

# *C. difficile* surveillance

## Quarterly report

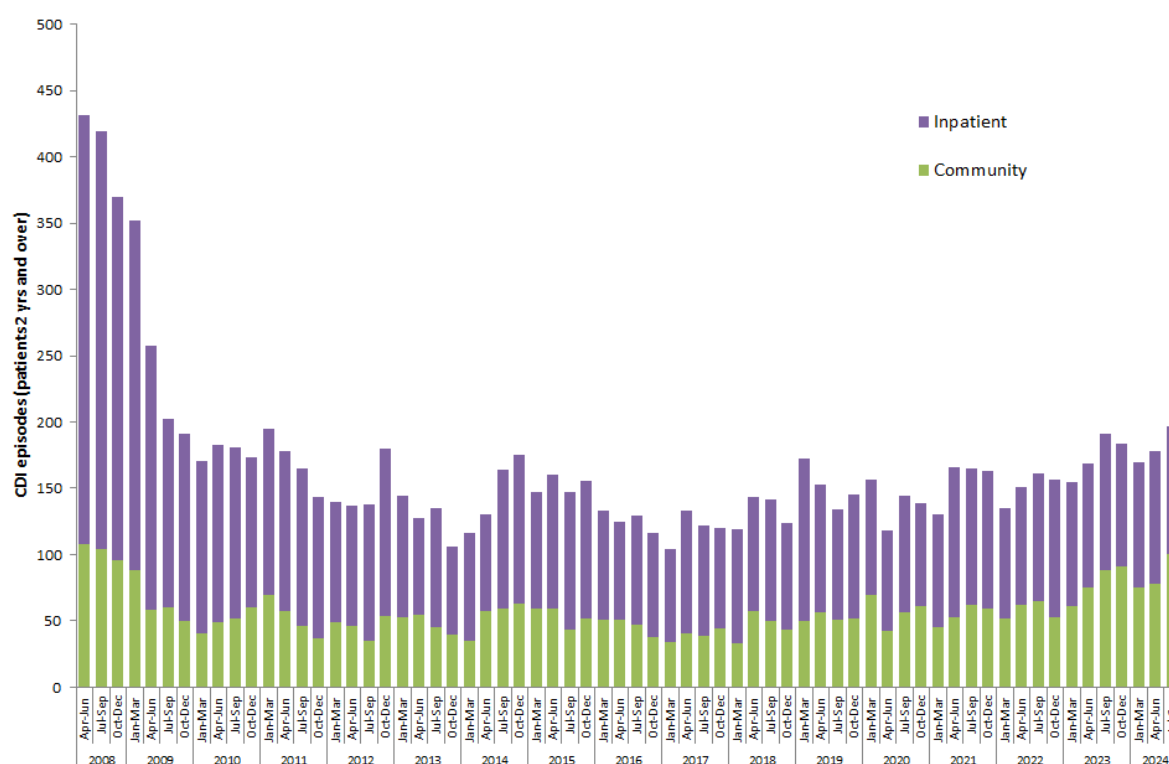
### July - September 2024

#### Key points

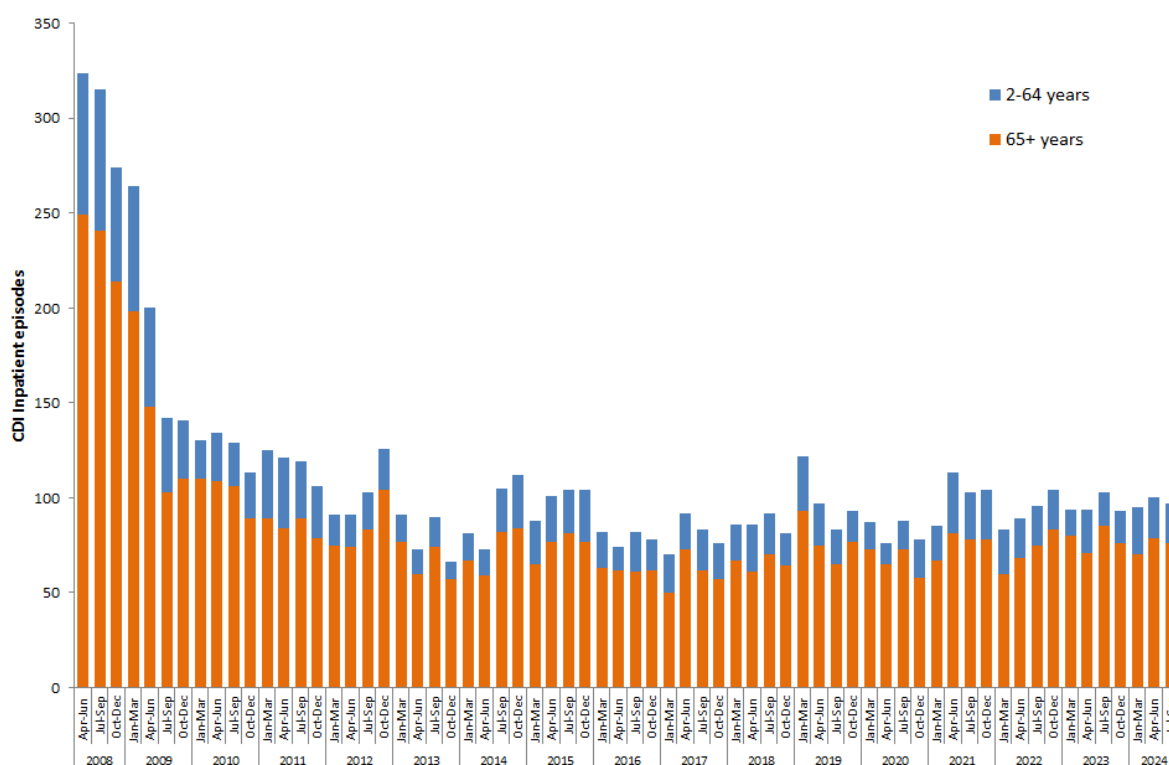
- Rates presented throughout this report have now changed to per 100,000 occupied bed days to align with the Targets.
- CDI reports for hospital inpatients aged 2 years and over decreased by 3% (from 100 to 97 episodes) during July-September 2024 compared to April-June 2024.
- CDI rate per 100,000 bed days increased by 3.1% during July-September 2024 compared to April-June 2024.
- CDI reports for community patients aged 2 years and over increased by 28% (from 78 to 100 episodes) during July-September 2024 compared to April-June 2024.
- CDI reports for hospital inpatients aged 2 years and over increased by 2% between the 2022/23 and 2023/24 financial years.
- Please note: Bed day data were not available for BHSCT and SEHSCT hospitals and provisional figures were used this quarter (figures taken from Jul-Sep 2023).

For further information or clarification on HCAI definitions, please refer to previous reports or contact [hcaini@hscni.net](mailto:hcaini@hscni.net)

