**NHS Digital**

**Indicator Supporting Documentation**

**IAP00141 Incidence of Healthcare Associated Infection (HCAI) – C. difficile infection (CCGOIS)**

**Application Form**

**Indicator and Methodology Assurance Service**

**Title: Incidence of Healthcare Associated Infection**

**(HCAI) - C. difficile**

**Set or domain: CCG OIS 5.4**

**IAS Reference Code: IAP00141**

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| **Version History** Version | Date | Changed By | Change |
| V0.1 | 15/08/2017 | Andy Besch | Commenced uplift to new application form |
| V0.2 | 19/10/2017 | Sharif Salah | Review of comments & completion of remainder of form |
| V0.3 | 25/10/2017 | Sharif Salah | Further minor changes following a review by Chris Dew |
| V0.4 | 26/10/2017 | Sharif Salah | Further minor changes ready for MRG |
| V0.5 | 03/01/2018 | Sharif Salah | Action of changes recommended by MRG |

**Application Form**

**Section 1. Introduction / Overview**

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| 1.1 Title | Incidence of Healthcare Associated Infection (HCAI) - C. difficile |
| **1.2. Set or domain** | Clinical Commissioning Group Outcome Indicator Set (CCG OIS)  Domain 5 - Treating and caring for people in a safe environment and protecting them from avoidable harm |
| **1.3. Topic area** | Patient Safety |
| **1.4. Definition** | CCG OIS indicator 5.4 presents the number of C. difficile infections reported, in people aged two and over, per CCG, in each of the last 13 months.  This mirrors the reporting practice of Public Health England (PHE), who are the data source, and who also publish monthly C. difficile data on a rolling 13-month basis so that the figure for the same month in the previous year is also shown. |
| **1.5. Indicator owner & contact details** | Clinical Indicators team, NHS Digital  Clinical.indicators@nhs.net |
| **1.6. Publication status** | Currently in publication |

**Section 2. Rationale**

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| **2.1. Purpose** | This indicator forms part of Domain 5 of the CCG Outcomes Indicator Set: Treating and caring for people in a safe environment and protecting them from avoidable harm. The indicator supports the objectives of continually increasing standards of infection control to limit the incidence of HCAI, with the overall aim of eradicating them completely. Reductions in volumes of reported C. difficile infection are linked to better patient outcomes (or a lack of harmful outcome). |
| **2.2 Sponsor** | Originally commissioned by NHS England |
| **2.3 Endorsement** | Mandated by the Department of Health in 1 2007 letter from the Chief Medical Officer and the Chief Nursing Officer:  http://webarchive.nationalarchives.gov.uk/20081105222157/http://www.dh.go  v.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chie  fmedicalofficerletters/DH\_073767?IdcService=GET\_FILE&dID=137883&Ren  dition=Web |
| **2.4 Evidence and Policy base** | Healthcare Associated Infections can result in longer hospital stays and, in severe cases, prolonged illness or death. High standards of infection control  can limit the incidence of such infections.  PHE performs the vital task of monitoring, responding to, and limiting outbreaks of life-threatening infectious diseases for which antibiotics are of limited use. Public health teams use the data to monitor the rates of infection in their area; to monitor outbreaks of infections and check that trends are decreasing in both community and hospital settings; to identify seasonal variations in disease outbreaks.  PHE has been managing the mandatory surveillance of Staphylococcus aureus bacteraemia in England since April 2001. Mandatory surveillance was originally instigated in response to increasing levels of MRSA bacteraemia across the English NHS and has subsequently been rolled out for other HCAIs where there was a perceived issue/problem.  Surveillance of C. difficile infection was originally introduced in 2004 for patients aged 65 years and over. This was then extended to include all cases in patients aged 2 years and over in April 2007. Reports are submitted using the same real-time web-enabled system that is used to collect enhanced MRSA and MSSA bacteraemia data. An enhanced dataset similar to that collected for MRSA and MSSA is also collected.  NHS Improvement also publish C-diificile related guidance where they set out the objectives for acute trusts and CCGs to make continuous improvement in Clostridium difficile infection care.  https://improvement.nhs.uk/resources/clostridium-difficile-infection-objectives/  This includes Clostridium difficile infection assessment tool and action plan guidance, available at  https://improvement.nhs.uk/uploads/documents/Clostridium\_difficile\_infection  \_assessment\_tool\_and\_action\_plan\_guidance.xlsx  Organisations are able to use this assessment tool to identify risk factors and good practice in CDI prevention and control.  A further document titled Clostridium difficile infection objectives 2017/18 and guidance on sanction implementation is available from  https://improvement.nhs.uk/uploads/documents/CDI\_objectives\_201718\_final\_2.pdf |

