

# *C. difficile* surveillance

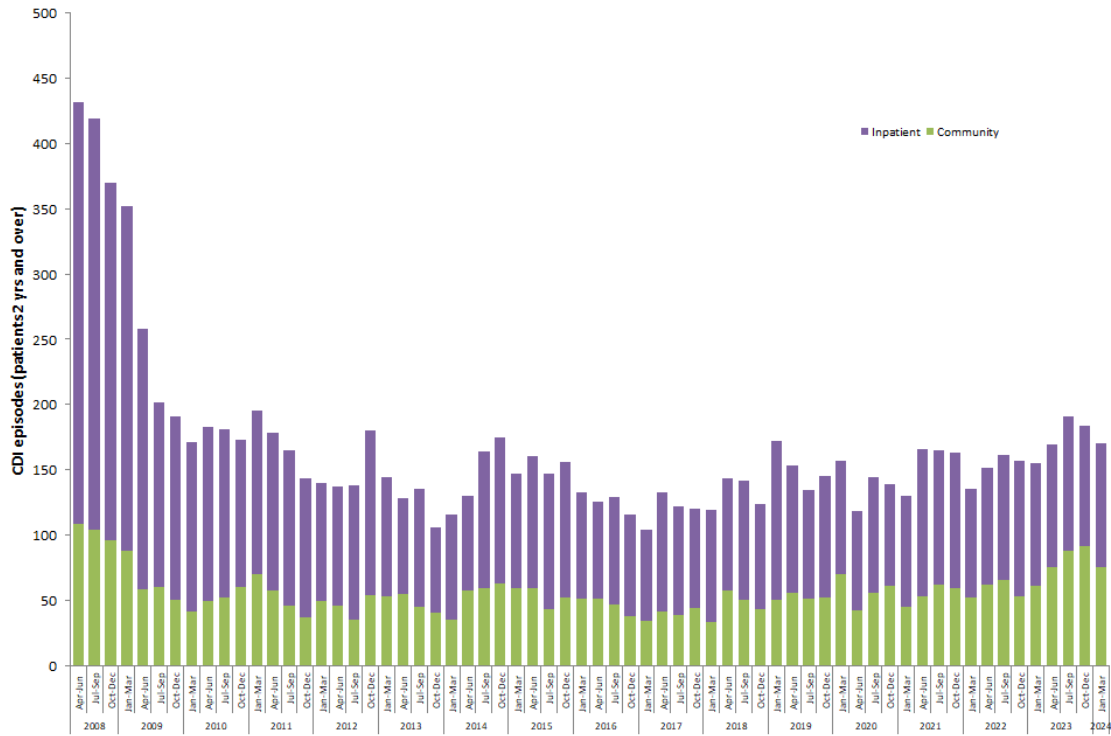
## Quarterly report

### January-March 2024

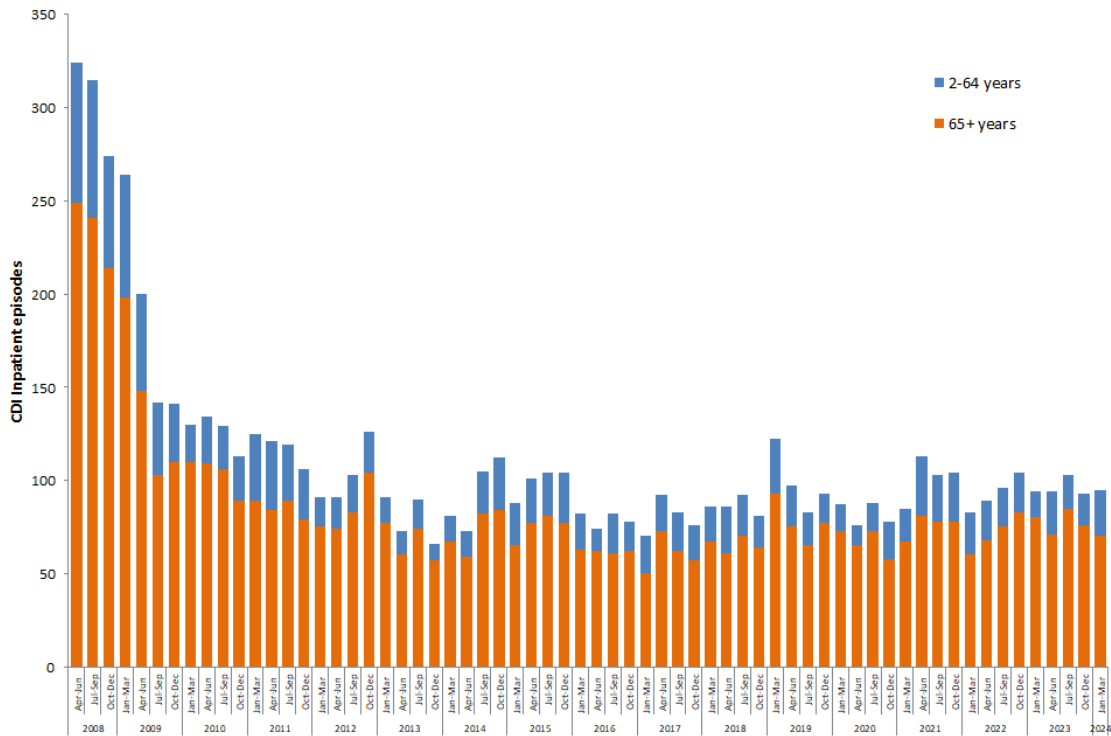
#### Key points

- CDI reports for hospital inpatients aged 2 years and over increased by 2% (from 93 to 95 episodes) during January-March 2024 compared to October-December 2023.
- CDI rate per 1,000 bed days increased by 0.4% during January-March 2024 compared to October-December 2023.
- CDI reports for community patients aged 2 years and over decreased by 18% (from 91 to 75 episodes) during January-March 2024 compared to October-December 2023.
- 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 SEHSCT hospitals and estimates were used this quarter (averages taken for Q1, 2020-2023).

