       |
| 001                  | 2        | 2.0    | 3        | 3.1    | 4        | 3.6    | 0        | 0.0     |
| 002                  | 6        | 5.9    | 10       | 10.3   | 7        | 6.3    | 8        | 10.1    |
| 005                  | 10       | 9.8    | 5        | 5.2    | 7        | 6.3    | 4        | 5.1     |
| 011                  | 7        | 6.9    | 2        | 2.1    | 4        | 3.6    | 3        | 3.8     |
| 014                  | 12       | 11.8   | 6        | 6.2    | 13       | 11.7   | 4        | 5.1     |
| 015                  | 8        | 7.8    | 5        | 5.2    | 8        | 7.2    | 8        | 10.1    |
| 018                  | 0        | 0.0    | 1        | 1.0    | 1        | 0.9    | 3        | 3.8     |
| 020                  | 8        | 7.8    | 10       | 10.3   | 8        | 7.2    | 5        | 6.3     |
| 023                  | 8        | 7.8    | 12       | 12.4   | 12       | 10.8   | 4        | 5.1     |
| 078-like*            | 10       | 9.8    | 10       | 10.3   | 3        | 2.7    | 9        | 11.4    |
| Other                | 26       | 25.5   | 23       | 23.7   | 32       | 28.8   | 21       | 26.6    |
| Not groupable**      | 2        | 2.0    | 1        | 1.0    | 3        | 2.7    | 5        | 6.3     |
| Not on ribotype list | 3        | 2.9    | 9        | 9.3    | 9        | 8.1    | 5        | 6.3     |
| Not isolated***      | 0        | 0.0    | 0        | 0.0    | 0        | 0.0    | 0        | 0.0     |
| Total                | 102      |        | 97       |        | 111      |        | 79       |         |

Table 2: A summary of *C. difficile* ribotypes in <u>Community Patients</u> aged 2 years and over, and thepercentage of each against the overall total, in Northern Ireland during routine surveillance,Apr 2024 – Mar 2025.

| Ribotype             | Apr - Ju | n 2024 | Jul - Se | p 2024     | Oct - De | c 2024 | Jan - Mar 2025 |      |
|----------------------|----------|--------|----------|------------|----------|--------|----------------|------|
|                      | Number   | %      | Number   | %          | Number   | %      | Number         | %    |
| 001                  | 0        | 0.0    | 4        | 4.0        | 1        | 1.3    | 3              | 5.8  |
| 002                  | 9        | 11.8   | 6        | <b>5.9</b> | 9        | 11.4   | 8              | 15.4 |
| 005                  | 4        | 5.3    | 10       | 9.9        | 5        | 6.3    | 3              | 5.8  |
| 011                  | 2        | 2.6    | 0        | 0.0        | 2        | 2.5    | 2              | 3.8  |
| 014                  | 6        | 7.9    | 8        | 7.9        | 8        | 10.1   | 6              | 11.5 |
| 015                  | 4        | 5.3    | 4        | 4.0        | 13       | 16.5   | 2              | 3.8  |
| 018                  | 2        | 2.6    | 1        | 1.0        | 4        | 5.1    | 0              | 0.0  |
| 020                  | 8        | 10.5   | 4        | 4.0        | 2        | 2.5    | 0              | 0.0  |
| 023                  | 4        | 5.3    | 9        | 8.9        | 3        | 3.8    | 1              | 1.9  |
| 027                  | 1        | 1.3    | 0        | 0.0        | 0        | 0.0    | 0              | 0.0  |
| 078-like*            | 8        | 10.5   | 15       | 14.9       | 4        | 5.1    | 6              | 11.5 |
| Other                | 25       | 32.9   | 30       | 29.7       | 13       | 16.5   | 8              | 15.4 |
| Not groupable**      | 1        | 1.3    | 3        | 3.0        | 4        | 5.1    | 4              | 7.7  |
| Not on ribotype list | 2        | 2.6    | 6        | 5.9        | 10       | 12.7   | 9              | 17.3 |
| Not isolated***      | 0        | 0.0    | 1        | 1.0        | 1        | 1.3    | 0              | 0.0  |
| Total                | 76       |        | 101      |            | 79       |        | 52             |      |

