**NHS Digital**

**Indicator Supporting Documentation**

IAP00040 Incidence of healthcare-associated infection – C. difficile infection (NHSOF)

Application Form

Indicator Assurance Service

**Title: Incidence of healthcare-associated infection - C. difficile**

**Set or domain: Set or domain: NHS Outcomes Framework - Domain 5 - Treating and caring for people in a safe environment and protecting them from avoidable harm**

**IAS Reference Code: IAP00040**

**Version History**

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| --- | --- | --- | --- |
| Version | Date | Changed By | Change |
| V0.1 |  |  |  |
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# Application Form

Section 1 Introduction / overview

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| **1.1 Title** | Incidence of healthcare-associated infection - C. difficile |
| **1.2 Set or domain** | NHS Outcomes Framework - 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** | The number of Clostridium difficile(C.difficile) infections reported to Public Health England (PHE), in patients aged two years or older.Figures are reported at England level, and at Provider level where cases can be apportioned to a provider. This means that there is a difference between the England total and the sum of providers as most cases cannot be apportioned to a provider based on the reported information. |
| **1.5 Indicator owner & contact details** | -------------------?----------------- |
| **1.6 Publication status** | Currently in publication |

Section 2 Rationale

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| **2.1 Purpose** | Healthcare Associated Infections are directly related to healthcare interventions. Infections can result in longer stays in hospital, and in severe cases prolonged illness and even death. High standards of infection control can limit the incidence of such infections and therefore reductions in these infections are linked to better outcomes for patients (or lack of a harmful outcome).This indicator is a measure by which resources can be focussed to attempt to reduce the level of healthcare infections in the NHS. |
| **2.2 Sponsor** | Andrew Parker? |
| **2.3 Endorsement** |  |
| **2.4 Evidence and Policy base**Including related national incentives, critical business question, NICE quality standard and set or domain rationale, if appropriate | Surveillance of C. difficile laboratory faecal samples in England and Wales was introduced in 1990 as part of the Public Health Laboratory Service’s voluntary monitoring of infectious diseases. Between 1990 and 2004 there was a rise in the number of C. difficile infections, from less than 3,000 in 1990 to more than 45,000 in 2004. Rates of C. difficile infections also rose over this time period in all age groups ≥40 years old. Due to the increasing incidence of C. difficile infections, the mandatory reporting of C. difficile infection in people aged ≥65 years was introduced in England in January 2004, this was a quarterly aggregate data return reported by NHS acute Trusts comprising data on the number of toxin-positive C. difficile faecal samples. Due to the continued rise of C. difficile infections among the population aged ≥65 years, the C. difficile mandatory surveillance scheme was enhanced in April 2007, to be patient-level and to cover all C. difficile infections in patients aged 2 years and over. Reports are submitted using the same web-enabled system that is used to collect enhanced MRSA (and later MSSA) bacteraemia data [[1]](#footnote-1).The commitment to continued reduction of c.difficile infections was re- iterated in Everyone Counts: Planning for Patients 2014/15 to 2018/19 <https://www.england.nhs.uk/wp-content/uploads/2013/12/5yr-strat-plann-guid-wa.pdf> , which was published on 20th December 2013. |

Section 3 Data

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| **3.1 Data source** | Counts of the number of C.difficile infections in patients aged two years or older. Published in the annual and quarterly Mandatory Surveillance of Healthcare Associated Infections by Public Health England (PHE).  |
| **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 are reported monthly to PHE. Independent sector (IS) healthcare organisations providing regulated activities also undertake surveillance of C. difficile infection[[2]](#footnote-2). No other data sources were considered for this indicator. |
| **3.3 Data availability** | Published around four months after the end of the reporting period. <https://www.gov.uk/government/statistics/clostridium-difficile-infection-annual-data> |
| **3.4 Data quality** | The data does not provide a basis for decisions on the clinical effectiveness of infection control interventions in individual Trusts: further investigations considering potential confounders would need to be undertaken before this could be done.The data cannot be used as a basis for comparisons between acute trusts. The counts of infections have not been adjusted to give a standardised rate considering factors such as organisational demographics or case mix. Count information is of use for comparison of an individual organisation over time. |
| **3.5 Quality assurance** | NHS England carry out annual trust level surveillance of these data, using trust apportioned specimens. |
| **3.6 Quality improvement plan** If appropriate | None identified.Responsibility lies with NHS England. The NHS Outcomes Framework sets out the national outcome goals that the Secretary of State will use to monitor the progress of NHS England. It does not set out how these outcomes should be delivered, it is for NHS England to determine how best to deliver improvements by working with CCGs to make use of the tools at their disposal. |
| **3.7 Data linkage** | None |
| **3.8 Quality of data linkage** | N/A |
| **3.9 Data fields** | The crude number of cases of C.difficile reported to Public Health England (PHE) |
| **3.10 Data filters** | C. difficile infections in patients aged two years or older.**All reported cases:**‘All reported cases’ refers to all toxin positive results for *C. difficile* infections that are detected by the Trust whose laboratory processed the specimen. It is important to note that this does not necessarily imply that the infection was acquired there.**Trust apportioning of cases:***C. difficile* infections are apportioned to a Trust in tables 7b & 8b (patients aged 2 years and over) if the following rules are met:1. The location where the specimen was taken was given as ‘Acute Trust’ or was not known;
2. The patient was either an ‘In-patient’, ‘Day-patient’, in ‘Emergency assessment’ or was not known;
3. Patient’s specimen date is on, or after, the fourth day of the admission (or admission date is null), where the day of admission is day 1.
 |
| **3.11 Justifications of inclusions and exclusions** and how these adhere to standard definitions | C. difficile may be found in the gut of people with no symptoms: up to 3% of healthy adults, 7% of residents in long‑term care facilities, 14−20% of older people on hospital wards and about 66% of healthy children aged under 2 years.[[3]](#footnote-3) The high prevalence of C.difficile in the gut of healthy children under the age of 2 years old is the reason they are excluded from screening. |
| **3.12 Data processing** | None |

Section 4 Construction

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| **4.1 Numerator** | None |
| **4.2 Denominator** | None |
| **4.3 Computation** | Data for this indicator have been taken from published PHE data (Table 8a: Financial year counts and rates of C. difficile infection (patients aged 2 years and over) - All reported cases and Table 8b: Financial year counts and rates of C. difficile infection (patients aged 2 years and over) - Trust apportioned cases only).<https://www.gov.uk/government/statistics/clostridium-difficile-infection-annual-data>  |
| **4.4 Risk adjustment or standardisation type and methodology** | **None***Variables and methodology:* |
| **4.5 Justification of risk adjustment type and variables**or why risk adjustment is not used | Indicator is a simple total. Risk adjustment is not necessary.Background information about the collection of C.difficile data is available at:<https://www.gov.uk/government/collections/clostridium-difficile-guidance-data-and-analysis>  |
| **4.6 Confidence interval / control limit use and methodology** | None*Methodology:* |
| **4.7 Justification of confidence intervals / control limits used** | N/A |