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

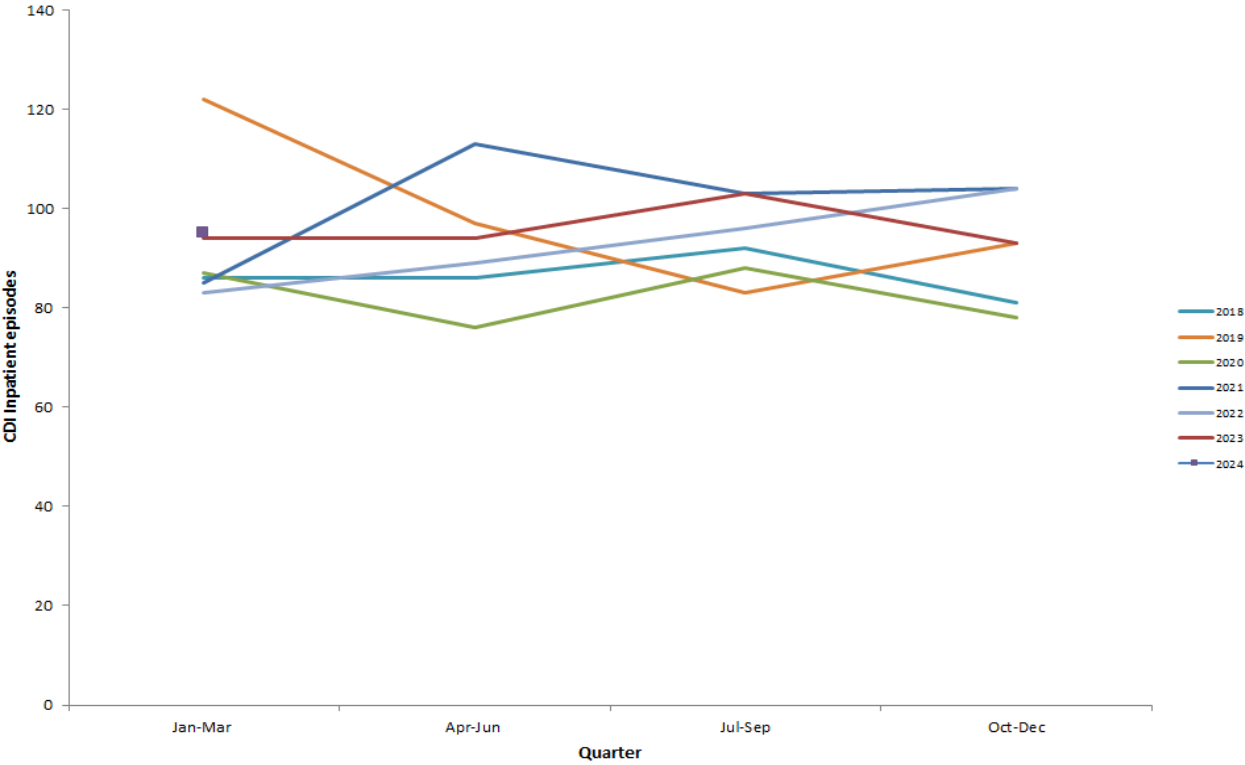


**Figure 1: Total CDI episodes, inpatient and community, in Northern Ireland, by quarter (patients ≥ 2 years), between 2008 and 2024**



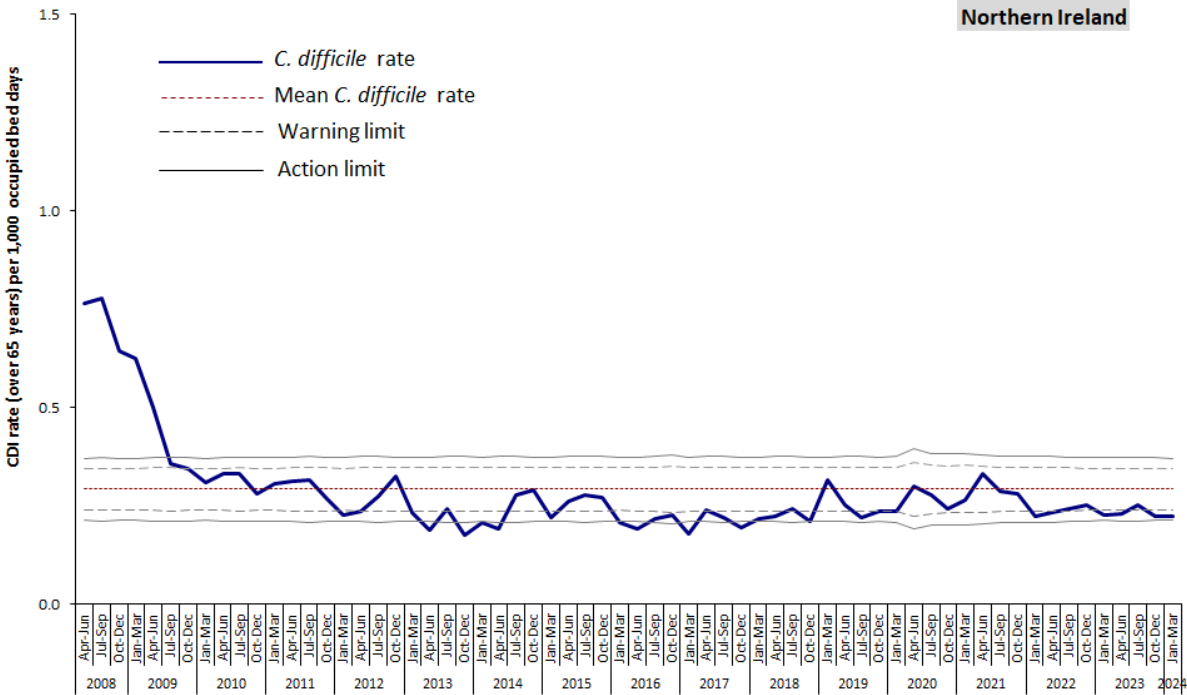
**Figure 2a: Total CDI inpatient episodes, by age band, in Northern Ireland, by quarter, between 2008 and 2024**

Figure 2b: Total CDI inpatient episodes in Northern Ireland, by quarter (patients ≥ 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, April 2023 – March 2024.**

Ribotype	Apr - Jun 2023		Jul - Sep 2023		Oct - Dec 2023		Jan - Mar 2024	
	Number	%	Number	%	Number	%	Number	%
001	3	3.2	2	1.9	5	5.4	1	1.1
002	5	5.3	8	7.8	16	17.2	10	10.5
005	6	6.4	9	8.7	5	5.4	5	5.3
011	5	5.3	3	2.9	3	3.2	0	0.0
014	6	6.4	11	10.7	7	7.5	11	11.6
015	11	11.7	6	5.8	6	6.5	3	3.2
018	1	1.1	1	1.0	0	0.0	1	1.1
020	3	3.2	5	4.9	13	14.0	5	5.3
023	11	11.7	6	5.8	7	7.5	11	11.6
078-like*	17	18.1	24	23.3	8	8.6	13	13.7
Other	15	16.0	15	14.6	21	22.6	29	30.5
Not groupable**	9	9.6	9	8.7	2	2.2	4	4.2
Not on ribotype list	1	1.1	4	3.9	0	0.0	1	1.1
Not isolated***	1	1.1	0	0.0	0	0.0	1	1.1
<b>Total</b>	<b>94</b>		<b>103</b>		<b>93</b>		<b>95</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, April 2023 – March 2024.**