\* 078-Like means this isolate is PCR ribotype 078, or a very closely related (Clade 5) strain e.g. 126,193

\*\* 'Not groupable' ribotypes do not match existing profiles

\*\*\* 'Not isolated' indicates isolates that have no ribotype information supplied, with at least six weeks since the date of the specimen. Table 3: Descriptive data for *C. difficile* ribotypes 002, 078-Like, 014 and 015 in Northern IrelandHospital Inpatients and Community Patients, January – March 2025.

|               | 002 ( | n= 16) | 078-Lik | e (n= 15) | 014 ( | n = 10) | 015 ( | n = 10) |
|---------------|-------|--------|---------|-----------|-------|---------|-------|---------|
| Age           |       |        |         |           |       |         |       |         |
| range         |       | 7-92   |         | 1-91      |       | 5-84    |       | 2-87    |
| median        |       | 81     |         | 76        | -     | 77      | -     | 73      |
| Sex           | n     | %      | n       | %         | n     | %       | n     | %       |
| Female        | 9     | 56.3   | 6       | 40.0      | 7     | 70.0    | 6     | 60.0    |
| Male          | 7     | 43.8   | 9       | 60.0      | 3     | 30.0    | 4     | 40.0    |
| Trust         |       |        |         |           |       |         |       |         |
| Belfast       | 0     | 0.0    | 2       | 13.3      | 3     | 30.0    | 2     | 20.0    |
| Northern      | 1     | 6.3    | 2       | 13.3      | 0     | 0.0     | 3     | 30.0    |
| South Eastern | 10    | 62.5   | 3       | 20.0      | 0     | 0.0     | 1     | 10.0    |
| Southern      | 4     | 25.0   | 4       | 26.7      | 6     | 60.0    | 3     | 30.0    |
| Western       | 1     | 6.3    | 4       | 26.7      | 1     | 10.0    | 1     | 10.0    |
| Source        |       |        |         |           |       |         |       |         |
| Inpatient     | 8     | 50.0   | 9       | 60.0      | 4     | 40.0    | 8     | 80.0    |
| Community~    | 8     | 50.0   | 6       | 40.0      | 6     | 60.0    | 2     | 20.0    |

~ Community specimens include those taken from Accident and Emergency (<2days after admission date and not admitted), Outpatients, GPs, Hospice, Care Homes, Hospital Care at Home and Psychiatric facilities.