Section 5 Presentation and Interpretation

Presentation

5.1 Presentation of indicator

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| --- | --- |
| Year | Financial year |
| Period of coverage | 01/04 to 31/03 respective of financial year |
| Breakdown | England, provider |
| Level | Organisation code |
| Level description | Organisation name |
| Indicator value | Count of C. difficile infections in patients aged 2 or more |

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| **5.2 Contextual information provided alongside indicator**with justification | None |
| **5.3 Calculation and data source of contextual information** | N/A |
| **5.4 Use of bandings, benchmarks or targets**with justification | The NHS Outcomes Framework does not employ bandings or benchmarks as it is not part of the purpose of the framework.Values can be compared over time and against the England rate to see how a Local Authority is performing against its region, nationally and its neighbours. Values can also be used to review performance over time. |
| **5.5 Banding, benchmark or target methodology**if appropriate | N/A |

Interpretation

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| **5.6 Interpretation guidelines** | The figures represent the total reported cases of C.difficile infections by NHS Acute Trusts.A reduction in the figures would represent a desirable outcome. |
| **5.7 Limitations and potential bias** | None identified |
| **5.8 Improvement actions** | Reduction in infections of C.difficile is part of the Quality Premium, payments to CCGs based on performance[[4]](#footnote-4), which should encourage improvement. |
| **5.9 Evidence of variability** |  |

Section 6 Risks

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| **6.1 Similar existing indicators** | CCG OIS - 5.4 Incidence of Healthcare Associated Infection (HCAI) – C. difficile.Compendium - 24. Rate of C.difficile infection |
| **6.2 Coherence and comparability** | The CCG indicator is reported at CCG only.The Compendium indicator – last updated in March 2015, with no updates confirmed. |
| **6.3 Undesired behaviours and/or gaming** | None identified. |
| **6.4 Approach to indicator review** | The Department of Health perform an annual review of the NHS Outcomes Framework and release a summary of all indicators with any retirements, additions and changes.https://www.gov.uk/government/publications/nhs-outcomes-framework-2015-to-2016 |
| **6.5 Disclosure control** | None |
| **6.6 Copyright** | Copyright © 2016, Health and Social Care Information Centre. All Rights Reserved. |

**Pipeline Methodology Review Group**

**Applications for consideration**

**14th July 2011**

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| --- | --- |
| **Document Author:** | *Sam Widdowfield* |
| **Document Owner:** | *Sam Widdowfield* |
| **Created Date:** | *8 July 2011* |
| **Current Issue Date:** | *18 July 2011* |
| **Responses expected by:** | *n/a* |
| **Version Number:** | *V 0.2* |

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Document Control

## 0.1 Version History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Changed By** | **Summary of Changes** |
| **V 0.1** | **08/07//2011** | **Sam Widdowfield** | **Initial Draft** |
| **V 0.2** | **18/07/2011** | **Sam Widdowfield** | **Updated with recommendations from the meeting** |
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## 0.2 Approvals

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| --- | --- | --- | --- | --- |
| **Name** | **Title** | **Date** | **Version** | **Signature** |
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## 0.3 Distribution

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| **Version** | **Date** | **Distribution List** |
| **V 0.1** | **12/07//2011** | **MRG members, Alison Kirby, Dawn Fagence, Arun Bhoopal DH** |
| **V 0.2**  | **18/07/2011** | **MRG members, Alison Kirby, Dawn Fagence, Arun Bhoopal DH** |
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1 Introduction

There are several recommendations from previous MRG meetings that have been investigated and now require further input from the group. In section 2 of this paper the original submissions and recommendations are followed by the new responses to the recommendations.

There are also two new indicators for consideration in section 3.

2 Additional information and feedback from data owners on MRG recommendations

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| **Title** | **Status** | **Numerator construction** | **Numerator notes** | **Denominator** |
| 5.2i Incidence of healthcare associated infections - MRSA | Currently published on HPA website as counts on a monthly, quarterly and annual basis for all acute and primary care organisations.  | Count of all MRSA infections identified two days after admission, where the patient specimen location is ‘acute’ (or null), and patient location is ‘In-patient’, ‘Day patient’, ‘Emergency assessment’ (or is *null*) | These data should not be used as the basis for decisions on the clinical effectiveness of interventions in individual NHS organisations without further investigations | Patient bed day denominators are calculated using the average daily ‘Total (occupied)’ bed data from the KH03 dataset. Figures are now submitted quarterly on form KH03 by each NHS provider and provide a summary across all hospital sites within the Trust or PCT. Patients requiring critical care are excluded as they are captured in a bi-annual census. Occupation of beds by well babies are also excluded. |
| 5.2ii **(IAP00040)** Incidence of healthcare associated infections – *C difficile* | Currently published on HPA website as counts on a monthly, quarterly and annual basis for all acute and primary care organisations.  | Count of all C difficile infections identified three days after admission, where the patient specimen location is ‘acute’ (or null), and patient location is ‘In-patient’, ‘Day patient’, ‘Emergency assessment’ (or is *null*)  | These data should not be used as the basis for decisions on the clinical effectiveness of interventions in individual NHS organisations without further investigations | Patient bed day denominators are calculated using the average daily ‘Total (occupied)’ bed data from the KH03 dataset. Figures are now submitted quarterly on form KH03 by each NHS provider and provide a summary across all hospital sites within the Trust or PCT. Patients requiring critical care are excluded as they are captured in a bi-annual census. Occupation of beds by well babies are also excluded. |

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| **Recommendation 15** | Review use of bed days as denominator and ability of KH03 to provide this (aggregate return?). Investigate suitability of SPC based on numbers or rates to see variation from expected. Report back to MRG and QIC. |
| **Update** | HPA has provided two spreadsheets of MRSA and C diff of total cases by population (they have provided the calculated data), which underlie a chart which is published quarterly in a bulletin. However the customer has requested the DH Health Care Acquired Infection (HCAI) team are involved in these discussions, as they monitor trust rates based on bed days. |
| **Recommendation 2011/43** | DH HCAI team should be included in discussion. The HPA and DH approaches should be reviewed together. CIT to follow this up. |
| **Recommendation 2011/44** | Any mismatch between the numerator and denominator on the exclusion of patients requiring critical care should be investigated. This is to be considered in the review in recommendation 2011/43. |
| **Update July 2011** | DH HCAI team use HPA data on a monthly basis to monitor changes on a local level, using bed days as the denominator.  While it is not critical that the national and local indicators use the same denominator, it was agreed that using the same denominator would make disaggregation easier.  While the MRSA indicator currently uses the  KH03 return for bed days, it was acknowledged that this was due to legacy rather than the preferred method, and that the more recently defined CDI indicator was based on HES finished episode bed days.  Recommendation 2011/44  specifically highlighted that the KH03 bed days return did not include critical care bed days, when critical care would be expected to be one of the higher risk locations for HCAI and excluding these would not be desirable.  Use of HES bed days removes this issue, as critical care bed days are included. |
| **Recommendation 2011/51** | The indicators can now go to IGB provided:Clarity is gained regarding ‘finished episode bed days’ as need to ensure all days at risk are includedIt is made clear in the DQ statement that the numerator and denominator are directly comparable as they come from different data sourcesThe possible need for risk adjustment in the future is added to the DQ statement |