Ribotype	Apr - Jun 2023		Jul - Sep 2023		Oct - Dec 2023		Jan - Mar 2024	
	Number	%	Number	%	Number	%	Number	%
001	3	4.0	2	2.3	3	3.3	2	2.7
002	15	20.0	7	8.0	10	11.0	9	12.0
005	2	2.7	6	6.8	3	3.3	2	2.7
011	0	0.0	2	2.3	3	3.3	1	1.3
014	3	4.0	6	6.8	8	8.8	5	6.7
015	4	5.3	3	3.4	6	6.6	10	13.3
018	0	0.0	0	0.0	1	1.1	0	0.0
020	9	12.0	5	5.7	9	9.9	8	10.7
023	7	9.3	7	8.0	10	11.0	8	10.7
078-like*	15	20.0	22	25.0	12	13.2	6	8.0
Other	7	9.3	18	20.5	20	22.0	14	18.7
Not groupable**	3	4.0	4	4.5	3	3.3	4	5.3
Not on ribotype list	7	9.3	6	6.8	2	2.2	6	8.0
Not isolated***	0	0.0	0	0.0	1	1.1	0	0.0
<b>Total</b>	<b>75</b>		<b>88</b>		<b>91</b>		<b>75</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 002, 023 and 078-like\* in Northern Ireland Hospital Inpatients and Community Patients, January – March 2024.**

	002 (n = 19)		023 (n = 19)		078-like* (n = 19)	
<b>Age</b>						
range	5-93		16-100		22-95	
median	76		78		81	
<b>Sex</b>						
	n	%	n	%	n	%
Female	10	52.6	12	63.2	12	63.2
Male	9	47.4	7	36.8	7	36.8
<b>Trust</b>						
Belfast	7	36.8	5	26.3	5	26.3
Northern	2	10.5	2	10.5	1	5.3
South Eastern	4	21.1	2	10.5	2	10.5
Southern	4	21.1	6	31.6	9	47.4
Western	2	10.5	4	21.1	2	10.5
<b>Source</b>						
Inpatient	10	52.6	11	57.9	13	68.4
Community~	9	47.4	8	42.1	6	31.6