Section 3. Data

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| **3.1. Data Source** | Public Health England (formerly Health Protection Agency until April 2013) mandatory surveillance data  Monthly C. difficile infection figures at CCG level are published by PHE at:  https://www.gov.uk/government/statistics/clostridium-difficile-infection-  monthly-data-by-attributed-clinical-commissioning-group |
| **3.2.**  **Justification of source and others considered** | PHE has carried out mandatory enhanced surveillance of C. difficile infection since April 2007 for NHS acute trusts. Patient-level data of any C. difficile infections identified in the acute trust’s hospital laboratory, regardless of the location of the patient at the time the specimen was taken, are reported monthly to PHE.  Independent sector (IS) healthcare organisations providing regulated activities also undertake surveillance of C. difficile infection, although it is not mandatory for them. |
| **3.3. Data availability** | The monthly C. difficile counts on the Indicator Portal are updated at quarterly intervals throughout the year – in March, June, September, December. Publication dates are publicly pre-announced on the NHS Digital publication calendar  https://digital.nhs.uk/article/6677/Publications-by-year    The monthly C. difficile counts on the PHE website are updated more frequently. Monthly data is processed and analysed before being published on the first Wednesday of the following month. This occurs between two and six weeks following the end of a given month (depending on how the month falls). For example, January 2017 data was signed off on 15 February 2017 and then published on 1 March 2017. This is two weeks from sign-off to publication.  PHE data is published on a monthly, quarterly and annual basis according to a pre-announced publication schedule published on gov.uk. Dates are included for an entire 12-month period. The PHE official statistics publication calendar is available here:  www.gov.uk/government/uploads/system/uploads/attachment\_data/file/61  0032/PHE\_official\_statistics\_12\_months\_publication\_calendar.xlsx |
| **3.4. Data Quality** | **i) What data quality checks are relevant to this indicator?**  **Coverage** ☐  **Completeness** ☒ Validity ☒  **Default** ☐  **Integrity** ☒ Timeliness ☒ Other ☐ |
|  | **If you included ‘Other’ as a data quality check, please describe the check, how it will be measured, and its reason for use below:**  Not applicable |
|  | **ii) What are the current values for the data quality checks selected?** The period of data the current values are calculated from should be stated. Current values should be recorded as a percentage and calculated as described below.  A data quality statement accompanies the actual data for all CCG OIS indicators on the Indicator Portal. The data quality statement for incidence of C. difficile infection is available at:  https://indicators.hscic.gov.uk/download/Clinical%20Commissioning%20Gr  oup%20Indicators/Specification/CCG\_5.4\_I00806\_Q.pdf  Public Health England (PHE) also publishes a more detailed data quality statement relating to Mandatory Health Care Associated Infection Surveillance, including C. difficile infection. This is available at:  https://www.gov.uk/government/uploads/system/uploads/attachment\_data/  file/635429/mandatory\_healthcare\_associated\_infection\_data\_quality\_rep  ort.pdf  PHE update this statement annually just after the close of every financial year.  PHE also include a note to aid interpretation on their monthly data file explaining what can and can’t be deduced from the published data.  **Period of data: June 2016 to June 2017**  **Coverage: Data for all CCGs is available**  **Calculation: n/a**  **Completeness:**  In relation to NHS acute trusts, data completeness is considered good. From April 2007 all acute NHS trusts in England have been required to report all cases of C. difficile in patients aged two years and over.  NHS acute trusts that have failed to sign-off their data for three or more months in a row are highlighted in all acute trust level data tables published by NHS England. Only 2 out of 152 acute trusts were highlighted in the data table that covers the 13 months to August 2017.  However, the following information on page 8 of the UK Statistics Assessment Report, available at:  https://www.statisticsauthority.gov.uk/publication/statistics-on-mandatory-  surveillance-of-healthcare-associated-infections-in-england/  should also be noted. It states that:  "...the fact that the reporting of Health Care Associated Infections (HCAIs) by the non-NHS sector is not mandatory means that not all of the affected population is represented in the data. This incomplete capture could lead  to patchy response planning and continued spread of infection".  **Calculation: n/**  **Validity: n/a**  The nature of the data collection means that NHS acute trusts can request updates to their data at any time. Further information on the process necessary for an acute trust to request such changes can be found here:  https://hcaidcs.phe.org.uk/ContentManagement/LinksAndAnnouncements/  HCAIDCS\_System\_Administration%20\_Unlock\_Requests\_UserGuide\_V2.  0.pdf  Further information on the Data Specific Revisions & corrections Policy can be found here:  https://www.gov.uk/government/uploads/system/uploads/attachment\_data/  file/509316/HCAI\_Mandatory\_Surveillance\_Data\_Specific\_Revisions\_and  \_Corrections\_Policy\_March\_2016.pdf  This process means that there are frequently minor changes/additions to the most recent three data months in future publications.  Please see ‘3.5. Quality assurance’ for further details.  **Calculation: n/a**  **Default: n/a**  **Calculation: n/a**  **Integrity: n/a**  **Calculation: n/a**  **Timeliness: n/a**  **Calculation: n/a**  **Other: n/a** |