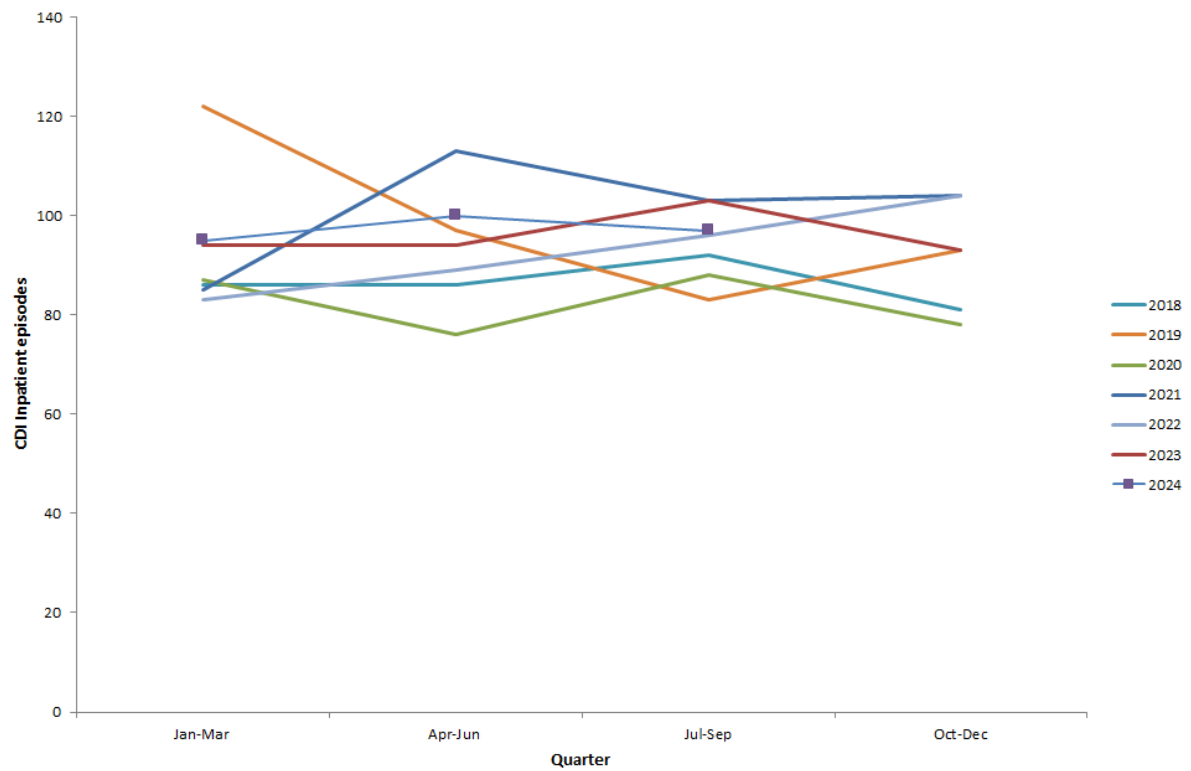
# Surveillance of *C. difficile* infection (CDI)



**Figure 1: Total CDI episodes, inpatient and community, in Northern Ireland, by quarter (patients ≥ 2 years), between 2008 and 2024**



**Figure 2a: Total CDI inpatient episodes, by age band, in Northern Ireland, by quarter, between 2008 and 2024**



**Figure 2b: Total CDI inpatient episodes in Northern Ireland, by quarter (patients  $\geq$  2 years), between 2018 and 2024**