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

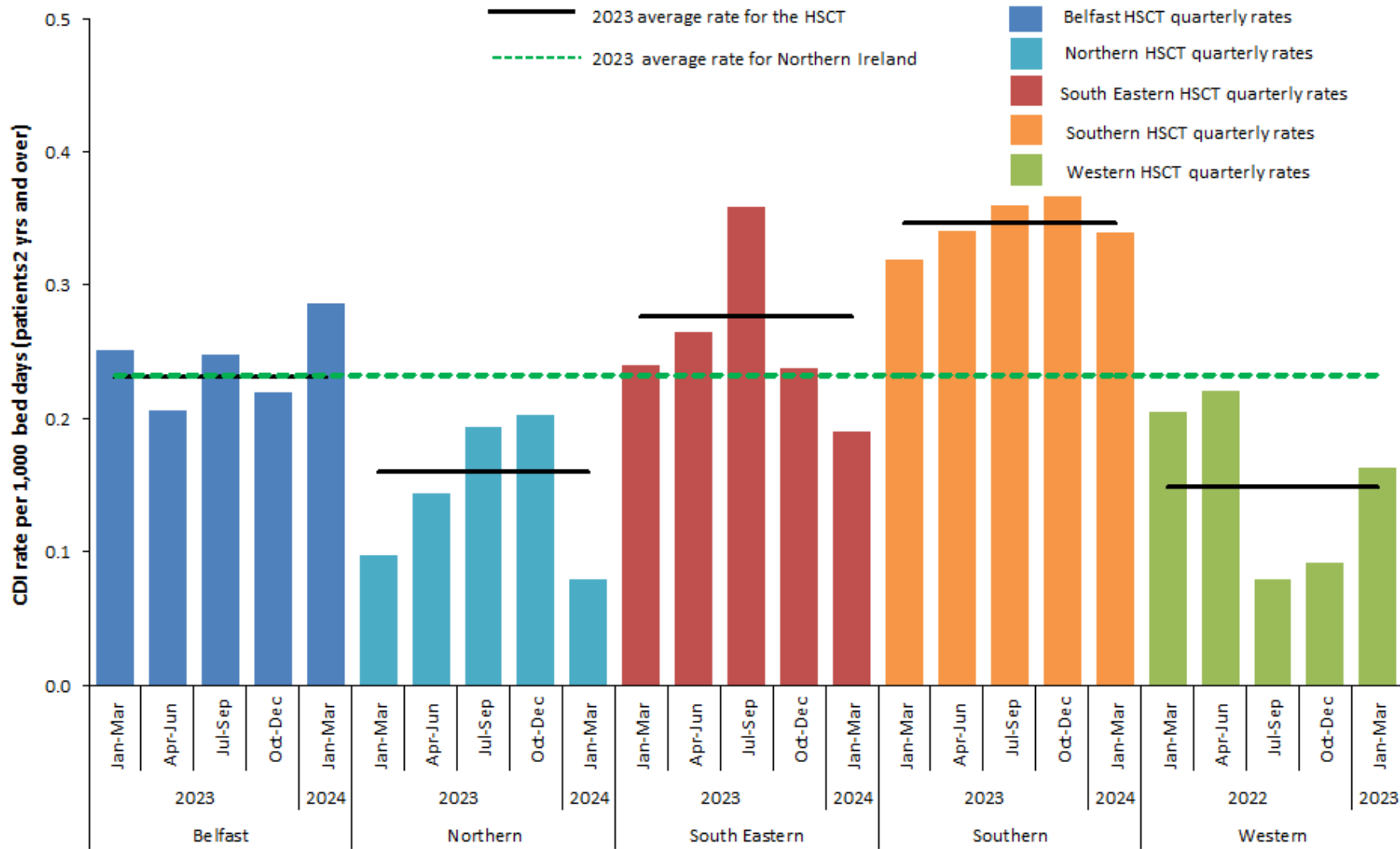


Figure 4: Quarterly rates of *C. difficile* among inpatients aged 2 years and over, by HSCT, January 2023 – March 2024, compared with annual Northern Ireland and HSCT rates for 2023