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| **Indicator** | **Construction and data source** | **Rationale** | **Potential issues** |
| DOMAIN 3: Helping people to recover from episodes of ill health or following injury3a Emergency admissions for acute conditions that should not usually require hospital admission | Data source: Hospital Episode Statistics (The NHS IC) and ONS population statisticsProportion of persons with acute conditions (ear/nose/throat infections, kidney/urinary tract infections, heart failure) admitted to hospital as an emergency admission in the respective quarter of the financial year.Indicator will be quarterly.NUMERATOR:The number of finished and unfinished continuous inpatient (CIP) spells, excluding transfers, for patients with an emergency method of admission and with the primary diagnoses (DIAG\_01in the 1st episode of the spell, ICD 10 codes) listed in annex A in the respective quarter of the financial year.DENOMINATOR:Resident population for the respective organisation. | Outcomes seeking to measure: Progress in preventing conditions from becoming more serious will be measured using this indicator. It looks at conditions that should usually be managed without the patient having to be admitted to hospital. Where an individual has been admitted for one of these conditions, it may indicate that they have deteriorated more than should have been allowed by the adequate provision of healthcare in primary care or as an outpatient in hospital. | 1. Indicator is based on a NCHOD indicator. The NCHOD indicator is produced using a 10 year linked file whereas this indicator will be not produced in this way due to the quarterly outputs required.2. Since unfinished CIPs are counted there is need for linked HES data from the following quarter. This wasn't an issue for the annual NCHOD analyses but will need some thought for more up to date quarterly analyses. 3. There should be some retrospective analyses, comparing results from the NCHOD method and the new method, in order to understand the reasons for differences, if any. 4. In any new method, special attention will be needed to ensure that incident cases are not dropped between quarters, that emergency transfers with EPIORDER 1 are not counted etc. The NCHOD 10 year linked file does contain between year linkage, alongside within year.  |

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| **Recommendation 2011/48** | The clinical codes for this indicator differ from those used for similar indicators for Comparators and NCHOD. DH to supply further evidence for the selection. |
| **Recommendation 2011/49** | Following on from recommendation 2011/48 CIT should look at the NCHOD and Comparators indicators with relation to this. |

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| **Update: July 2011**Discussions held with clinical colleagues around appropriate definitions led to agreement that the most appropriate way forward is to build on the definition of ambulatory care sensitive conditions as used in the NHS Comparators indicator “Emergency admissions for 19 ambulatory care sensitive conditions”, with some additions and removals as deemed appropriate for the purpose of the indicator. Conditions have been included for two reasons – either the condition itself should be treated in the community/primary care, or management of the condition outside hospital should prevent the condition escalating so that an emergency admission is required.There has been effort made to ensure consistency with other definitions – namely the conditions set out in the NCHOD indicators “Acute/Chronic conditions usually managed in primary care”, and those set out in the NHS Institute population “Directory of Ambulatory Emergency Care for Adults”. Some conditions may appear in the directory, but not in the definition set out below. This is because ambulatory emergency care needs to be distinguished from the ambulatory care sensitive conditions. The latter refers to conditions in which improved preventative healthcare or improved long-term condition management results in a decreased risk of an acute event occurring. With the Directory of Ambulatory Emergency Care for Adults, the 49 scenarios relate to where the acute event has developed and delivery of that acute care is feasible for a significant proportion of cases without an overnight stay in hospital. Thus, there are overlaps in the conditions mentioned but they represent differing points in the patient journey.The conditions to be included are shown in annex A alongside the conditions included in the NCHOD and NHS Comparators indicators.Additional details on the definitions are outlined in annex B in the paper *NHS Outcomes Framework indicators: Definition of Ambulatory Care Sensitive conditions*. |

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| **Recommendation 2011/52** | The denominator for this indicator is the resident population. This is fine at national level but an alternative approach will need to be considered if sub-national breakdowns are required. |
| **Recommendation 2011/53** | DH need to demonstrate that evidence for the inclusion and exclusion of certain conditions is fit for purpose and could stand up to future scrutiny and challenges on methodology. The bounds of the pipeline process need to be clarified to show what this process has and has not covered. |

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| **Indicator** | **Construction and data source** | **Rationale** | **Potential issues** |
| DOMAIN 3: Helping people to recover from episodes of ill health or following injury3.2 Emergency admissions for children with lower respiratory tract infections | Data source: Hospital Episode Statistics (The NHS IC) and ONS population statisticsProportion of children aged 0 – 19 admitted to hospital as an emergency admission for LRTIs in the respective quarter of the financial year.Indicator will be quarterly.NUMERATOR:The number of finished and unfinished continuous inpatient (CIP) spells, excluding transfers, for patients aged0 – 19 with an emergency method of admission and with any of the following primary diagnoses (DIAG\_01 in the 1st episode of the spell, ICD 10 codes) in the respective quarter of the financial year:Bronchiolitis, bronchopneumonia and pneumonia**:*** J10.0 Influenza with pneumonia virus identified;
* J11.0 Influenza with pneumonia, virus not identified;
* J11.1 Influenza with other respiratory manifestations, virus not identified (bronchiolitis with influenza);
* J12.- Viral pneumonia nec;
* J13 Pneumonia due to Streptococcus pneumoniae;
* J14 Pneumonia due to Haemophilus influenzae;
* J15.- Bacterial pneumonia nec;
* J16.- Pneumonia due to other infectious organisms nec;
* J18.0 Bronchopneumonia, unspecified;
* J18.1 Lobar pneumonia;
* J18.9 Pneumonia unspecified;
* J21.- Acute bronchiolitis.

DENOMINATOR:Resident population for the respective organisation. | Outcomes seeking to measure: LRTIs in children leads to a high number of emergency bed days and is included here to attempt to address the problem. The aim is that in the future, these will be more successfully treated in primary care rather than secondary care.Respiratory infections form one of the most common reasons for hospital admission in childhood, especially in infants. Between 1 and 3% of all babies experience an admission with bronchiolitis and about 2.5% of all child admissions are for pneumonia. Emergency admission rates in children, especially under the age of 5 years for lower respiratory infections - bronchiolitis, bronchopneumonia and pneumonia - reflect a variety of influences. Rates vary across the country but are increased in areas of socio-economic deprivation. Previous analyses have shown that they also vary between health authorities, even when social deprivation is taken into account, probably reflecting variation in access to, and expectation of, health services and also clinical practice. Lower rates are linked to higher breast feeding rates and reduction of exposure to tobacco smoke - preventive measures that reduce both incidence and severity of infections. | As for 3a:1. Indicator is based on a NCHOD indicator. The NCHOD indicator is produced using a 10 year linked file whereas this indicator will be not produced in this way due to the quarterly outputs required.2. Since unfinished CIPs are counted there is need for linked HES data from the following quarter. This wasn't an issue for the annual NCHOD analyses but will need some thought for more up to date quarterly analyses. 3. There should be some retrospective analyses, comparing results from the NCHOD method and the new method, in order to understand the reasons for differences, if any. 4. In any new method, special attention will be needed to ensure that incident cases are not dropped between quarters, that emergency transfers with EPIORDER 1 are not counted etc. The NCHOD 10 year linked file does contain between year linkage, alongside within year.  |