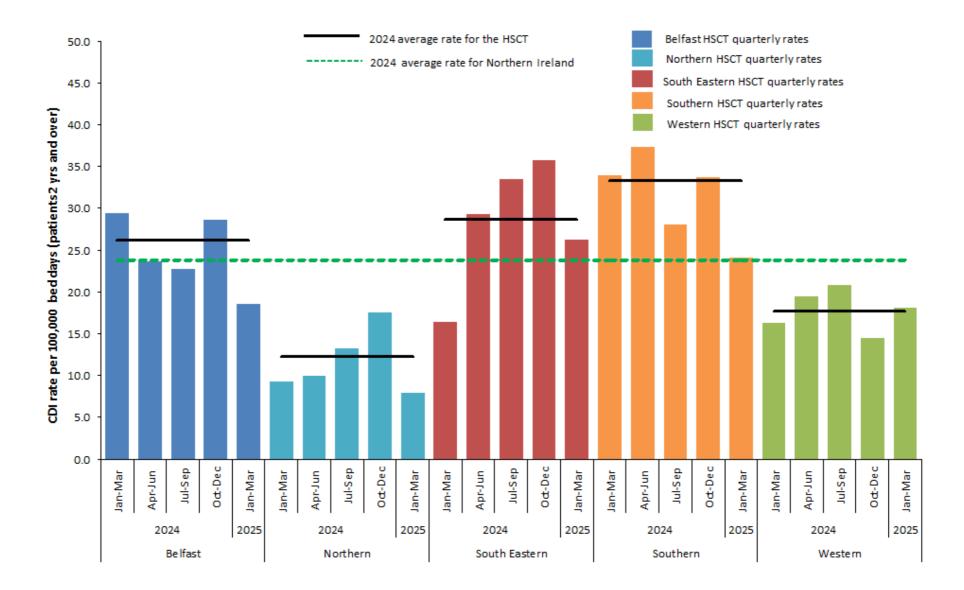


Figure 4: Quarterly rates of *C. difficile* among inpatients aged 2 years and over, by HSCT, January 2024 – March 2025, compared with annual Northern Ireland and HSCT rates for 2024

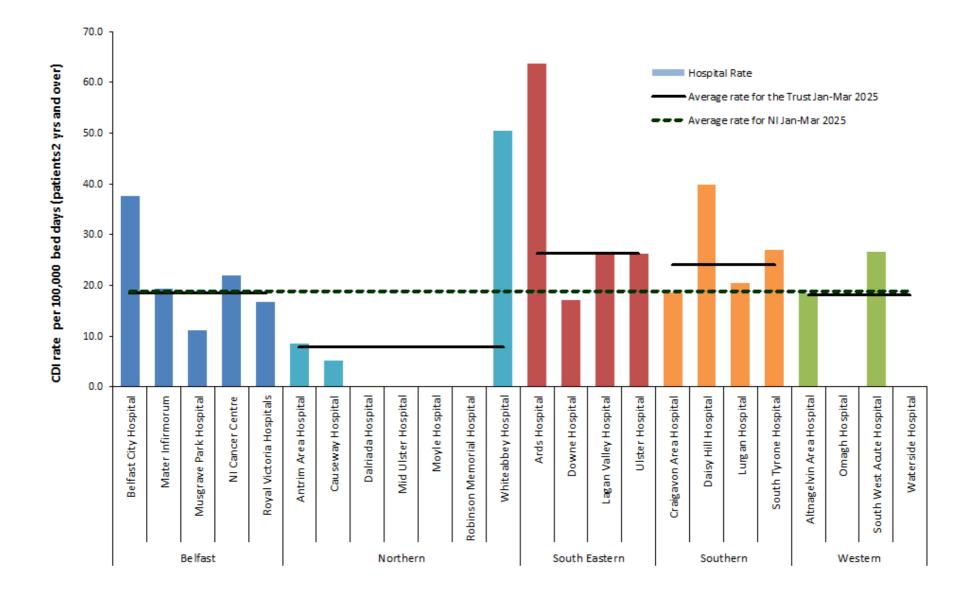


Figure 5: *C. difficile* rates during January-March 2025 Inpatients aged 2 years and over, by hospital, including HSCT rates and average rate for Northern Ireland (see appendix A, Table 4)

## Appendix A

| Table 4: Quarterly rates* of <i>C. difficile</i> reports in patients aged 2 years and over, by hospital, |
|--|
| Apr 2024 – Mar 2025.   |