|  | **iv) What is the rationale for the selection of the data quality checks and thresholds selected above?**  See above  **v) Describe how you would plan to improve data quality should it not meet, or subsequently fall below, the thresholds required for this indicator.**  Any data quality issues will be managed and mitigated through agreed engagement channels with the data suppliers. |
|  | **vi) Who will own the data quality risks and issues for this indicator?**  **Name:** Chris Dew  **Job Title:** Information Analysis Lead Manager  **Role:** Responsible Statistician for CCG OIS  **Email:** clinical.indicators@nhs.net  **Telephone:** 0300 303 5678 |
|  | **vii) Describe how the data quality risks and issues will be managed for this indicator, including the escalation process.**  Any issues will be managed and mitigated through agreed engagement channels with the data suppliers. |
|  | **viii) Describe any assumptions you have made about data quality for this indicator.**  Please see section 3.5 ‘Quality Assurance' and section 5 ‘Limitations and potential bias’ |
|  | **ix) Describe any data quality constraints you are aware of for this indicator.**  Please see section 3.5 ‘Quality Assurance' and section 5 ‘Limitations and potential bias' |
|  | **Additional data quality information:**  Not applicable |
| **3.4. Quality Assurance** | The administrative data source used for collection of the data included in all mandatory HCAI surveillance outputs is the HCAI DCS. This is a real-time web-enabled system that facilitates the collection of all mandatory HCAI surveillance data from NHS acute trusts.  The mandatory HCAI surveillance protocol provides background on both the surveillance processes and the mechanism employed for data collection (HCAI DCS). Details of exactly what should be reported (surveillance inclusion criteria, core data set etc.) are also provided for each organism under surveillance. Information on monthly reporting deadlines (as outlined in section 3.1) is also provided. The HCAI DCS is also supplemented by a complete and comprehensive set of user guides. These guides provide system users with detailed information on all aspects of the system:  hcaidcs.phe.org.uk/WebPages/InternalContentPage.aspx  All infection episodes are entered onto the HCAI DCS by the NHS acute trust responsible for testing the specimen. Acute trust CEOs are required to sign-off the infection data across all four organisms collected via the HCAI DCS on the 15th of each month (see section 3.11 for further detail). CEO sign-off constitutes formal agreement/assurance that a given month of data is complete and correct. Acute trust CEO sign-off is as mandated by the Chief Medical Officer (CMO).  Further information in relation to quality assurance is published in the detailed data quality statement relating to Mandatory Health Care Associated Infection Surveillance, including C. difficile infection available at:  https://www.gov.uk/government/uploads/system/uploads/attachment\_data/  file/635429/mandatory\_healthcare\_associated\_infection\_data\_quality\_rep  ort.pdf  It should also be noted that there have been improvements made by Public Health England across a range of areas in relation to ‘Statistics on Mandatory Surveillance of Healthcare Associated Infections’ (a group which includes MRSA, MSSA and E. coli bacteraemia, and C. difficile infection) to comply with a series of requirements laid out by the UK Statistics Authority in  Assessment Report 302 Statistics on Mandatory Surveillance of Healthcare-Associated Infections in England  available at:  https://www.statisticsauthority.gov.uk/publication/statistics-on-mandatory-  surveillance-of-healthcare-associated-infections-in-england/  The outputs were subsequently accredited as National Statistics in August 2016 |
| **3.6. Data Linkage** | Not applicable |
| **3.7. Quality of data linkage** | Not applicable |
| **3.8. Data Fields** | The data fields available in the PHE data published monthly are as follows.  CCG Code  PHE Centre  CCG Name  Month 1 Total  Month 2 Total  Month 3 Total  Month 4 Total  Month 5 Total  Month 6 Total  Month 7 Total  Month 8 Total  Month 9 Total  Month 10 Total  Month 11 Total  Month 12 Total  Month 13 Total  NHS Digital repackages this data in order to publish it on the Indicator Portal as  part of CCG OIS, as described in Section 5.1. |
| **3.9. Data Filters** | None |
| **3.10. Justifications of inclusions and exclusions** | There is a protocol in place for the organisms covered by Mandatory HCAI Surveillance. This protocol spells out in detail the exact processes/requirements for data suppliers (NHS acute trusts) in terms of data provision/transfer from NHS acute trusts to PHE (HCAI DCS). The mandatory HCAI surveillance protocol provides background on both the surveillance processes and the mechanism employed for data collection (HCAI DCS). Details of exactly what should be reported (surveillance inclusion criteria, core data set etc.) are also provided for each organism under surveillance. |
| **3.11. Data Processing** | PHE receive record level data, including NHS number, of the patients with the infection from trusts, which is then mapped to a GP.  NHS Digital’s Organisation Data Service (ODS) is used to attribute C. difficile cases.  The following allocation method is used to ensure that even in cases where the patient does not have a GP, they are still mapped to a CCG (as used for other indicators).  The algorithm attributes a CCG as the first of these steps that succeeds:  1. GP Practice code maps to CCG  2. Postcode of patient maps to CCG  3. The CCG within which the HQ of the reporting trust resides  where the GP and postcode are obtained from the Spine through the patient's NHS number and date of birth if the trace is successful  It is possible for a single CCG to be the main commissioning body, or ‘lead’, to more than one acute trust while another CCG may not be lead to any acute trust.  It should be noted that the allocation method described above will lead to a patient attending an out of area Trust having their data tracked back to their ‘home’ CCG (i.e. CCG of residence) for reporting purposes. |

