THE IMPACT OF RECORDING SAME DAY EMERGENCY CARE ACTIVITY IN THE EMERGENCY CARE DATA SET - METHODOLOGY

Background

There are proposed changes to move records of same day emergency care (SDEC) activity to the emergency care data set (ECDS).[1] Currently SDEC activity resides within the inpatient data set. This analysis investigated the impact of the proposed changes on frequently used inpatient metrics such as mortality ratios, readmission risk and average length of stay.

Methodology

For the purpose of this analysis we have limited all activity to admissions from acute, non-specialist trusts. All admissions where the records were of poor quality were excluded from the analysis, this included admissions where risk adjusted mortality or readmission outcomes could not be calculated due to missing data fields.

The denominator

Building on the previously stated criteria for inclusion, there are two different denominators included in the analysis.

- All admission types: elective and non-elective
- Non-elective admissions only

Defining SDEC-eligible admissions (numerator)

We used the diagnosis codes and ages suggested by the SDEC 100 registry[2] to define inpatient admissions that may be eligible for SDEC. We also applied new exclusion criteria to refine the SDEC-eligible cohort.

Inclusion criteria (based on SDEC 100 registry[2]):

- SDEC ICD10 code in the primary diagnosis position
- Age criteria relating to ICD10 code is satisfied
    - Frailty is defined as ages >75 (adapted from SDEC 100 registry[2] for this analysis)
    - Adult is defined as ages 18+
    - Child is defined as ages 2-17

The SDEC reference tables[2] describe priority conditions for SDEC as part of the *NHS Long Term Plan* (2019). The list is not intended to be exhaustive or exclusive but to allow providers and commissioners to identify the highest impact conditions that may be amenable to SDEC. Reference tables are accessible via the following link:

https://nhs-digital.citizenspace.com/data-set-development-service/consultation-on-change-to-ecds/

Exclusion criteria:

- Admissions where the patient was not discharged on the same day that they were admitted (length of stay >0 days)
- Admissions where patients died during their admission
- Admissions where the patient was transferred to or from another provider
- Elective admissions

The assumption here is that patients who are amenable to SDEC should be clinically well enough to be discharged the same day and therefore not require a transfer at any point in the admission.

Groupings

SDEC ICD10 codes are grouped into 15 systems, which were broadly grouped into medical and surgical systems for the purpose of this analysis.

Medical systems defined as:

- Medical: Cardiac
- Medical: Gastro
- Medical: Neuro
- Medical Respiratory
- Medical: Haem/Onc
- Medical: Endocrine
- Medical: Allergy
- Medical: Infectious
- Toxicology
- Drug/Alcohol

Surgical systems defined as:

- Surgical: General
- Surgical Urology
- ObsGyn
- Ortho/Trauma
- Rheum/Ortho

Analysis

Figure 1 – National percentage of all admissions that are SDEC eligible for FY2018/19. Visualised as a pie chart.

Figure 2 – 10-year trend of the national annual percentage of all admissions that are SDEC eligible. Visualised as a line graph.

Figure 3 – National volume of SDEC eligible admissions in FY18/19 split by system of primary diagnosis. Visualised as a bar chart.

Figure 4 – Provider level percentage of all admissions that are SDEC eligible split by medical or surgical system of primary diagnosis for FY18/19. Visualised as a stacked bar chart.

Figure 5 – The bar charts show the provider level impact and variation of removing SDEC-eligible admissions from the inpatient dataset on several key metrics for FY18/19:

- Change in hospital standardised mortality ratio relative risk, limited to 56 diagnoses groups, which give rise to over 80% of in-hospital deaths.
- Change in standardised mortality ratio relative risk (all diagnoses groups).
- Change in readmission relative risk (all diagnoses groups), where readmissions are within 28 days.
- Change in average length of stay (in days).

Displayed in the top right corner of each bar chart is the number of hospitals where the banding changed after the removal of SDEC-eligible admissions e.g. from within expected range to above expected.

Figure 6 – National number of SDEC-eligible admissions in FY18/19 for each ICD10 primary diagnosis where the number of SDEC-eligible admissions were >2000 (43 out of 78 primary diagnoses are presented on the chart).

References

1. https://nhs-digital.citizenspace.com/data-set-development-service/consultation-on-change-to-ecds/

2. https://nhs-digital.citizenspace.com/data-set-development-service/consultation-on-change-to-ecds/
Download Excel Workbook titled: SDEC 100 registry - Final 26 07 2019.xlsx