## 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 April 2008 are shown for each HSCT in appendix B.

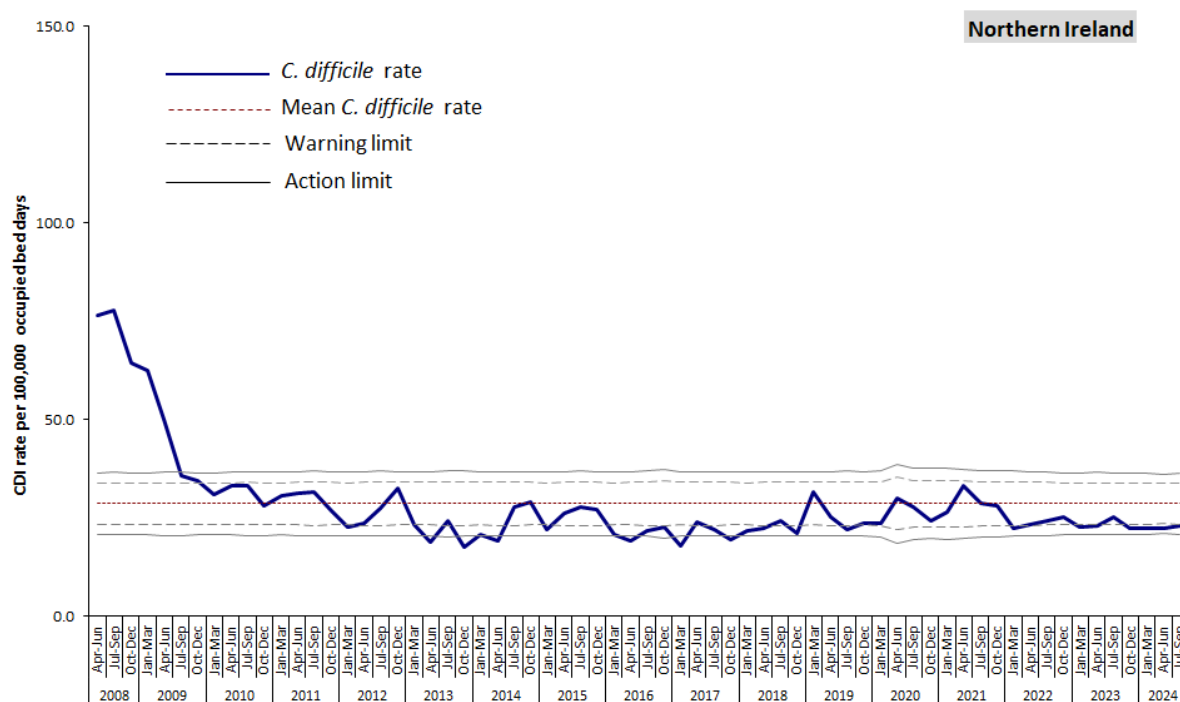


Figure 3: Statistical process control chart for quarterly *C. difficile* rates among inpatients in Northern Ireland aged 2 years and over (for HSCT level, see appendix B)

## Results from the NI Ribotype Surveillance Programme

**Table 1: A summary of *C. difficile* ribotypes in Hospital Inpatients aged 2 years and over, and the percentage of each against the overall total, in Northern Ireland during routine surveillance, October 2023 – September 2024.**

Ribotype	Oct - Dec 2023		Jan - Mar 2024		Apr - Jun 2024		Jul - Sep 2024	
	Number	%	Number	%	Number	%	Number	%
001	5	5.4	1	1.1	2	2.0	3	3.1
002	16	17.2	10	10.5	6	6.0	10	10.3
005	5	5.4	5	5.3	9	9.0	5	5.2
011	3	3.2	0	0.0	6	6.0	2	2.1
014	7	7.5	11	11.6	12	12.0	6	6.2
015	6	6.5	3	3.2	8	8.0	5	5.2
018	0	0.0	1	1.1	0	0.0	1	1.0
020	13	14.0	5	5.3	8	8.0	10	10.3
023	7	7.5	11	11.6	8	8.0	12	12.4
078-like*	8	8.6	13	13.7	10	10.0	10	10.3
Other	21	22.6	30	31.6	26	26.0	21	21.6
Not groupable**	2	2.2	3	3.2	2	2.0	3	3.1
Not on ribotype list	0	0.0	1	1.1	3	3.0	9	9.3
Not isolated***	0	0.0	1	1.1	0	0.0	0	0.0
<b>Total</b>	<b>93</b>		<b>95</b>		<b>100</b>		<b>97</b>	

**Table 2: A summary of *C. difficile* ribotypes in Community Patients aged 2 years and over, and the percentage of each against the overall total, in Northern Ireland during routine surveillance, October 2023 – September 2024.**

Ribotype	Oct - Dec 2023		Jan - Mar 2024		Apr - Jun 2024		Jul - Sep 2024	
	Number	%	Number	%	Number	%	Number	%
001	3	3.3	2	2.7	1	1.3	4	4.0
002	10	11.0	9	12.0	9	11.5	6	6.0
005	3	3.3	2	2.7	5	6.4	10	10.0
011	3	3.3	1	1.3	3	3.8	0	0.0
014	8	8.8	5	6.7	6	7.7	8	8.0
015	6	6.6	10	13.3	4	5.1	4	4.0
018	1	1.1	0	0.0	2	2.6	1	1.0
020	9	9.9	8	10.7	7	9.0	4	4.0
023	10	11.0	8	10.7	4	5.1	9	9.0
027	0	0.0	0	0.0	1	1.3	0	0.0
078-like*	12	13.2	6	8.0	8	10.3	15	15.0
Other	20	22.0	15	20.0	23	29.5	29	29.0
Not groupable**	3	3.3	3	4.0	3	3.8	3	3.0
Not on ribotype list	2	2.2	6	8.0	2	2.6	6	6.0
Not isolated***	1	1.1	0	0.0	0	0.0	1	1.0
<b>Total</b>	<b>91</b>		<b>75</b>		<b>78</b>		<b>100</b>	

\* 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 078-like\*, 023 and 002 in Northern Ireland  
Hospital Inpatients and Community Patients, July - September 2024.**