**Section 4. Construction**

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| **4.1. Numerator** | Count of all reported C. difficile infections in people aged two and over, per CCG |
| **4.2. Dominator** | None |
| **4.3. Computation** | This indicator is a count of all reported C. difficile infections in people aged two and over, per CCG, as reported by PHE.  It includes patients who are (i) in-patients, day-patients, emergency assessment patients or not known; AND (ii) have had their specimen taken at an acute trust or not known; AND (iii) specimen was taken on or after day four of the admission (admission date is considered day ‘1’).  Cases of C. difficile identified in one month may or may not be included in the following month’s figures. A case is considered to be ‘new’ if it occurs outside of a 28 day period since the initial positive specimen. Positive results within this period are considered to be duplicates and are thus not reported.  Note the data published for the latest three months are provisional in nature and may be subject to change in a subsequent release.  As this indicator is a raw count of cases only, a denominator is not required. |
| **4.4. Risk adjustments or standardisation type and methodology** | **None**  Variables and methodology:  Not applicable |
| **4.5. Justification of risk and variables** or why risk adjustment is not used | The indicator is a raw monthly count. We do not currently publish rates for this indicator (standardised or otherwise). This approach was agreed during initial assurance of the indicator where it was noted that it was not seen as desirable to give the impression that it would be more acceptable to have higher rates in particular groups, the aim of the indicator being principally to bring about improvement and not to compare trusts. There was also concern that random variation may ‘swamp’ issues related to age or gender. NHS Improvement’s objective is to drive down infection rates in all CCGs rather than compare CCGs against each other.  CCG rates per 100,000 population on a financial year basis are however published by PHE. They are signposted in the Quality Statement and are available at:  https://www.gov.uk/government/statistics/clostridium-difficile-  infection-annual-data |
| **4.5. Confidence interval / control limit use and methodology** | None |