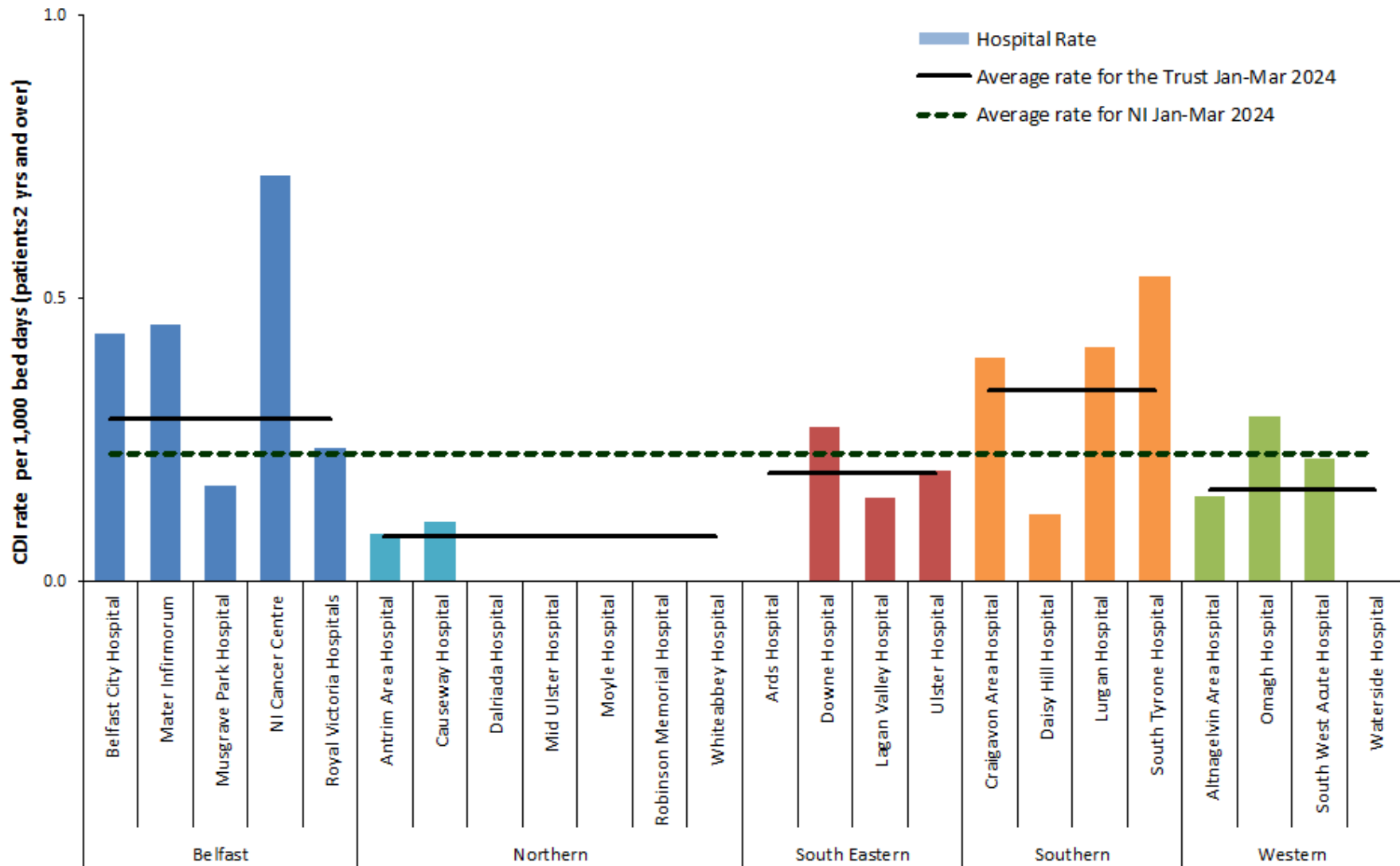


Figure 5: *C. difficile* rates during January - March 2024 Inpatients aged 2 years and over, by hospital, including HSCT rates and average rate for Northern Ireland (see appendix A, Table 4)

## Appendix A

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

Hospital	Apr-Jun 2023	Jul-Sep 2023	Oct-Dec 2023	Jan-Mar 2024
Belfast City Hospital	0.221	0.147	0.375	0.437
Mater Infirmorum	0.062	0.514	0.356	0.453
Musgrave Park Hospital	0.282	0.308	0.172	0.167
NICCO	0.471	0.463	0.471	0.717
Royal Group of Hospitals	0.202	0.199	0.168	0.235
<b>Belfast Health &amp; Social Care Trust</b>	<b>0.206</b>	<b>0.248</b>	<b>0.220</b>	<b>0.287</b>
Antrim Area Hospital	0.163	0.175	0.236	0.084
Causeway Hospital	0.161	0.275	0.155	0.103
Dalriada Hospital	0.000	0.560	0.630	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.000	0.000	0.000	0.000
<b>Northern Health &amp; Social Care Trust</b>	<b>0.144</b>	<b>0.194</b>	<b>0.202</b>	<b>0.079</b>
Ards Hospital	0.583	2.402	0.000	0.000
Downe Hospital	0.230	0.228	0.274	0.273
Lagan Valley Hospital	0.000	0.131	0.286	0.146
Ulster Hospital	0.292	0.340	0.236	0.196
<b>South Eastern Health &amp; Social Care Trust</b>	<b>0.265</b>	<b>0.358</b>	<b>0.238</b>	<b>0.190</b>
Craigavon Area Hospital	0.348	0.335	0.370	0.394
Daisy Hill Hospital	0.421	0.479	0.300	0.118
Lurgan Hospital	0.217	0.423	0.204	0.413
South Tyrone Hospital	0.000	0.000	0.882	0.538
<b>Southern Health &amp; Social Care Trust</b>	<b>0.341</b>	<b>0.360</b>	<b>0.366</b>	<b>0.339</b>
Altnagelvin Area Hospital	0.218	0.081	0.130	0.151
Omagh Hospital	0.000	0.000	0.000	0.292
South West Acute Hospital	0.343	0.115	0.000	0.217
Waterside Hospital	0.000	0.000	0.168	0.000
<b>Western Health &amp; Social Care Trust</b>	<b>0.221</b>	<b>0.079</b>	<b>0.091</b>	<b>0.163</b>
<b>NI TOTAL</b>	<b>0.230</b>	<b>0.251</b>	<b>0.224</b>	<b>0.225</b>