| Hospital                                 | Apr-Jun 2024 | Jul-Sep 2024 | Oct-Dec 2024 | Jan-Mar 2025 |
|--|--------------|--------------|--------------|--------------|
| Belfast City Hospital                    | 23.13        | 30.68        | 31.00        | 37.52        |
| Mater Infirmorum                         | 30.35        | 19.59        | 38.28        | 19.28        |
| Musgrave Park Hospital                   | 23.69        | 17.76        | 22.15        | 11.14        |
| NICCO                                    | 23.01        | 65.10        | 108.04       | 22.01        |
| Royal Group of Hospitals                 | 22.31        | 20.56        | 23.13        | 16.67        |
| Belfast Health & Social Care Trust       | 23.60        | 22.71        | 28.66        | 18.55        |
|  |              |              |              |              |
| Antrim Area Hospital                     | 10.93        | 18.71        | 12.88        | 8.45         |
| Causeway Hospital                        | 12.10        | 5.20         | 30.92        | 5.17         |
| Dalriada Hospital                        | 0.00         | 0.00         | 0.00         | 0.00         |
| Mid Ulster Hospital                      | 0.00         | 0.00         | 0.00         | 0.00         |
| Moyle Hospital                           | 0.00         | 0.00         | 0.00         | 0.00         |
| Robinson Memorial Hospital               | 0.00         | 0.00         | 58.28        | 0.00         |
| Whiteabbey Hospital                      | 0.00         | 0.00         | 0.00         | 50.40        |
| Northern Health & Social Care Trust      | 10.01        | 13.20        | 17.51        | 7.94         |
|  |              |              |              |              |
| Ards Hospital                            | 0.00         | 0.00         | 0.00         | 63.69        |
| Downe Hospital                           | 22.78        | 112.06       | 87.80        | 17.06        |
| Lagan Valley Hospital                    | 26.31        | 38.67        | 25.64        | 25.93        |
| Ulster Hospital                          | 31.03        | 27.74        | 32.90        | 26.26        |
| South Eastern Health & Social Care Trust | 29.26        | 33.49        | 35.79        | 26.29        |
|  |              |              |              |              |
| Craigavon Area Hospital                  | 42.00        | 31.60        | 39.16        | 18.59        |
| Daisy Hill Hospital                      | 36.67        | 25.60        | 23.29        | 39.89        |
| Lurgan Hospital                          | 20.52        | 0.00         | 0.00         | 20.37        |
| South Tyrone Hospital                    | 0.00         | 28.63        | 58.79        | 26.90        |
| Southern Health & Social Care Trust      | 37.32        | 28.00        | 33.77        | 24.13        |
|  |              |              |              |              |
| Altnagelvin Area Hospital                | 23.32        | 21.31        | 15.62        | 18.31        |
| Omagh Hospital                           | 0.00         | 29.48        | 0.00         | 0.00         |
| South West Acute Hospital                | 21.91        | 26.92        | 21.14        | 26.51        |
| Waterside Hospital                       | 0.00         | 0.00         | 0.00         | 0.00         |
| Western Health & Social Care Trust       | 19.44        | 20.83        | 14.54        | 18.05        |
| NI TOTAL                                 | 23.06        | 23.44        | 26.50        | 18.89        |

Table 5: Quarterly *C. difficile* reports in patients aged 2 years and over, by HSCT, Apr 2024 – Mar 2025.

| Trust                                    | Apr-Jun 2024<br>Episodes | Jul-Sep 2024<br>Episodes | Oct-Dec 2024<br>Episodes | Jan-Mar 2025<br>Episodes |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Belfast Health & Social Care Trust       | 31                       | 29                       | 37                       | 24                       |
| Northern Health & Social Care Trust      | 10                       | 10                       | 13                       | 6                        |
| South Eastern Health & Social Care Trust | 21                       | 24                       | 26                       | 19                       |
| Southern Health & Social Care Trust      | 27                       | 20                       | 25                       | 18                       |
| Western Health & Social Care Trust       | 13                       | 14                       | 10                       | 12                       |
| NI TOTAL<br>NI community TOTAL           | 102<br>76                | 97<br>101                | 111<br>79                | 79<br>52                 |

\*Note: Rates displayed are per 100,000 occupied bed days. Previous reports presented rates per 1,000 occupied bed days.

Bed day data were not available for NHSCT and South Tyrone hospital (SHSCT) - provisional figures were used this quarter (figures taken from Jan-Mar 2024).