Section 5. Presentation and Interpretation

Presentation

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| **5.1. Presentation of indicator** | The indicator is released in the form of a csv and xlsx file (each containing the same data) with the following column headings:  Reporting period of coverage Breakdown ONS code Level description Indicator value  Only values at CCG level are presented |
| **5.2. Contextual information provided alongside indicator**  with justification | Contextual information is provided in the quality statement published on the Indicator Portal alongside the data file and contains much of the information presented in this application, including some of the information detailed in '2 - Evidence and Policy base'. It demonstrates how the Code of Practice for Official Statistics has been followed in the collection, production and dissemination of the data. |
| **5.3. Calculation and data source of contextual information** | The contextual information provided in the PHE data quality statement supports the Indicator Portal data quality statement by providing a greater depth of information.  PHE also include a note containing contextual information to aid interpretation on their monthly data file explaining what can and can’t be deduced from the published data. |
| **5.4. Use of bandings, benchmarks or targets**  with justification | None |
| **5.5. Banding, benchmark or target methodology**  If appropriate | Not applicable |

Interpretation

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| **5.6. Interpretation guidelines** | This indicator requires careful interpretation and should not be used in isolation. It should be taken in conjunction with other indicators and information from other sources that together form a holistic view of CCG outcomes and a fuller overview of how CCG processes are impacting on outcomes.  Readers may be interested in referring to the aggregate quarterly counts and rates for all NHS acute trusts in England which are published by PHE with an epidemiological commentary on a quarterly basis (QEC). The QEC contain a description of the trends in the mandatory reports of C. difficile. The commentary also describes trends in other epidemiological factors and is available here.  PHE also include a note to aid interpretation on their monthly data file explaining what can and can’t be deduced from the published data. The note explains that this data does not provide a basis for decisions on the clinical effectiveness of infection control interventions in individual trusts, and that further investigations considering potential confounders would need to be undertaken before this could be done. |
| **5.7. Limitations and potential bias** | The patterns of providing care may vary between organisations in terms of extent of treatment in primary care settings; referral policies and practices; hospital outpatient facilities/walk-in clinics; and hospital inpatient admission policies and practices.  A number of factors outside the control of healthcare providers, such as the socio-economic mix of local populations, may determine whether a patient acquires an infection; thus, this could influence incidence.  This indicator is not subject to standardisation as the policy objectives are to drive down infection rates and reduce disparity between CCGs, rather than compare across CCGs.  PHE undertakes routine comparisons between data collected on the HCAI DCS and that collected via the voluntary surveillance system (Second Generation Surveillance System). This routine audit not only enables them to assess the completeness of the mandatory datasets but also enables us to identify/investigate any differences that may exist in terms of the collection/recording of data by region/geography, age, sex etc. They also assess potential sources of bias and error as well as discussion on the impact that NHS performance management may have on reported data. This is available here  Please also see section 5.9 on ‘Evidence of variability’ |
| **5.7. Improvement actions** | Mandatory HCAI surveillance outputs are used to monitor progress on controlling key health care associated infections and for providing epidemiological evidence to inform action to reduce them.  Data are used to support the NHS objective of improving the quality and safety of services and promoting patient choice by providing access to  information on NHS performance.  Data are used for various benchmarking purposes. Hospital infection control teams use the data to prepare benchmarking information for providers within their area. PHE also run and maintain a centralised benchmarking dashboard which allows users to compare a specific organisation (for example an NHS acute Trust) against a selection of other user-specified Trusts. This report can display both counts and rates for the selected time period and is available. Further details on the benchmarking dashboard are available here.  Data are also used for the performance management of CDI objectives set by NHS Improvement. This helps enable acute trusts and CCGs make continuous improvement in Clostridium difficile infection care.  Resources for acute trusts and CCGS are available from:  https://improvement.nhs.uk/resources/clostridium-difficile-infection-objectives/  This includes Clostridium difficile infection assessment tool and action plan guidance, available from here.  Organisations are able to use this assessment tool to identify risk factors and good practice in CDI prevention and control, as well as to monitor progress against objectives, in order to reduce infections locally. Mandatory surveillance outputs are routinely used to appraise local/regional NHS management of infection levels within their area.  A further document titled Clostridium difficile infection objectives 2017/18 and guidance on sanction implementation is available from here. Document available on request by email to [indicators@nice.org.uk](mailto:indicators@nice.org.uk).  These data are also used to inform patient choice via the NHS Choices website. |
| **5.9. Evidence of variability** | Fluctuations in the data can occur for a number of reasons and high fluctuations may not necessarily indicate an outbreak - for instance, organisational changes, variations in the patient populations being treated and seasonality can also cause large variation in counts. Consideration of the numbers without the context cannot indicate the reasons or the significance of the fluctuations |