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| **Recommendation 2011/50** | A verbal update at the meeting stated that ages 0 to 19 are to be used. DH to supply the documentation behind this decision and bring back to MRG |

3 New indicators to be considered

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| **Indicator** | **Construction and data source** | **Rationale** | **Potential issues** |
| DOMAIN 2: Enhancing quality of life for people with long-term conditions2.3i Unplanned hospitalisation for chronic ambulatory care sensitive conditions | Data source: Hospital Episode Statistics (The NHS IC) and ONS population statisticsIndicator definition: the proportion of persons with chronic conditions (annex A) admitted to hospital as an emergency admission in the respective quarter of the financial yearIndicator will be quarterly.NumeratorThe number of finished and unfinished continuous inpatient spells (CIPS), excluding transfers, for patients with an emergency method of admission and with any of the primary diagnoses listed in annex A (DIAG\_01 in the 1st episode of the spell, ICD 10 codes) in the respective quarter of the financial year.DenominatorResident adult population estimate for the respective organisationThis indicator will be a rate per 100,000 populationIndicators to be disaggregated by the equality and inequality strands set out in the outcome framework for national level data where this is feasible | Ambulatory Care Sensitive (ACS) conditions (e.g. diabetes, hypertension) are those where effective community care and case-management can help prevent the need for hospital admission. ACS conditions account for nearly 800,000 or (20%) of all emergency admissions nationally. Over 20% of these ACS emergency admissions are zero-day admissions.Providing effective ambulatory care for these conditions will lead to better patient care and case management, and a reduction in avoidable emergency admissions, which are costly and expose patients to otherwise avoidable clinical risks such as health care acquired infections. The aim of this indicator is to look at emergency admissions for all long-term conditions where optimum management can be achieved in the community.LSHTM were commissioned to review the proposed conditions to be included in this indicator. The conditions are shown in annex A alongside the conditions included in the NCHOD and NHS Comparators indicators.Additional details on the definitions are outlined in annex B in the paper *NHS Outcomes Framework indicators: Definition of Ambulatory Care Sensitive conditions*. | Should primary diagnosis code only be used or diagnoses in all fields for certain codes?Other issues as outlined for 3a and 3.2 |

**Recommendations 2011/52 and 2011/53, from indicator 3a, apply to indicator 2.3i also:**

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| **Recommendation 2011/52** | An alternative approach may need to be considered if sub-national breakdowns are required. |
| **Recommendation 2011/53** | DH need to demonstrate that evidence for the inclusion and exclusion of certain conditions is fit for purpose and could stand up to future scrutiny and challenges on methodology. The bounds of the pipeline process need to be clarified to show what this process has and has not covered. |

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| **Indicator** | **Construction and data source** | **Rationale** | **Potential issues** |
| DOMAIN 3: Helping people to recover from episodes of ill health or following injury3.1 Patient-reported outcome measures (PROMs) for elective procedures | Data source: NHS Information Centre’s PROMs data publication and dataset which is part of the HES dataset.Indicator definition: Patient reported improvement in health status following elective procedures, currently covering groin hernia, hip replacement, knee replacement and varicose veins. PROMs data are published monthly with an approximate 5 month lag.As PROMs data are generated from the information gathered in the PROMs questionnaires, they do not rely on a numerator/denominator relationship:1. All patients receiving one of the relevant Procedures from an NHS-funded Provider are eligible to participate and should be invited to complete PROMs questionnaires. 2. The responses to the pre- and post-operative PROMs questionnaires are converted into pre- and post-operative health status measurements by the application of scoring algorithms, where appropriate. The difference between the pre- and postoperative health status scores is a measure of the outcome of the procedure. The PROMs indicators will be reported separately for the four separate conditions for the purposes of the NHS OF. In the future, as more PROMs are developed another approach may need to be considered. | The indicator is part of domain 3 of the set – this domain reflects the importance of helping people to recover from episodes of ill health or following injury. This can be seen as two complementary objectives: preventing conditions from becoming more serious (wherever possible), and helping people to recover effectively. The PROMs indicator was included in the set to ensure it covered elective procedures, not just emergency ones.  | 1. Due to the voluntary nature of PROMs questionnaires the amount of data collected is affected by participation and response rates. The participation rate is the proportion of eligible patients completing and returning pre-operative PROMs questionnaires. The response rate is the proportion of patients completing and returning the post-operative PROMs questionnaires. Currently participation and response rates are approximately 69% and 75% respectively.2. As PROMs are developed for more procedures an alternative reporting approach will need to be considered.3. Case-mix adjustment methodology is currently being reviewed as part of the PROMs expansion. The outcome of this review will need to be considered from an indicator methodology perspective.  |

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| **Recommendation 2011/54** | Justification for the choice of case-mix methodology is required from DH. |
| **Recommendation 2011/55** | The quality statement will need to include some words describing the potential for bias created by non-participation. Are non-responders an atypical group? |
| **Recommendation 2011/56** | Indicator can now go to IGB. |