## Appendix A

Table 6: Quarterly rates\* of *C. difficile* reports in patients aged 65 years and over, by hospital, Apr 2024 – Mar 2025.

| Hospital                                 | Apr-Jun 2024 | Jul-Sep 2024 | Oct-Dec 2024 | Jan-Mar 2025 |
|--|--------------|--------------|--------------|--------------|
| Belfast City Hospital                    | 51.61        | 50.91        | 16.50        | 35.20        |
| Mater Infirmorum                         | 40.10        | 16.27        | 38.22        | 25.28        |
| Musgrave Park Hospital                   | 26.49        | 28.43        | 26.80        | 8.71         |
| NICCO                                    | 53.71        | 46.36        | 180.34       | 0.00         |
| Royal Group of Hospitals                 | 26.53        | 20.93        | 30.06        | 14.67        |
| Belfast Health & Social Care Trust       | 31.54        | 24.60        | 34.30        | 16.64        |
|  |              |              |              |              |
| Antrim Area Hospital                     | 20.07        | 24.91        | 16.29        | 14.22        |
| Causeway Hospital                        | 24.15        | 7.86         | 24.59        | 0.00         |
| Dalriada Hospital                        | 0.00         | 0.00         | 0.00         | 0.00         |
| Mid Ulster Hospital                      | 0.00         | 0.00         | 0.00         | 0.00         |
| Moyle Hospital                           | 0.00         | 0.00         | 0.00         | 0.00         |
| Robinson Memorial Hospital               | 0.00         | 0.00         | 69.40        | 0.00         |
| Whiteabbey Hospital                      | 0.00         | 0.00         | 0.00         | 69.11        |
| Northern Health & Social Care Trust      | 18.01        | 17.38        | 18.09        | 10.71        |
|  |              |              |              |              |
| Ards Hospital                            | 0.00         | 0.00         | 0.00         | 63.69        |
| Downe Hospital                           | 24.61        | 120.34       | 123.58       | 26.10        |
| Lagan Valley Hospital                    | 29.88        | 43.57        | 28.70        | 30.92        |
| Ulster Hospital                          | 46.38        | 39.02        | 49.67        | 33.71        |
| South Eastern Health & Social Care Trust | 40.66        | 45.18        | 51.39        | 33.71        |
|  | <b>51 05</b> |              | 50.00        | 47.70        |
| Craigavon Area Hospital                  | 61.95        | 39.90        | 53.80        | 17.73        |
| Daisy Hill Hospital                      | 20.71        | 20.01        | 27.59        | 44.53        |
| Lurgan Hospital                          | 23.43        | 0.00         | 0.00         | 21.62        |
| South Tyrone Hospital                    | 0.00         | 28.63        | 63.29        | 28.28        |
| Southern Health & Social Care Trust      | 44.59        | 30.88        | 43.13        | 25.22        |
| Altnagelvin Area Hospital                | 26.28        | 34.99        | 16.88        | 25.07        |
| Omagh Hospital                           | 0.00         | 29.90        | 0.00         | 0.00         |
|  |              |              |              |              |
| South West Acute Hospital                | 21.39        | 35.60        | 21.67        | 25.45        |
| Waterside Hospital                       | 0.00         | 0.00         | 0.00         | 0.00         |
| Western Health & Social Care Trust       | 20.44        | 31.50        | 15.61        | 21.34        |
| NI TOTAL                                 | 31.04        | 29.30        | 32.78        | 21.10        |
|  | 1            |              |              |              |

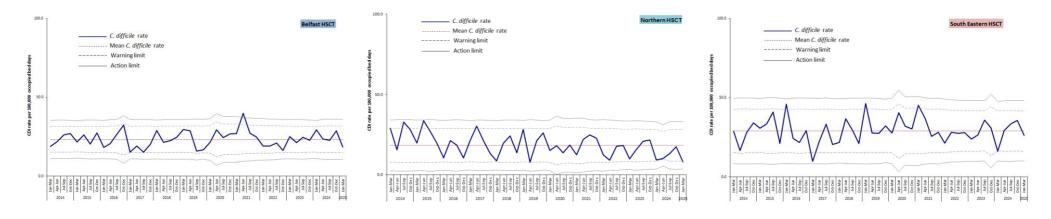
Table 7: Quarterly *C. difficile* reports in patients aged 65 years and over, by HSCT, Apr 2024 – Mar 2025.