		078-like* (n= 25)		023 (n= 21)		002 (n = 16)	
<b>Age</b>							
	range	22-95		4-96		38-94	
	median	79		81		80	
<b>Sex</b>		n	%	n	%	n	%
	Female	17	68.0	12	57.1	7	43.8
	Male	8	32.0	9	42.9	9	56.3
<b>Trust</b>							
	Belfast	5	20.0	9	42.9	3	18.8
	Northern	2	8.0	4	19.0	2	12.5
	South Eastern	7	28.0	1	4.8	8	50.0
	Southern	6	24.0	6	28.6	3	18.8
	Western	5	20.0	1	4.8	0	0.0
<b>Source</b>							
	Inpatient	10	40.0	12	57.1	10	62.5
	Community~	15	60.0	9	42.9	6	37.5

~ Community specimens include those taken from Accident and Emergency, Outpatients, GPs, Hospice, Care Homes, Hospital Care at Home and Psychiatric facilities.

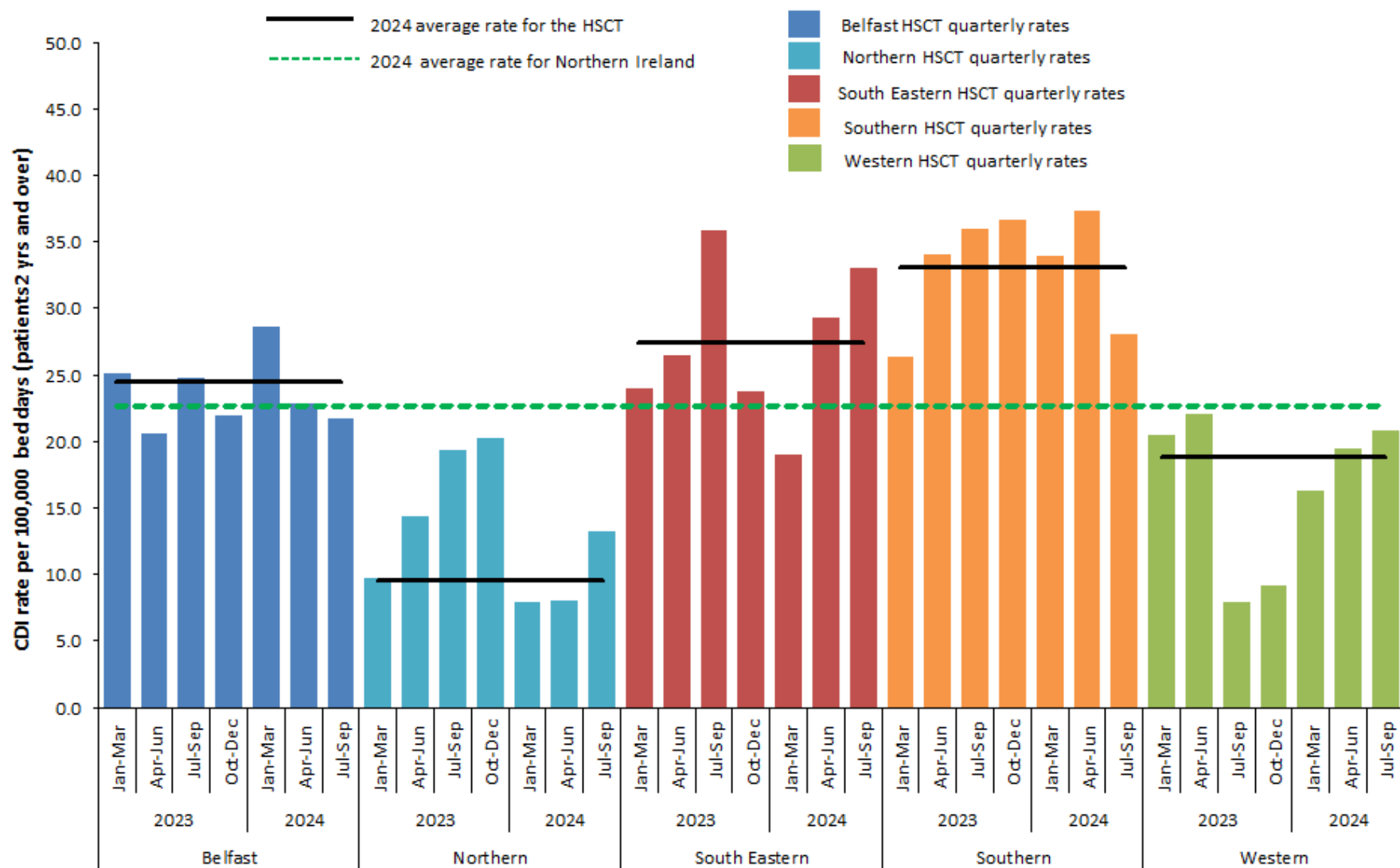


Figure 4: Quarterly rates of *C. difficile* among inpatients aged 2 years and over, by HSCT, January 2023 – September 2024, compared with annual Northern Ireland and HSCT rates for 2024



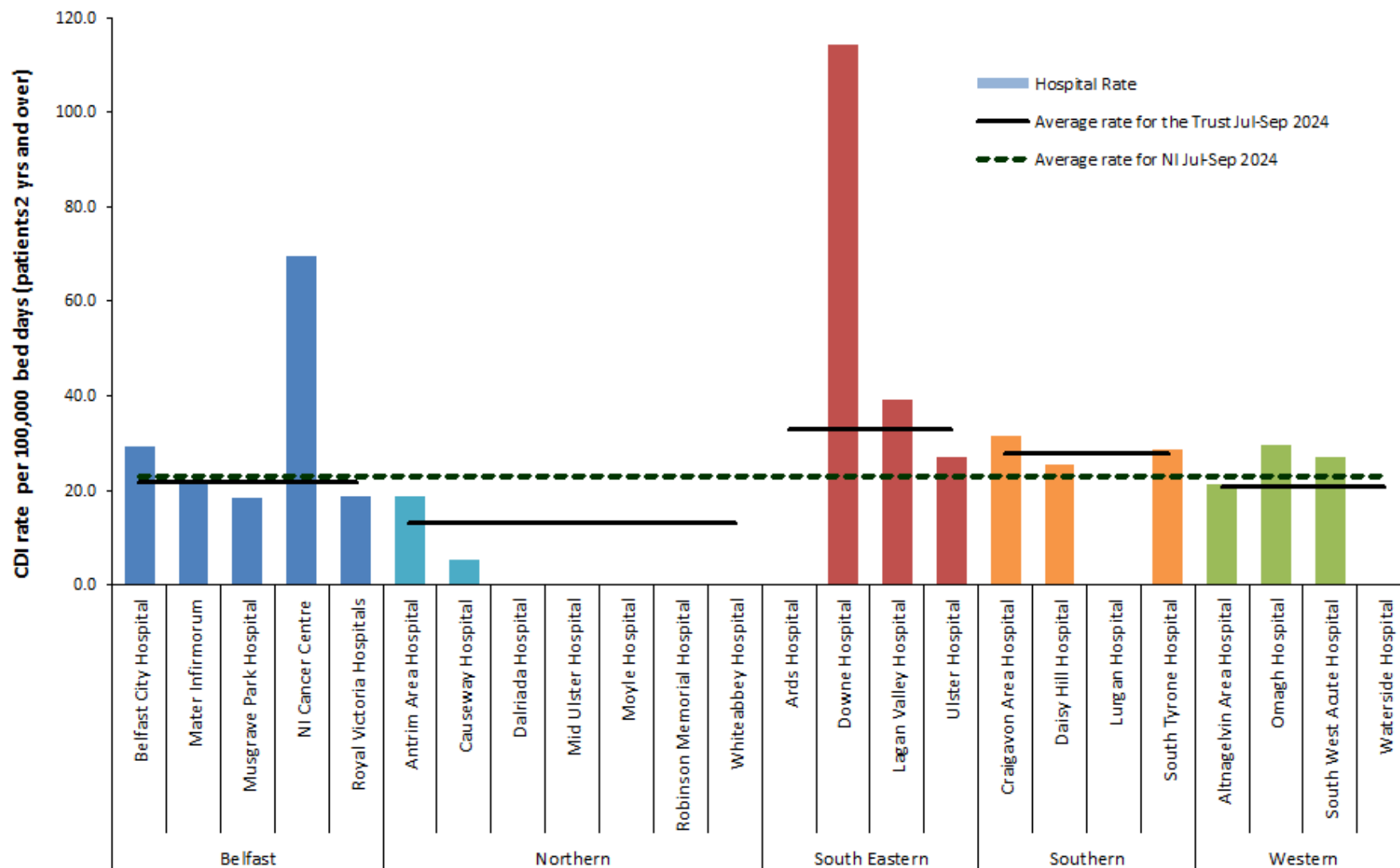


Figure 5: *C. difficile* rates during July - September 2024 Inpatients aged 2 years and over, by hospital, including HSCT rates and average rate for Northern Ireland (see appendix A, Table 4)