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

Trust	Apr-Jun 2023 Episodes	Jul-Sep 2023 Episodes	Oct-Dec 2023 Episodes	Jan-Mar 2024 Episodes
Belfast Health & Social Care Trust	28	33	31	41
Northern Health & Social Care Trust	10	14	15	6
South Eastern Health & Social Care Trust	19	26	15	12
Southern Health & Social Care Trust	23	25	26	25
Western Health & Social Care Trust	14	5	6	11
<b>NI TOTAL</b>	<b>94</b>	<b>103</b>	<b>93</b>	<b>95</b>
<b>NI community TOTAL</b>	<b>75</b>	<b>88</b>	<b>91</b>	<b>75</b>

## Appendix A

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

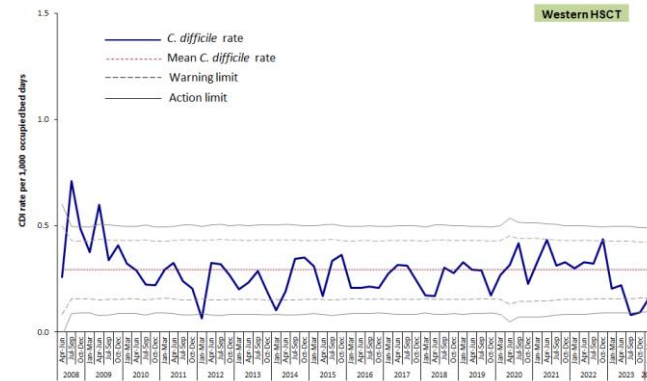
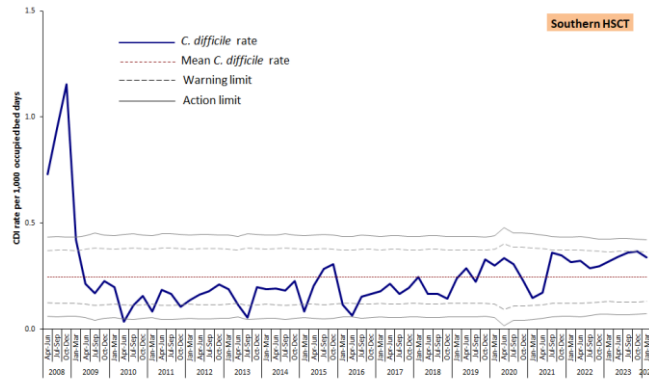
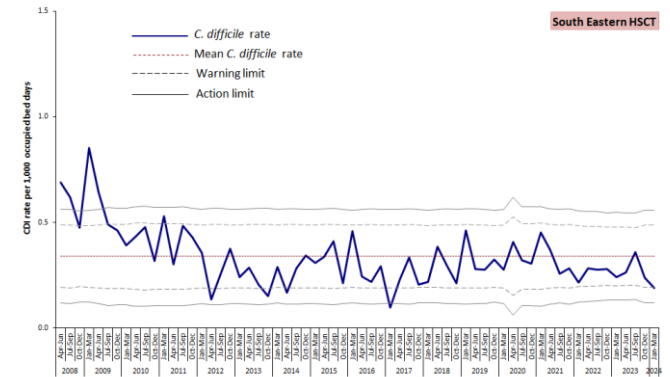
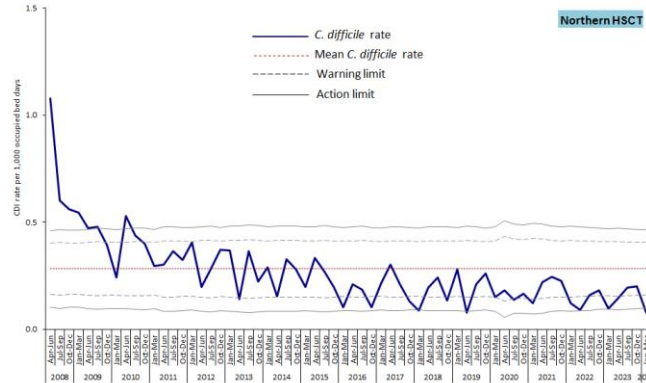
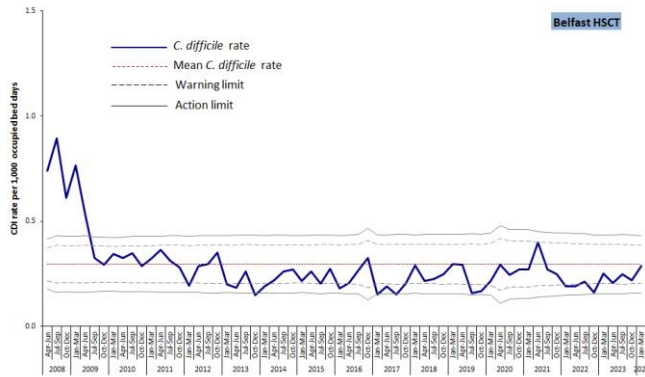
Hospital	Apr-Jun 2023	Jul-Sep 2023	Oct-Dec 2023	Jan-Mar 2024
Belfast City Hospital	0.344	0.170	0.495	0.477
Mater Infirmorum	0.080	0.570	0.459	0.477
Musgrave Park Hospital	0.265	0.474	0.179	0.163
NICCO	1.074	0.464	0.902	0.893
Royal Group of Hospitals	0.265	0.340	0.277	0.239
<b>Belfast Health &amp; Social Care Trust</b>	<b>0.261</b>	<b>0.391</b>	<b>0.330</b>	<b>0.306</b>
Antrim Area Hospital	0.174	0.276	0.326	0.124
Causeway Hospital	0.264	0.338	0.246	0.083
Dalriada Hospital	0.000	0.799	0.656	0.000
Mid Ulster Hospital	0.000	0.000	0.000	0.000
Moyle Hospital	0.000	0.000	0.000	0.000
Robinson Memorial Hospital	0.000	0.000	0.000	0.000
Whiteabbey Hospital	0.000	0.000	0.000	0.000
<b>Northern Health &amp; Social Care Trust</b>	<b>0.166</b>	<b>0.270</b>	<b>0.281</b>	<b>0.097</b>