**Annex A: Conditions included in indicators - NHS Comparators, NCHOD and the Outcomes Framework**

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|  |  |  | **NHS Comparators** | **OF indicators** | **OF indicators** | **NCHOD** | **NCHOD** |
| Group name | ICD10 codes | Description | *Managing Emergency Admissions (19 Ambulatory Care Conditions)* | *2.3i: Unplanned hospitalisation for chronic ambulatory care sensitive conditions* | *3a: Emergency admissions for acute conditions that should not usually require hospital admission* | *Emergency hospital admissions: chronic conditions usually managed in primary care* | *Emergency hospital admissions: acute conditions usually managed in primary care* |
| Influenza and pneumonia | J10 | Influenza due to identified influenza virus |  |   |  |   |   |
|   | J11 | Influenza, virus not identified |  |   |  |   |   |
|   | J13 | Pneumonia due to Streptococcus pneumoniae |  |   |   |   |   |
|  | J13X | Pneumonia due to Streptococcus pneumoniae |  |  |  |  |  |
|   | J14 | Pneumonia due to Haemophilus influenzae |  |   |  |   |   |
|   | J15.3 | Pneumonia due to streptococcus, group B |  |   |  |   |   |
|   | J15.4 | Pneumonia due to other streptococci |  |   |  |   |   |
|   | J15.7 | Pneumonia due to Mycoplasma pneumoniae |  |   |  |   |   |
|   | J15.9 | Bacterial pneumonia, unspecified |  |   |  |   |   |
|   | J16.8 | Pneumonia due to other specified infectious organisms |  |   |  |   |   |
|   | J18.1 | Lobar pneumonia, unspecified |  |   |  |   |   |
|   | J18.8 | Other pneumonia, organism unspecified |  |   |  |   |   |
| Other vaccine preventable | A35 | Other tetanus |  |   |   |   |   |
|   | A36 | Diphtheria |  |   |  |   |   |
|   | A37 | Whooping cough |  |   |  |   |   |
|   | A80 | Acute poliomyelitis |  |   |   |   |   |
|   | B05 | Measles |  |   |  |   |   |
|   | B06 | Rubella [German measles] |  |   |  |   |   |
|   | B16.1 | Acute hep B with delta-agent (coinfectn) without hep coma |  |   |  |   |   |
|   | B16.9 | Acute hep B without delta-agent and without hepat coma |  |   |  |   |   |
|   | B18.0 | Chronic viral hepatitis B with delta-agent |  |  |   |   |   |
|   | B18.1 | Chronic viral hepatitis B without delta-agent |  |  |   |   |   |
|   | B26 | Mumps |  |   |  |   |   |
|   | G00.0 | Haemophilus meningitis |  |   |   |   |   |
|   | M01.4 | Rubella arthritis |  |   |  |   |   |
| Asthma | J45 | Asthma |  |  |   |  |   |
|   | J46 | Status asthmaticus |  |   |   |  |   |
|   | J46X | Status asthmaticus |  |  |   |   |   |
| Congestive heart failure | I11.0 | Hypertensive heart disease with (congestive) heart failure |  |  |   |   |  |
|   | I48X | Atrial fibrillation and flutter |  |  |   |   |   |
|   | I50 | Heart failure |  |  |   |   |  |
|   | J81 | Pulmonary oedema |  |   |   |   |   |
|   | J81X | Pulmonary oedema |  |  |   |   |   |
| Diabetes complications | E10.0-E10.8 | Insulin-dependent diabetes mellitus |  |  |   |  |   |
|  | E10.9 | Insulin-dependent diabetes mellitus without complications |  |  |  |  |  |
| (This covers Diabetes A-C in the ICD9 list) | E11.0-E11.8 | Non-insulin-dependent diabetes mellitus |  |  |   |  |   |
|  | E11.9 | Non-insulin-dependent diabetes mellitus without complications |  |  |  |  |  |
|   | E12.0-E12.8 | Malnutrition-related diabetes mellitus |  |  |   |  |   |
|  | E12.9 | Malnutrition-related diabetes mellitus without complications |  |  |  |  |  |
|   | E13.0-E13.8 | Other specified diabetes mellitus |  |  |   |  |   |
|  | E13.9 | Other specified diabetes mellitus without complications |  |  |  |  |  |
|   | E14.0-E14.8 | Unspecified diabetes mellitus |  |  |   |  |   |
|  | E14.9 | Unspecified diabetes mellitus without complications |  |  |  |  |  |
| Chronic obstructive pulmonary disease | J20 | Acute bronchitis |  |  |   |   |   |
|   | J41 | Simple and mucopurulent chronic bronchitis |  |  |   |   |   |
|   | J42 | Unspecified chronic bronchitis |  |   |   |   |   |
|   | J42X | Unspecified chronic bronchitis |  |  |   |   |   |
|   | J43 | Emphysema |  |  |   |   |   |
|   | J44 | Other chronic obstructive pulmonary disease |  |  |   |   |   |
|   | J47 | Bronchiectasis |  |   |   |   |   |
|   | J47X | Bronchiectasis |  |  |   |   |   |
| Angina | I20 | Angina pectoris |  |  |   |   |   |
|   | I24.0 | Coronary thrombosis not resulting in myocardial infarction |  |   |  |   |   |
|   | I24.8 | Other forms of acute ischaemic heart disease |  |   |  |   |   |
|   | I24.9 | Acute ischaemic heart disease, unspecified |  |   |  |   |   |
|   | I25 | Chronic ischaemic heart disease |  |  |   |   |   |
| Iron deficiency anaemia | D50.1 | Sideropenic dysphagia |  |  |   |   |   |
|   | D50.8 | Other iron deficiency anaemias |  |  |   |   |   |
|   | D50.9 | Iron deficiency anaemia, unspecified |  |  |   |   |   |
|   | D51 | Vitamin B12 deficiency anaemia |  |  |   |   |   |
|   | D52 | Folate deficiency anaemia |  |  |   |   |   |
| Hypertension | I10 | Essential (primary) hypertension |  |   |   |   |   |
|   | I10X | Essential (primary) hypertension |  |  |   |   |   |
|   | I11.9 | Hypertensive heart disease without (congestive) heart failure |  |  |   |   |   |
|   | I13.0 | Hypertensive heart and renal disease with (congestive) heart failure |  |  |   |   |   |
| Nutritional deficiencies | E40 | Kwashiorkor |  |   |   |   |   |
|   | E41 | Nutritional marasmus |  |   |   |   |   |
|   | E42 | Marasmic kwashiorkor |  |   |   |   |   |
|   | E43 | Unspecified severe protein-energy malnutrition |  |   |   |   |   |
|   | E55.0 | Rickets, active |  |   |   |   |   |
|   | E64.3 | Sequelae of rickets |  |   |   |   |   |
| Dehydration and gastroenteritis | E86 | Volume depletion |  |   |  |   |   |
|   | K52 | Other noninfective gastroenteritis and colitis |  |   |  |   |   |
|   | K52.2 | Allergic and dietetic gastroenteritis and colitis |  |   |   |   |   |
|   | K52.8 | Other specified noninfective gastroenteritis and colitis |  |   |   |   |   |
|   | K52.9 | Noninfective gastroenteritis and colitis, unspecified |  |   |   |   |   |
| Pyelonephritis | N10 | Acute tubulo-interstitial nephritis |  |   |  |   |   |
|   | N11 | Chronic tubulo-interstitial nephritis |  |   |  |   |   |
|   | N12 | Tubulo-interstitial nephritis not spec as acute or chronic |  |   |  |   |   |
|   | N13.6 | Pyonephrosis |  |   |  |   |   |
| Perforated/bleeding ulcer | K25.0-K25.2, K25.4-K25.6 | Gastric ulcer |  |   |  |   |   |
|   | K26.0-K26.2, K26.4-K26.6 | Duodenal ulcer |  |   |  |   |   |
|   | K27.0-K27.2, K27.4-K27.6 | Peptic ulcer, site unspecified |  |   |  |   |   |
|   | K28.0-K28.2, K28.4-K28.6 | Gastrojejunal ulcer |  |   |  |   |   |
|   | K20 | Oesophagitis |  |   |  |   |   |
|   | K21 | Gastro-oesophageal reflux disease |  |   |  |   |   |
| Cellulitis | L01 | Impetigo |  |   |  |   |   |
|   | L02 | Cutaneous abscess, furuncle and carbuncle |  |   |  |   |   |
|  | L03 | Cellulitis |  |   |  |   |   |
|   | L04 | Acute lymphadenitis |  |   |  |   |   |
|   | L08.0 | Pyoderma |  |   |  |   |   |
|   | L08.8 | Other spec local infections of skin and subcutaneous tissue |  |   |  |   |   |
|   | L08.9 | Local infection of skin and subcutaneous tissue, unspecified |  |   |  |   |   |
|   | L88 | Pyoderma gangrenosum |  |   |  |   |   |
|   | L98.0 | Pyogenic granuloma |  |   |  |   |   |
| Pelvic inflammatory disease | N70 | Salpingitis and oophoritis |  |   |   |   |   |
|   | N73 | Other female pelvic inflammatory diseases |  |   |   |   |   |
|   | N74 | Female pelvic inflammatory disorders in diseases EC |  |   |   |   |   |
| Ear, nose and throat infections | H66 | Suppurative and unspecified otitis media |  |   |  |   |  |
|   | H67 | Otitis media in diseases classified elsewhere |  |   |  |   |   |
|   | J02 | Acute pharyngitis |  |   |  |   |  |
|   | J03 | Acute tonsillitis |  |   |  |   |  |
|   | J04 | Acute laryngitis |  |   |  |   |  |
|   | J06 | Acute upper respiratory infections multiple and unsp sites |  |   |  |   |  |
|   | J31.2 | Chronic pharyngitis |  |   |  |   |  |
| Dental conditions | A69.0 | Necrotizing ulcerative stomatitis |  |   |  |   |   |
|   | K02 | Dental caries |  |   |  |   |   |
|   | K03 | Other diseases of hard tissues of teeth |  |   |  |   |   |
|   | K04 | Diseases of pulp and periapical tissues |  |   |  |   |   |
|   | K05 | Gingivitis and periodontal diseases |  |   |  |   |   |
|   | K06 | Other disorders of gingiva and edentulous alveolar ridge |  |   |  |   |   |
|   | K08 | Other disorders of teeth and supporting structures |  |   |  |   |   |
|   | K09.8 | Other cysts of oral region, not elsewhere classified |  |   |  |   |   |
|   | K09.9 | Cyst of oral region, unspecified |  |   |  |   |   |
|   | K12 | Stomatitis and related lesions |  |   |  |   |   |
|   | K13 | Other diseases of lip and oral mucosa |  |   |  |   |   |
| Convulsions and epilepsy | G40 | Epilepsy |  |  |   |   |   |
|   | G41 | Status epilepticus |  |  |   |   |   |
|   | R56 | Convulsions, not elsewhere classified |  |   |  |   |   |
|   | O15 | Eclampsia |  |   |  |   |   |
| Gangrene | R02 | Gangrene, not elsewhere classified |  |   |   |   |   |
| Mental and behavioural disorders | F00 | Dementia in alzheimers |   |  |   |   |   |
|   | F01 | Vascular dementia |   |  |   |   |   |
|   | F02 | Dementia in other diseases |   |  |   |   |   |
|   | F03 | Unspecified dementia |   |  |   |   |   |
| Kidney / urinary tract infections | N15.9 | Renal tubulo-interstitial disease, unspecified; |   |   |  |   |  |
|   | N39.0 | Urinary tract infection, site not specified; |   |   |  |   |  |
|   | N30.0 | Acute cystitis. |   |   |  |   |  |
|   | N30.8 | Other cystitis |   |   |  |   |  |
|   | N30.9 | Cystitis, unspecified |   |   |  |   |  |
| Intestinal infectious diseases  | A02.0 | Salmonella enteritis |   |   |  |   |   |
|   | A04 | Other bacterial intestinal infections |   |   |  |   |   |
|   | A05.9 | Bacterial foodborne intoxication, unspecified |   |   |  |   |   |
|   | A07.2 | Cryptosporidiosis |   |   |  |   |   |
|   | A08 | Viral and other specified intestinal infections |   |   |  |   |   |
|   | A09 | Diarrhoea and gastroenteritis of presumed infectious origin |   |   |  |   |   |
| Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified  | I89.1 | Lymphangitis |   |   |  |   |   |
| Extrapyramidal and movement disorders  | G25.3 | Myoclonus |   |   |  |   |   |