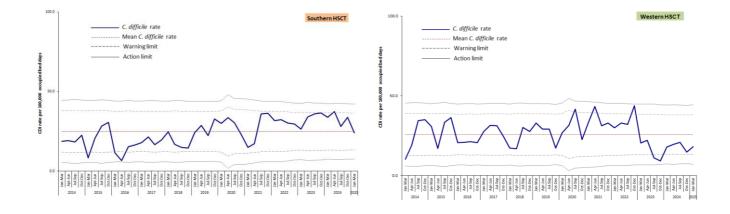
| Trust                                    | Apr-Jun 2024<br>Episodes | Jul-Sep 2024<br>Episodes | Oct-Dec 2024<br>Episodes | Jan-Mar 2025<br>Episodes |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Belfast Health & Social Care Trust       | 23                       | 17                       | 26                       | 12                       |
| Northern Health & Social Care Trust      | 9                        | 9                        | 9                        | 5                        |
| South Eastern Health & Social Care Trust | 20                       | 22                       | 25                       | 16                       |
| Southern Health & Social Care Trust      | 20                       | 14                       | 20                       | 12                       |
| Western Health & Social Care Trust       | 9                        | 14                       | 7                        | 10                       |
| NI TOTAL<br>NI community TOTAL           | 81<br>69                 | 76<br>84                 | 87<br>64                 | 55<br>47                 |

\*Note: Rates displayed are per 100,000 occupied bed days. Previous reports presented rates per 1,000 occupied bed days.

#### **Appendix B**

Trends in C. difficile rates in inpatients aged 2 years and over, by HSCT and quarter, 2014 – 2025





#### Appendix C

| HSCT             | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24* | 2024/25* |
|------------------|---------|---------|---------|---------|---------|----------|----------|
| Belfast          | 132     | 106     | 101     | 128     | 107     | 136      | 121      |
| Northern         | 57      | 47      | 34      | 52      | 37      | 49       | 39       |
| South Eastern    | 82      | 72      | 76      | 69      | 75      | 72       | 90       |
| Southern         | 43      | 71      | 50      | 74      | 80      | 99       | 90       |
| Western          | 65      | 63      | 66      | 80      | 81      | 39       | 49       |
|                  |         |         |         |         |         |          |          |
| Northern Ireland | 379     | 359     | 327     | 403     | 380     | 395      | 389      |

Table 8: C. difficile reports among inpatients\* in Northern Ireland aged 2 years and over, by financial year and HSCT

Table 9: C. difficile reports among inpatients\* in Northern Ireland aged 65 years and over, by financial year and HSCT

| HSCT             | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24* | 2024/25* |
|------------------|---------|---------|---------|---------|---------|----------|----------|
| Belfast          | 98      | 80      | 80      | 84      | 78      | 96       | 78       |
| Northern         | 48      | 39      | 27      | 39      | 31      | 43       | 32       |
| South Eastern    | 67      | 68      | 68      | 60      | 66      | 63       | 83       |
| Southern         | 32      | 57      | 37      | 56      | 63      | 78       | 66       |
| Western          | 41      | 45      | 51      | 58      | 66      | 30       | 40       |
|                  |         |         |         |         |         |          |          |
| Northern Ireland | 286     | 289     | 263     | 297     | 304     | 310      | 299      |

\*"Inpatient episodes" for 2023/24 and 2024/25 include all patients categorised as hospital in-patient and ED patients with a positive specimen taken >= 2 days after the decision to admit date. Previous years include inpatients only.