**Section 6. Risks**

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| **6.1. Similar existing indicators** | In addition to the identical C. difficile PHE data already publishes on its own website (https://www.gov.uk/government/statistics/clostridium-difficile-infection-monthly-data-by-attributed-clinical-commissioning-group), a similar indicator exists in the NHS Outcomes Framework (5.2.ii Incidence of healthcare-associated infection - C. difficile). These counts are however attributed to an acute trust (where possible) rather than to a CCG. 5.2.ii also provides national level counts which include all cases regardless of whether it was possible to attribute an individual to a particular acute trust.  This data is available on the Indicator Portal (https://indicators.hscic.gov.uk/webview/) reference P01792 |
| **6.2. Coherence and comparability** | Whilst this data shows the trend in the number of C. difficile infections in a CCG over a series of months, it does not provide a basis for reliable month on month comparisons. Please see section 5.9 on ‘Evidence of variability’ for more details.  This data does not provide for comparisons between CCGs either. As mentioned previously, the C. difficile infection count has not been adjusted to give a standardised rate considering factors such as CCG demographics or case mix |
| **6.3. Undesired behaviours and/or gaming** | The possibility of the following ‘unintended consequences’ arising was previously highlighted during the initial assurance of this indicator:   * • Delayed testing of patients with diarrhoea for as long as possible, hoping to avoid a notified C. Difficile infection. * • Treating patients without testing for infection. * • Not registering patients who have a history of susceptibility to HCAIs.   Referring older people less to avoid HCAIs  However, this indicator repackages data already published by PHE. If any of these behaviours occurred, it wouldn’t be because of this indicator being included in CCG OIS |
| **6.4. Approach to indicator review** | As this indicator was previously given the assurance rating ‘no significant issues on the basis of completion of outstanding actions’, the previous review period was set to three years. Following this indicator review, the review period will be set by the Indicator Governance Board (IGB). Prior to the review period lapsing the Indicator and Methodology Assurance Service (IMAS) will liaise with the Clinical Indicators (CI) team to initiate the review process.  User feedback and comments on this indicator are welcomed via  NHS Digital Enquiries enquiries@nhsdigital.nhs.uk or the Clinical Indicators mailbox clinical.indicators@nhs.net  User needs and feedback will be taken into consideration during this assurance process. However, no feedback has been received from users of the data about this specific indicator Despite this, the indicator remains in Domain 5 of CCG OIS.  To try and improve customer feedback all data teams in NHS Digital are undertaking customer satisfaction surveys and are sending the following link to all customers to give them the opportunity to provide customer feedback  http://bit.ly/CustomerSatisfactionSurveyClinicalIndicators |
| **6.5. Disclosure control** | No disclosure control is applied to this indicator. All figures have already been made publicly available by PHE. Counts are not rounded before publication |

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| Indicator Assurance Report |
| **Incidence of Healthcare Associated Infection (HCAI)**  **- C. difficile infection** |
| **IAP00141** |

**Assurance Record IAP00141**

**Incidence of Healthcare Associated Infection (HCAI) - C. difficile infection**

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| **Final Assurance Rating from the Indicator Governance Board**  **Reason for assessment** | Scheduled review (review date reached) |
| **Iteration** | 1st IGB meeting |

**Rating Against Assessment Criteria**

**Clarity** - Fit for use with caveats

**Rationale** - Fit for use with caveats

**Data** - Fit for use with caveats

**Construction** - Fit for use

**Presentation and Interpretation** - Fit for use with caveats

**Risks and Usefulness** - Fit for use

**Overall Rating**

Fit for use with caveats

**Outcome**

**This indicator has been approved for inclusion in the National Library of Quality Assured Indicators**

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| **Key findings from Assurance** |
| • Make clear in the presentation of the indicator output and specification that the indicator value is a count  • Reference that the definition of the indicator is shortly expected to be amended  • The section of Data Quality needs to be reinforced to clarify that the data for someone attending an out of area trust will have his / her data tracked back to his / her home Clinical Commissioning Group (CCG) |

