HSC Public Health Agency

Surveillance Definitions

Please note the following definitions are for the purposes of inclusion in surveillance programmes only and are not based on clinical judgement.

HCAI

Enhanced surveillance arrangements are in place for:

- Blood cultures positive (laboratory confirmed) for *S. aureus*
- All laboratory confirmed cases of *C. difficile* in those age 2 and above, as per definition below.
    - Diarrhoeal stools (Bristol Stool types 5-7) where the specimen is *C. difficile* toxin positive
    - Toxic megacolon or ileostomy where the specimen is *C. difficile* toxin positive
    - Pseudomembranous colitis revealed by lower gastro-intestinal endoscopy or Computed Tomography
    - Colonic histopathology characteristic of *C. difficile* infection (with or without diarrhoea or toxin detection) on a specimen obtained during endoscopy or colectomy
    - Faecal specimens collected post-mortem where the specimen is *C. difficile* toxin positive or tissue specimens collected post-mortem where pseudomembranous colitis is revealed or colonic histopathology is characteristic of *C. difficile* infection
    - **Please note:** In contrast to other collections, *C. difficile* infections identified post-mortem are included
    - Current guidelines[1] recommend a combination of two tests (first; toxin gene detection by NAAT or GDH EIA, second; a sensitive toxin EIA test) for the diagnosis of CDI.

Exclusions

- Positive blood cultures taken within 14 days of the first sample are not reported as they are considered to be the same episode.
- Positive blood cultures taken more than 14 days after the first sample of each episode are not reported, as these are considered to be part of a new episode.
- For **positive blood cultures only,** cases identified post mortem are excluded. This does not include C. difficile infection.
- For ***C. difficile* infection**, positive specimens taken within 28 days of the first sample are not reported as they are considered to be the same episode.

[1] Available online at https://www.gov.uk/government/publications/updated-guidance-on-the-diagnosis-and-reporting-of-clostridium-difficile accessed 07/01/2019

HSC Public Health Agency

Apportioning Cases

S. aureus (MRSA or MSSA)

The current method of apportioning cases to be more likely associated with hospital stay is as follows:

Any patient specimen taken on the second day of admission onwards (e.g. day 2, when day 0 equals the date of admission) is more likely to be associated with hospital stay.

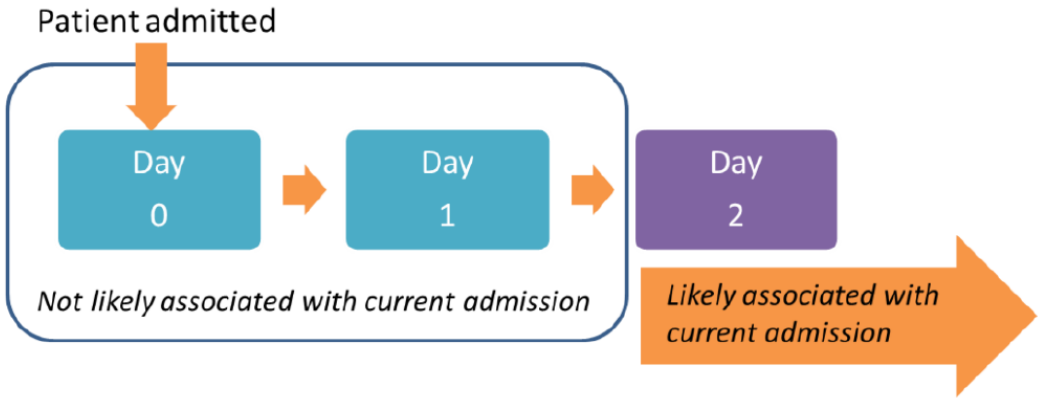

Figure 1. Current method of attribution of S. aureus bloodstream infections to "healthcare associated" category.

C. difficile infection

The current method of apportioning cases to be more likely associated with hospital stay is as follows:

Any patient specimen taken on the third day of admission onwards (e.g. day 3 when day 0 equals day of admission) in an acute Trust (including cases with unspecified specimen location) for In-patients, Day-patients, Emergency Assessment, or unspecified patient category.

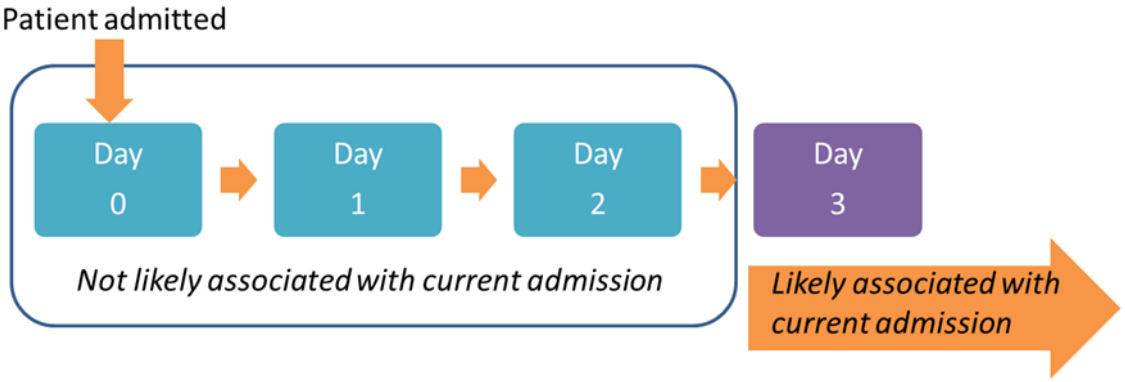

Figure 2. Current method of attribution of C. difficile infections to "healthcare associated" category.

Denominators

Population

Northern Ireland mid-year population estimates were obtained from the Northern Ireland Statistics and Research Agency. Mid-year population estimates are usually published in June of the following year. The most recent quarters populated has been estimated using previous year's data until it becomes available. Inhabitants per quarter are adjusted for numbers of days (including adjustments leap years) calculated as:

Number of days in the quarter / 365 (or 366 for a leap year) x population

Bed Days

HSC Trust bed days were obtained from the Northern Ireland Statistics and Research Agency. This includes the average number of available and occupied beds during the year in wards that are open overnight, measured at midnight. Hospitals may also have a number of beds in wards that are only open during the day. Beds reserved for day care admission or regular day admission are not included. For the purposes of this dashboard, only bed days from acute Trust hospitals are included. Psychiatric facilities are excluded.

Admissions

HSC Trust admissions were obtained from the Northern Ireland Statistics and Research Agency. Total admissions has been taken to be the sum of inpatients (elective and non-elective). Deaths and discharges have been used as an approximation for admissions. For the purposes of this dashboard, only admissions from acute Trust hospitals are included. Psychiatric facilities are excluded.