## Appendix A

Table 4: Quarterly rates\* of *C. difficile* reports in patients aged 2 years and over, by hospital, Oct 2023 – Sept 2024.

Hospital	Oct-Dec 2023	Jan-Mar 2024	Apr-Jun 2024	Jul-Sep 2024
Belfast City Hospital	37.54	43.70	22.08	29.35
Mater Infirmorum	35.59	45.26	30.77	22.02
Musgrave Park Hospital	17.23	16.73	22.58	18.46
NICCO	47.07	71.65	23.57	69.51
Royal Group of Hospitals	16.80	23.46	21.38	18.73
<b>Belfast Health &amp; Social Care Trust</b>	<b>21.97</b>	<b>28.66</b>	<b>22.80</b>	<b>21.77</b>
Antrim Area Hospital	23.61	8.45	7.81	18.71
Causeway Hospital	15.46	10.35	12.10	5.20
Dalriada Hospital	63.01	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	0.00	0.00
Whiteabbey Hospital	0.00	0.00	0.00	0.00
<b>Northern Health &amp; Social Care Trust</b>	<b>20.20</b>	<b>7.94</b>	<b>8.01</b>	<b>13.20</b>
Ards Hospital	0.00	0.00	0.00	0.00
Downe Hospital	27.45	27.26	23.04	114.21
Lagan Valley Hospital	28.65	14.60	26.72	39.28
Ulster Hospital	23.57	19.57	30.91	27.17
<b>South Eastern Health &amp; Social Care Trust</b>	<b>23.77</b>	<b>19.01</b>	<b>29.26</b>	<b>33.07</b>
Craigavon Area Hospital	36.96	39.37	42.00	31.60
Daisy Hill Hospital	29.95	11.80	36.67	25.60
Lurgan Hospital	20.42	41.31	20.52	0.00
South Tyrone Hospital	88.18	53.79	0.00	28.63
<b>Southern Health &amp; Social Care Trust</b>	<b>36.63</b>	<b>33.89</b>	<b>37.32</b>	<b>28.00</b>
Altnagelvin Area Hospital	12.97	15.06	23.32	21.31
Omagh Hospital	0.00	29.16	0.00	29.48
South West Acute Hospital	0.00	21.65	21.91	26.92
Waterside Hospital	16.82	0.00	0.00	0.00
<b>Western Health &amp; Social Care Trust</b>	<b>9.11</b>	<b>16.26</b>	<b>19.44</b>	<b>20.83</b>
<b>NI TOTAL</b>	<b>22.39</b>	<b>22.45</b>	<b>22.38</b>	<b>23.08</b>

Table 5: Quarterly *C. difficile* reports in patients aged 2 years and over, by HSCT, Oct 2023 – Sept 2024.

Trust	Oct-Dec 2023 Episodes	Jan-Mar 2024 Episodes	Apr-Jun 2024 Episodes	Jul-Sep 2024 Episodes
Belfast Health & Social Care Trust	31	41	31	29
Northern Health & Social Care Trust	15	6	8	10
South Eastern Health & Social Care Trust	15	12	21	24
Southern Health & Social Care Trust	26	25	27	20
Western Health & Social Care Trust	6	11	13	14
<b>NI TOTAL</b>	<b>93</b>	<b>95</b>	<b>100</b>	<b>97</b>
<b>NI community TOTAL</b>	<b>91</b>	<b>75</b>	<b>78</b>	<b>100</b>

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

## Appendix A

Table 6: Quarterly rates\* of *C. difficile* reports in patients aged 65 years and over, by hospital, Oct 2023 - Sept 2024.