**Approval date - 18/01/2018**

**Review date - 18/01/2021**

**Incidence of Healthcare Associated Infection (HCAI) - C. difficile infection**

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| **Details of Methodology Appraisal – 02/11/2017**  **Methodology appraisal body** | NHS Digital Indicator Methodology and Assurance Service |
| **Reason for assessment** | Scheduled review (review date reached) |
| **Iteration** | 1st MRG meeting |

**Rating Against Assessment Criteria**

**Clarity** - Fit for use with caveats

**Rationale** - Fit for use with caveats

**Data** - Fit for use with caveats

**Construction** - Fit for use

**Presentation and Interpretation** - Fit for use with caveats

**Risks and Usefulness** - Fit for use

**Please find a detailed description of recommendations and actions in the appraisal log at the end of the document.**

**Summary Recommendation to Applicant:**

MRG would like to thank the applicant for presenting this indicator. Members agreed that the application had much merit. The group agreed a number of proposed changes to the documentation, details of which are outlined in the appraisal log below. The group agreed that there were no significant queries to resolve and their assessment was therefore “Fit for use with caveats” and the application could continue to Indicator Governance Board (IGB) on the basis that the recommendations in the appraisal log are acted upon.

**Summary Recommendation to IGB:**

**Key findings**

Make clear in the presentation of the indicator output and specification that the indicator value is a count

• Reference that the definition of the indicator is shortly expected to be amended

• The section of Data Quality needs to be reinforced to clarify that the data for someone attending an out of area trust will have his / her data tracked back to his / her home Clinical Commissioning Group (CCG)

**Assurance Record**

**IAP00141**

Incidence of Healthcare Associated Infection (HCAI) - C. difficile infection

**Appraisal Log Clarity**

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| **Rec. no** | **Issue or recommendation** | **Raised by / Date** | **Response or Action taken by applicant** | **Response date** | **Resolved** | **Sign off by / Date** |
| 1a | The title of the indicator should be clarified. The use of “incidence” suggests the indicator could be a rate. The applicant should considerer changing the title to “Count of” rather than “Incidence of”  It is also suggested that the title reference that this is data recorded in trusts | 02/11/2017 | The indicator titles are defined by NHS England and the Department of Health and are consistent across the CCG Outcomes Indicator Set and NHS Outcomes Framework. Therefore, whilst the title cannot be changed, it will be made clear in the presentation of the indicator output and specification that the indicator value is a count. | 03/01/2018 | ☒ | MRG Chair  10/01/2018 |
| **Rec. no** | **Issue or recommendation** | **Raised by / Date** | **Response or Action taken by applicant** | **Response date** | **Resolved** | **Sign off by / Date** |
| 1b | It is understood by the group that the definition of this indicator is to be amended by PHE shortly (potentially within 6 months).  Can the applicant clarify whether this is the case and if so make reference to the potential change within “Definition” | 02/11/2017 | An email has been sent to both the relevant shared PHE mailbox (Mandatory.Surveillance@phe.gov.uk) and to a PHE contact in order to seek clarification. A response was received on 05/01/2018 indicating the following:  We can confirm that there are no imminent changes to be made to the definition of MRSA and CDI reporting by CCG and that we will notify you if and when any changes are implemented. Please can you provide us with a timescale of how soon you would need to be notified of any changes.  We propose to respond requesting 6 months’ notice should PHE propose to make any changes to definitions in the future if the group agree this is a reasonable timescale. | 03/01/2018 | ☒ | MRG Chair  10/01/2018 |

Rationale

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| **Rec. no** | **Issue or recommendation** | **Raised by / Date** 02/11/2017 | **Response or Action taken by applicant** | **Response date**  03/01/2018 | **Resolved**☒ | **Sign off by /** Date – MRG Chair 10/01/2018 |
| 2.a | This indicator is a count rather than a rate and therefore data for Trusts cannot be directly compared against each other. MRG queried why a rate could not be produced per population.  MRG ask that it be noted in the paperwork that the results of the indicator are not comparable between Trusts. |  | These points are hopefully already addressed in the existing application. Section 6.2 (Coherence and comparability) states the following:  This data does not provide for comparisons between CCGs either. As mentioned previously, the MRSA infection count has not been adjusted to give a standardised rate considering factors such as CCG demographics or case mix.  Furthermore, the following explanation appears under Section 4.5 (Justification of risk adjustment):  The indicator is a raw monthly count. We do not currently publish rates for this indicator (standardised or otherwise). This approach was agreed during initial assurance of the indicator where it was noted that it was not seen as desirable to give the impression that it would be more acceptable to have higher rates in particular groups, the aim of the indicator being principally to bring about improvement and not to compare trusts. There was also concern that random variation may ‘swamp’ issues related to age or gender. NHS Improvement’s objective is to drive down infection rates in all CCGs rather than compare CCGs against each other.  CCG rates per 100,000 population on a financial year basis are however published by PHE. They are signposted in the Quality Statement and are available at:  https://www.gov.uk/government/statistics/clostridium-difficile-infection-annual-data |  |  |  |