**Annex B**

**NHS Outcomes Framework indicators**

**Definition of Ambulatory Care Sensitive conditions**

**1.0 Background**

1.1 The NHS Outcomes Framework was published in December 2010 with a group of 51 indicators. As part of this suite of indicators, there are two that look at unplanned hospitalisation for conditions that should be managed in the community. These indicators are:

 Domain 2 - Enhancing quality of life for people with long-term conditions

* Unplanned hospitalisation for chronic ambulatory care sensitive conditions

Domain 3 - Helping people to recover from episodes of ill health or following injury

* Emergency admissions for acute conditions that should not usually require hospital admission

1.2 Both these indicators will look at ambulatory care sensitive conditions with an aim to monitor those conditions for which hospital admission could be prevented by interventions in the community.

1.3 This paper follows on from a discussion held with clinical colleagues around appropriate definitions, and builds on the work set out in the paper of 16th May 2011.

**2.0 Developing a definition of ambulatory care sensitive conditions**

2.1 During discussions it was agreed that the most appropriate way forward was to build on the definition of ambulatory care sensitive conditions as used in the NHS Comparators indicator “Emergency admissions for 19 ambulatory care sensitive conditions”, with some additions and removals as deemed appropriate for the purpose of the indicator. The definitions and codes used are outlined in this paper.

2.2 Decisions have been made to include conditions for two reasons – either the condition itself should be treated in the community/primary care, or management of the condition outside hospital should prevent the condition escalating so that an emergency admission is required. Therefore – in some of these cases the indicator is not saying that should an acute exacerbation occur should not be treated in hospital, rather that early management should prevent an acute exacerbation.

2.3 This indicator will benefit from periodic review as advances are made in way conditions are treated.

2.4 There has been effort made to ensure consistency with other definitions – namely the conditions set out in the NCHOD indicators “Acute/Chronic conditions usually managed in primary care”, and those set out in the NHS Institute population “Directory of Ambulatory Emergency Care for Adults”. Some conditions may appear in the directory, but not in the definition set out below. This is because ambulatory emergency care needs to be distinguished from the ambulatory care sensitive conditions. The latter refers to conditions in which improved preventative healthcare or improved long-term condition management results in a decreased risk of an acute event occurring. With the Directory of Ambulatory Emergency Care for Adults, the 49 scenarios relate to where the acute event has developed and delivery of that acute care is feasible for a significant proportion of cases without an overnight stay in hospital. Thus, there are overlaps in the conditions mentioned but they represent differing points in the patient journey.

**3.0 Amendments to NHS Comparators definition**

The list of conditions to be included are outlined below, and changes to the current NHS Comparators definition are highlighted. Those classed as “chronic” are marked blue, and those classed as “acute” are marked in red.

**3.1 Influenza, pneumonia and other vaccine preventable:**

The following codes were removed from the existing NHS Comparators definition. Each of these had between 2 and 11 emergency admissions for adults in 2009-10):

A35 – Other tetanus

A80 – Acute poliomyelitis

G00.0 - Haemophilus meningitis

All the conditions below are considered acute except for B18.0 and B18.1.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| J10 | Influenza due to identified influenza virus | 3,154 |
| J11 | Influenza, virus not identified | 920 |
| J13X | Pneumonia due to Streptococcus pneumoniae | 2,051 |
| J14 | Pneumonia due to Haemophilus influenzae | 505 |
| J15.3 | Pneumonia due to streptococcus, group B | 38 |
| J15.4 | Pneumonia due to other streptococci | 377 |
| J15.7 | Pneumonia due to Mycoplasma pneumoniae | 432 |
| J15.9 | Bacterial pneumonia, unspecified | 259 |
| J16.8 | Pneumonia due to other specified infectious organisms | 49 |
| J18.1 | Lobar pneumonia, unspecified | 63,376 |
| J18.8 | Other pneumonia, organism unspecified | 472 |
| A36 | Diphtheria | \* |
| A37 | Whooping cough | - |
| B05 | Measles | 25 |
| B06 | Rubella [German measles] | \* |
| B16.1 | Acute hep B with delta-agent (coinfectn) without hep coma | \* |
| B16.9 | Acute hep B without delta-agent and without hepat coma | 170 |
| B18.0 | Chronic viral hepatitis B with delta-agent | \* |
| B18.1 | Chronic viral hepatitis B without delta-agent | 61 |
| B26 | Mumps | 206 |
| M01.4 | Rubella arthritis | - |
|  |  | **Total 72,105** |