Ards Hospital	0.641	2.481	0.000	0.000
Downe Hospital	0.259	0.248	0.278	0.228
Lagan Valley Hospital	0.000	0.155	0.331	0.129
Ulster Hospital	0.423	0.443	0.264	0.174
<b>South Eastern Health &amp; Social Care Trust</b>	<b>0.362</b>	<b>0.456</b>	<b>0.267</b>	<b>0.168</b>
Craigavon Area Hospital	0.348	0.530	0.458	0.529
Daisy Hill Hospital	0.592	0.515	0.397	0.097
Lurgan Hospital	0.229	0.439	0.217	0.486
South Tyrone Hospital	0.000	0.000	0.949	0.547
<b>Southern Health &amp; Social Care Trust</b>	<b>0.369</b>	<b>0.482</b>	<b>0.454</b>	<b>0.430</b>
Altnagelvin Area Hospital	0.271	0.046	0.133	0.254
Omagh Hospital	0.000	0.000	0.000	0.000
South West Acute Hospital	0.381	0.078	0.000	0.281
Waterside Hospital	0.000	0.000	0.256	0.000
<b>Western Health &amp; Social Care Trust</b>	<b>0.261</b>	<b>0.048</b>	<b>0.093</b>	<b>0.222</b>
<b>NI TOTAL</b>	<b>0.280</b>	<b>0.340</b>	<b>0.293</b>	<b>0.241</b>

**Table 7: Quarterly *C. difficile* reports in patients aged 65 years and over, by HSCT, Apr 2023 - March 2024.**

Trust	Apr-Jun 2023 Episodes	Jul-Sep 2023 Episodes	Oct-Dec 2023 Episodes	Jan-Mar 2024 Episodes
Belfast Health & Social Care Trust	19	27	25	23
Northern Health & Social Care Trust	8	13	14	5
South Eastern Health & Social Care Trust	17	22	12	12
Southern Health & Social Care Trust	16	21	21	20
Western Health & Social Care Trust	11	2	4	10
<b>NI TOTAL</b>	<b>71</b>	<b>85</b>	<b>76</b>	<b>70</b>
<b>NI community TOTAL</b>	<b>61</b>	<b>66</b>	<b>80</b>	<b>53</b>

## 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