**Data**

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| **Rec. no** | **Issue or recommendation** | **Raised by / Date** | **Response or Action taken by applicant** | **Response date** | **Resolved** | **Sign off by / Date** |
| 3a | The section on data quality does not currently reference how a patient’s data is recorded if they attend at a Trust out of area. MRG understand that in such cases then the data is tracked backed to the patient’s home CCG. MRG ask that this point be clarified to check this is correct. This then needs to be detailed in the paperwork. | 02/11/2017 | A paragraph to this effect has been added to section 3.11 (Data Processing). It reads as follows:  It should be noted that the allocation method described above will lead to a patient attending an out of area Trust having their data tracked back to their ‘home’ CCG (i.e. CCG of residence) for reporting purposes. CCGs make continuous improvement in Clostridium difficile infection care.  Resources for acute trusts and CCGS are available from:  https://improvement.nhs.uk/resources/clostridium-difficile-infection-objectives/  This includes Clostridium difficile infection assessment tool and action plan guidance, available from here. Document available on request by email to [indicators@nice.org.uk](mailto:indicators@nice.org.uk)  Organisations are able to use this assessment tool to identify risk factors and good practice in CDI prevention and control, as well as to monitor progress against objectives, in order to reduce infections locally. Mandatory surveillance outputs are routinely used to appraise local/regional NHS management of infection levels within their area.  A further document titled Clostridium difficile infection objectives 2017/18 and guidance on sanction implementation is available from here. Document available on request by email to [indicators@nice.org.uk](mailto:indicators@nice.org.uk) | 03/01/2018 | ☒ | MRG Chair  10/01/2018 |

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| **Rec. no** | **Issue or recommendation** | **Raised by / Date** | **Response or Action taken by applicant** | **Response date Resolved** | **Sign off by / Date** |
| 5.b | The section on Improvement actions references “data are used nationally for benchmarking purposes”. MRG ask that additional clarity be provided to explain in what context data is used for benchmarking | 02/11/2017 | The relevant paragraph within section 5.8 (Improvement Actions) has been amended and now reads as follows: Data are used for various benchmarking purposes. Hospital infection control teams use the data to prepare benchmarking information for providers within their area. PHE also run and maintain a centralised benchmarking dashboard which allows users to compare a specific organisation (for example an NHS acute Trust) against a selection of other user-specified Trusts. This report can display both counts and rates for the selected time period and is available. Further details on the benchmarking dashboard are available from here. Document available on request by email to [indicators@nice.org.uk](mailto:indicators@nice.org.uk) | ☒ | MRG Chair  10/01/2018 |

**Risks and Usefulness**

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| **Rec. no** | **Issue or recommendation** | **Raised by / Date** | **Response or Action taken by applicant** | **Response date** | **Resolved** | **Sign off by / Date** |
| 6a | Within “Similar Existing indicators” MRG recommend that appropriate hyperlinks be added to the paperwork to reference where to find the information published by PHE in the NHS Outcomes Framework and also a link to the Indicator Portal. | 02/11/2017 | Section 6.1 (Similar existing indicators) has now been updated with the relevant hyperlinks. | 04/01/2018 | ☒ | MRG Chair  10/01/2018 |

**Any feedback should be made to the Indicator and Methodology Assurance Service (IMAS) Team at NHS Digital. Likewise, if you are unclear regarding any of the recommendations in this report or have any queries about the assurance process in general, please contact the IMAS team.**

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**Assurance Record**

**IAP00141**

Incidence of Healthcare Associated Infection (HCAI) - C. difficile infection

**Appraisal Log**