Additional notes for definition:

In any diagnosis field

Exclude people with a secondary diagnosis of D57 (Sickle-cell disorders)

**3.2 Asthma**

No changes have been made to the NHS Comparators definition. All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| J45 | Asthma | 31,793 |
| J46X | Status asthmaticus | 3,379 |
|  |  | **Total 35,172** |

Additional notes for definition:

Principal diagnosis only

**3.3 Congestive heart failure**

Hypertensive heart and renal disease with (congestive) heart failure (ICD-10 code I13.0) has been added into the existing NHS Comparators definition. All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| I11.0 | Hypertensive heart disease with (congestive) heart failure | 420 |
| I50 | Heart failure | 8 |
| J81X | Pulmonary oedema | 2,391 |
| I13.0 | Hypertensive heart and renal disease with (congestive) heart failure | 59 |
|  |  | **Total 2,878** |

Additional notes for definition:

Principal diagnosis only

Exclude operative procedures with ICD-10 codes of K0, K1, K2, K3, K4, K50, K52, K55, K56, K57, K60, K61, K66, K67, K68, K69, K71

**3.4 Diabetes**

Diabetes conditions coded 0.9 - “without complications” – have been added to the NHS Comparators definition (an additional 12,000 emergency admissions). All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| E10 | Insulin-dependent diabetes mellitus | 13,153 |
| E11 | Non-insulin-dependent diabetes mellitus | 16,363 |
| E12 | Malnutrition-related diabetes mellitus | \* |
| E13 | Other specified diabetes mellitus | 255 |
| E14 | Unspecified diabetes mellitus | 958 |
|  |  | **Total ~30,700** |

Additional notes for definition:

In any diagnosis field

**3.5 Chronic obstructive pulmonary disease**

No changes have been made to the NHS Comparators definition. All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| J20 | Acute bronchitis | 1,029 |
| J41 | Simple and mucopurulent chronic bronchitis | 14 |
| J42X | Unspecified chronic bronchitis | 139 |
| J43 | Emphysema | 2,950 |
| J44 | Other chronic obstructive pulmonary disease | 99,852 |
| J47X | Bronchiectasis | 4,681 |
|  |  | **Total 108,665** |

Additional notes for definition:

Principal diagnosis only;

ICD-10: J20 only with second diagnosis of J41, J42, J43, J44, J47

**3.6 Angina**

Chronic ischaemic heart disease (ICD-10 code I25) has been added on to the NHS Comparators definition.

These conditions could be split into chronic and acute, with I24 codes classed as acute, and I20 and I25 classed as chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| I20 | Angina pectoris | 63,031 |
| I24.0 | Coronary thrombosis not resulting in myocardial infarction | 143 |
| I24.8 | Other forms of acute ischaemic heart disease | 974 |
| I24.9 | Acute ischaemic heart disease, unspecified | 339 |
| I25 | Chronic ischaemic heart disease | 16,418 |
|  |  | **Total 80,905** |

Additional notes for definition:

Principal diagnosis only;

Exclude cases with operative procedure ICD-10 codes of A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, V, W, X0, X1, X2, X4, X5

**3.7 Iron deficiency anaemia**

The following codes were added to the existing NHS Comparators definition:

D51 – Vitamin B12 deficiency anaemia

D52 – Folate deficiency anaemia

All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| D50.1 | Sideropenic dysphagia | - |
| D50.8 | Other iron deficiency anaemias | 4,895 |
| D50.9 | Iron deficiency anaemia, unspecified | 6,892 |
| D51 | Vitamin B12 deficiency anaemia | 376 |
| D52 | Folate deficiency anaemia | 602 |
|  |  | **Total 12,765** |

Additional notes for definition:

Principal diagnosis only

**3.8 Hypertension**

No changes have been made to the NHS Comparators definition.

All the conditions are considered chronic.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| I10X | Essential (primary) hypertension | 6,070 |
| I11.9 | Hypertensive heart disease without (congestive) heart failure | 138 |
|  |  | **Total 6,208** |

Additional notes for definition:

Principal diagnosis only

Exclude cases with procedure code of K0, K1, K2, K3, K4, K50, K52, K55, K56, K57, K60, K61, K66, K67, K68, K69, K71

**3.9 Nutritional deficiencies**

This category will be removed due to extremely small numbers involved (~90 in 2009-10)

**3.10 Dehydration and gastroenteritis**

The following codes were added to the existing NHS Comparators definition:

A02.0 **Salmonella enteritis**

A04 **Other bacterial intestinal infections**

A05.9 **Bacterial foodborne intoxication, unspecified**

A07.2 **Cryptosporidiosis**

A08 **Viral and other specified intestinal infections**

A09 **Diarrhoea and gastroenteritis of presumed infectious origin**

K52.0 **Gastroenteritis and colitis due to radiation**

K52.1 **Toxic gastroenteritis and colitis**

All the conditions are considered acute.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| E86 | Volume depletion | 9,358 |
| K52 | **Other noninfective gastroenteritis and colitis** | **54,054** |
| A02.0 | **Salmonella enteritis** | **285** |
| A04 | **Other bacterial intestinal infections** | **5,762** |
| A05.9 | **Bacterial foodborne intoxication, unspecified** | **109** |
| A07.2 | **Cryptosporidiosis** | **51** |
| A08 | **Viral and other specified intestinal infections** | **8,064** |
| A09 | **Diarrhoea and gastroenteritis of presumed infectious origin** | **2,719** |
|  |  | **Total 80,402** |

Additional notes for definition:

Principal diagnosis only

**3.11 Pyelonephritis and kidney/urinary tract infections**

The following codes were added to the existing NHS Comparators definition, widening the group to include kidney and urinary tract infections:

N15.9 Renal tubulo-interstitial disease, unspecified;

N39.0 Urinary tract infection, site not specified;

N30.0 Acute cystitis

N30.8 **Other cystitis**

N30.9 **Cystitis, unspecified**

All the conditions are considered acute. N11 refers to Chronic tubulo-interstitial nephritis. However, the numbers involved are considered too small to move under chronic conditions as a separate category.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| N10 | Acute tubulo-interstitial nephritis | 2,049 |
| N11 | Chronic tubulo-interstitial nephritis | 521 |
| N12 | Tubulo-interstitial nephritis not spec as acute or chronic | 9,320 |
| N13.6 | Pyonephrosis | 531 |
| N15.9 | Renal tubulo-interstitial disease, unspecified; | 83 |
| N39.0 | Urinary tract infection, site not specified; | 109,075 |
| N30.0 | Acute cystitis | 81 |
| N30.8 | **Other cystitis** | **89** |
| N30.9 | **Cystitis, unspecified** | **482** |
|  |  | **Total 122,231** |