Hospital	Oct-Dec 2023	Jan-Mar 2024	Apr-Jun 2024	Jul-Sep 2024
Belfast City Hospital	49.50	47.69	51.61	50.91
Mater Infirmorum	45.86	47.65	40.10	16.27
Musgrave Park Hospital	17.87	16.31	26.49	28.43
NICCO	90.17	89.33	53.71	46.36
Royal Group of Hospitals	27.74	23.87	26.53	20.93
<b>Belfast Health &amp; Social Care Trust</b>	<b>32.98</b>	<b>30.55</b>	<b>31.54</b>	<b>24.60</b>
Antrim Area Hospital	32.58	12.39	13.38	24.91
Causeway Hospital	24.59	8.30	24.15	7.86
Dalriada Hospital	65.57	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	0.00	0.00
Whiteabbey Hospital	0.00	0.00	0.00	0.00
<b>Northern Health &amp; Social Care Trust</b>	<b>28.14</b>	<b>9.65</b>	<b>14.01</b>	<b>17.38</b>
Ards Hospital	0.00	0.00	0.00	0.00
Downe Hospital	27.79	24.12	24.61	120.34
Lagan Valley Hospital	33.09	15.04	29.88	43.57
Ulster Hospital	26.40	26.29	46.38	39.02
<b>South Eastern Health &amp; Social Care Trust</b>	<b>26.66</b>	<b>23.70</b>	<b>40.66</b>	<b>45.18</b>
Craigavon Area Hospital	45.77	52.86	61.95	39.90
Daisy Hill Hospital	39.71	9.69	20.71	20.01
Lurgan Hospital	21.68	48.60	23.43	0.00
South Tyrone Hospital	94.94	54.75	0.00	28.63
<b>Southern Health &amp; Social Care Trust</b>	<b>45.41</b>	<b>43.05</b>	<b>44.59</b>	<b>30.88</b>
Altnagelvin Area Hospital	13.26	25.44	26.28	34.99
Omagh Hospital	0.00	0.00	0.00	29.90
South West Acute Hospital	0.00	28.13	21.39	35.60
Waterside Hospital	25.61	0.00	0.00	0.00
<b>Western Health &amp; Social Care Trust</b>	<b>9.30</b>	<b>22.21</b>	<b>20.44</b>	<b>31.50</b>
<b>NI TOTAL</b>	<b>29.25</b>	<b>26.01</b>	<b>30.27</b>	<b>29.30</b>

Table 7: Quarterly *C. difficile* reports in patients aged 65 years and over, by HSCT, Oct 2023 – Sept 2024.

Trust	Oct-Dec 2023 Episodes	Jan-Mar 2024 Episodes	Apr-Jun 2024 Episodes	Jul-Sep 2024 Episodes
Belfast Health & Social Care Trust	25	23	23	17
Northern Health & Social Care Trust	14	5	7	9
South Eastern Health & Social Care Trust	12	12	20	22
Southern Health & Social Care Trust	21	20	20	14
Western Health & Social Care Trust	4	10	9	14
<b>NI TOTAL</b>	<b>76</b>	<b>70</b>	<b>79</b>	<b>76</b>
<b>NI community TOTAL</b>	<b>80</b>	<b>53</b>	<b>72</b>	<b>83</b>

\*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, 2008 – 2024



## Appendix C

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

HSCT	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Belfast	169	163	110	139	129	114	113	132	107	101	128	107	133
Northern	94	80	64	62	59	48	49	57	47	34	52	37	45
South Eastern	91	61	56	67	86	52	61	83	72	76	69	75	72
Southern	33	42	32	39	53	34	50	44	71	50	74	79	99
Western	50	65	48	71	64	56	64	65	63	66	80	81	36
Northern Ireland	437	411	310	378	391	304	337	381	360	327	403	379	385

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

HSCT	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Belfast	117	124	90	103	102	90	83	98	80	80	84	78	94
Northern	75	73	56	54	43	39	37	48	39	27	39	31	40
South Eastern	72	50	50	53	70	39	50	67	68	68	60	66	63
Southern	28	33	25	27	40	27	39	32	57	37	56	62	78
Western	35	58	37	53	43	40	50	41	45	51	58	66	27
Northern Ireland	327	338	258	290	298	235	259	286	289	263	297	303	302