Additional notes for definition:

Principal diagnosis only

**3.12 Perforated/bleeding ulcer**

The following codes were added to the existing NHS Comparators definition:

K20X **Oesophagitis**

K21 **Gastro-oesophageal reflux disease**

All the conditions are considered acute.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| K25.0-K25.2, K25.4-K25.6 | Gastric ulcer | 1,774 |
| K26.0-K26.2, K26.4-K26.6 | Duodenal ulcer | 3,534 |
| K27.0-K27.2, K27.4-K27.6 | Peptic ulcer, site unspecified | 214 |
| K28.0-K28.2, K28.4-K28.6 | Gastrojejunal ulcer | 35 |
| K20 | **Oesophagitis** | **1,808** |
| K21 | **Gastro-oesophageal reflux disease** | **8,251** |
|  |  | **Total 15,616** |

Additional notes for definition:

Principal diagnosis only

**3.13 Cellulitis**

The following codes were added to the existing NHS Comparators definition:

I89.1 - Lymphangitis

L01 – Impetigo

L02 – Cutaneous abscess, furuncle and carbuncle

All the conditions are considered acute.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| L03 | Cellulitis | 52,432 |
| L04 | Acute lymphadenitis | 282 |
| L08.0 | Pyoderma | 53 |
| L08.8 | Other spec local infections of skin and subcutaneous tissue | 286 |
| L08.9 | Local infection of skin and subcutaneous tissue, unspecified | 2,131 |
| L88 | Pyoderma gangrenosum | 115 |
| L98.0 | Pyogenic granuloma | 141 |
| I89.1 | Lymphangitis | 87 |
| L01 | Impetigo | 104 |
| L02 | Cutaneous abscess, furuncle and carbuncle | 23,700 |
|  |  | **Total 79,331** |

Additional notes for definition:

Principal diagnosis only

Exclude cases with operative procedure ICD-10 codes of A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S1, S2, S3, S41, S42, S43, S44, S45, S48, S49, T, V, W, X0, X1, X2, X4, X5

S47 is allowed if by itself

**3.14 Pelvic inflammatory disease**

This category will be removed due to small numbers involved.

**3.15 Ear, nose and throat infections**

The following codes were added to the existing NHS Comparators definition:

J04.0 – Acute laryngitis

We also considered adding J31.0 (Chronic rhinitis) and J31.1 (Chronic nasopharyngitis), however the numbers were considered too small for these conditions to be included.

All the conditions are considered acute – chronic pharyngitis is considered too small to move under chronic conditions as a separate category.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| H66 | Suppurative and unspecified otitis media | 878 |
| H67 | Otitis media in diseases classified elsewhere | - |
| J02 | Acute pharyngitis | 2,579 |
| J03 | Acute tonsillitis | 8,129 |
| J06 | Acute upper respiratory infections multiple and unsp sites | 4,068 |
| J31.2 | Chronic pharyngitis | 13 |
| J04.0 | Acute laryngitis | 296 |
|  |  | **Total 15,963** |

Additional notes for definition:

Principal diagnosis only

**3.16 Dental conditions**

No changes have been made to the NHS Comparators definition. All the conditions are considered acute.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| A69.0 | Necrotizing ulcerative stomatitis | \* |
| K02 | Dental caries | 464 |
| K03 | Other diseases of hard tissues of teeth | 10 |
| K04 | Diseases of pulp and periapical tissues | 3,567 |
| K05 | Gingivitis and periodontal diseases | 283 |
| K06 | Other disorders of gingiva and edentulous alveolar ridge | 193 |
| K08 | Other disorders of teeth and supporting structures | 404 |
| K09.8 | Other cysts of oral region, not elsewhere classified | 8 |
| K09.9 | Cyst of oral region, unspecified | \* |
| K12 | Stomatitis and related lesions | 1,463 |
| K13 | Other diseases of lip and oral mucosa | 694 |
|  |  | **Total** 7,092 |

Additional notes for definition:

Principal diagnosis only

**3.17 Convulsions and epilepsy**

The following codes were added to the existing NHS Comparators definition:

G25.3 **Myoclonus**

Epilepsy and status epilepticus are considered chronic. All other conditions are classed as acute.

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| G40 | Epilepsy | 27,167 |
| G41 | Status epilepticus | 1,677 |
| R56 | Convulsions, not elsewhere classified | 22,273 |
| O15 | Eclampsia | 12 |
| G25.3 | **Myoclonus** | **189** |
|  |  | **Total 51,318** |

Additional notes for definition:

Principal diagnosis only

**3.18 Gangrene**

This category will be removed due to small numbers involved.

**4.0 Additional categories**

**4.1 Dementia**

In addition to the amendments made to the existing NHS Comparators definition, it was also strongly felt that emergency admissions for Dementia should be included as a chronic ambulatory care sensitive condition. This condition is considered chronic. The ICD-10 codes are as follows:

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| F00 | Dementia in alzheimers | 600 |
| F01 | Vascular dementia | 4,017 |
| F02 | Dementia in other diseases | 83 |
| F03 | Unspecified dementia | 5,073 |
|  |  | **Total 9,773** |

**4.2 Atrial fibrillation and flutter**

This was picked up through a literature review of existing definitions of ACS conditions, and is also included in the NHS Institute’s Directory of Ambulatory Emergency Care for Adults

|  |  |  |
| --- | --- | --- |
| **ICD-10 Code** | **Condition** | **Emergency admissions for adults in 2009-10** |
| I48X | Atrial fibrillation and flutter | 56,694 |

**4.3 Acute headache**

This was picked up through a literature review of existing definitions of ACS conditions, and is also included in the NHS Institute’s Directory of Ambulatory Emergency Care for Adults. However, following advice from the National Clinical Lead for Neurology, it was decided not to be included in the list of conditions.

**5.0 Summary of conditions used in the indicator definitions**

**5.1 Unplanned hospitalisation for chronic ambulatory care sensitive conditions**

* Chronic hepatitis B
* Asthma
* Congestive heart failure
* Diabetes
* Chronic obstructive pulmonary disease
* Angina
* Iron deficiency anaemia
* Hypertension
* Epilepsy
* Dementia

**5.2 Emergency admissions for acute conditions that should not usually require hospital admission**

* Influenza, pneumonia and other vaccine preventable
* Acute ischaemic heart disease
* Dehydration and gastroenteritis
* Kidney/urinary tract infections
* Perforated/bleeding ulcer
* Cellulitis
* Ear, nose and throat infections
* Dental conditions
* Convulsions
* Atrial fibrillation and flutter

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1. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/442952/Annual_Epidemiological_Commentary_FY_2014_2015.pdf> [↑](#footnote-ref-1)
2. <https://www.gov.uk/government/collections/clostridium-difficile-guidance-data-and-analysis> [↑](#footnote-ref-2)
3. <https://www.nice.org.uk/advice/esmpb1/chapter/full-evidence-summary-medicines-and-prescribing-briefing> [↑](#footnote-ref-3)
4. <https://www.england.nhs.uk/wp-content/uploads/2013/12/5yr-strat-plann-guid-wa.pdf> [↑](#footnote-ref-4)