

Supplementary ECDS Analysis Data Coverage and Completeness Assessment

Introduction

With the publication of Supplementary ECDS Analysis, it is the first time data from the Monthly A&E Activity and Emergency Admissions (MSitAE) and Emergency Care Dataset (ECDS) collections have been published side by side on a monthly basis.

This note is designed to highlight the differences in the contents and coverage between these two data sources.

Data Sources

There are currently two published sources of A&E activity: Monthly A&E Activity and Emergency Admissions (MSitAE) and the Emergency Care Dataset (ECDS). MSitAE is an aggregate data collection which has been submitted by A&E providers since November 2010, initially in the form of a weekly data submission, which was changed to a monthly frequency from June 2015.

MSitAE collects the total number of attendances in the calendar month for all A&E types, including Minor Injury Units (MIUs) and Walk-in Centres (WICs), and of these, the number discharged, admitted, or transferred within four hours of arrival. Also included are the number of Emergency Admissions, and any waits over four hours and over twelve hours for admissions following decision to admit.

ECDS is a record-level dataset, introduced in June 2017, that allows the construction of the same metrics included in MSitAE but also includes many more data fields that allows more granular analysis of emergency care activity and performance.

Coverage

MSitAE collects data from all providers of emergency care in England and is considered the primary source of emergency care activity and performance in England.

MSitAE data is submitted by around 200 providers, of which 124 are Acute NHS Trusts with a Type 1 Emergency Department (ED), often referred to as Type 1 Providers.

As ECDS is still a relatively new dataset, it does not yet have as complete coverage as the MSitAE, although we are working with providers to improve the submission rates and data completeness.

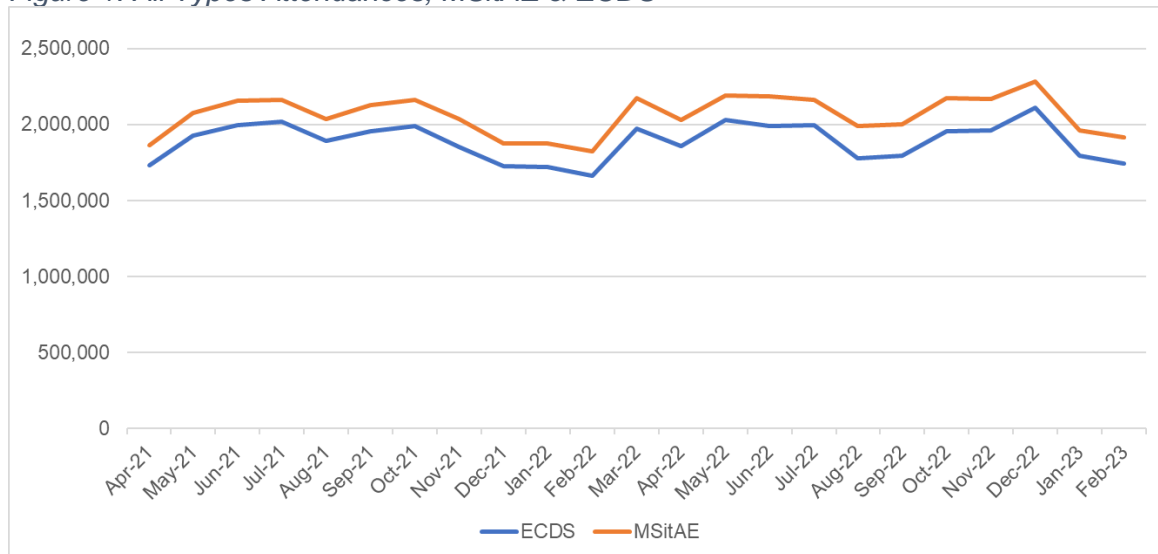
As of February 2023, there were 180 providers submitting data to ECDS including all 124 Types 1 Providers.

Reporting rules for MSitAE allow an acute provider to report co-located Type 3 activity under their trust submission even if an Independent Sector Provider (ISP) manages the services within the acute provider estate. In ECDS, this activity is often reported separately by the ISP, creating a mismatch in provider data.

Attendances

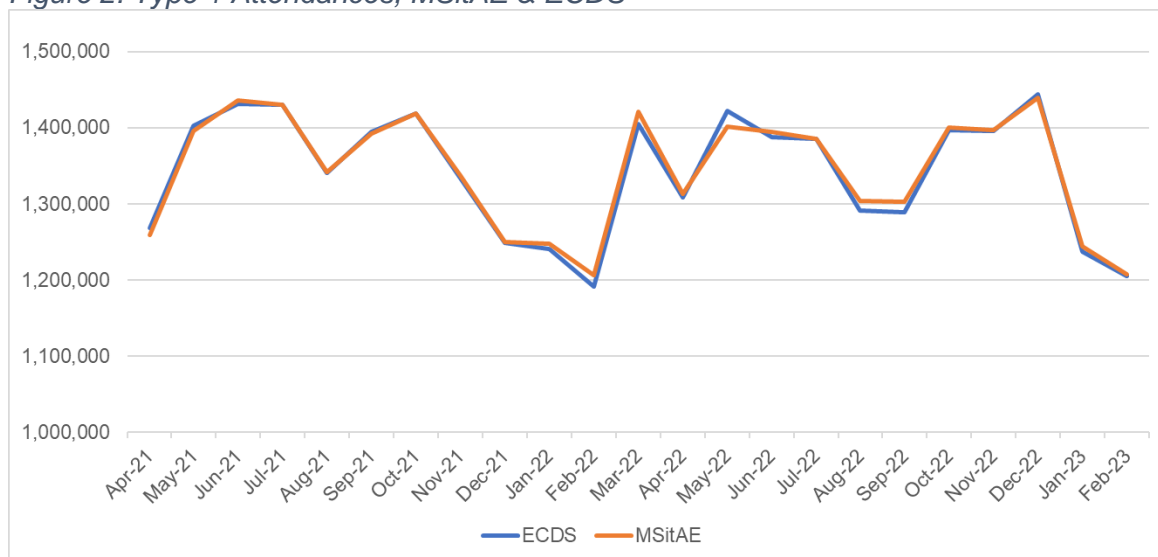
In February 2023 1.9m attendances were reported to MSitAE. By comparison, 1.7m attendances were reporting in ECDS, a difference of 9.7%. Since April 2021 the difference has fluctuated between 8% and 12% (Figure 1).

Figure 1: All Types Attendances, MSitAE & ECDS



However, when looking solely at Type 1 attendances, both MSitAE and ECDS had 1.2m attendances, with a difference of 0.2%. Since April 2021 the difference has been less than 1% in most months (Figure 2).

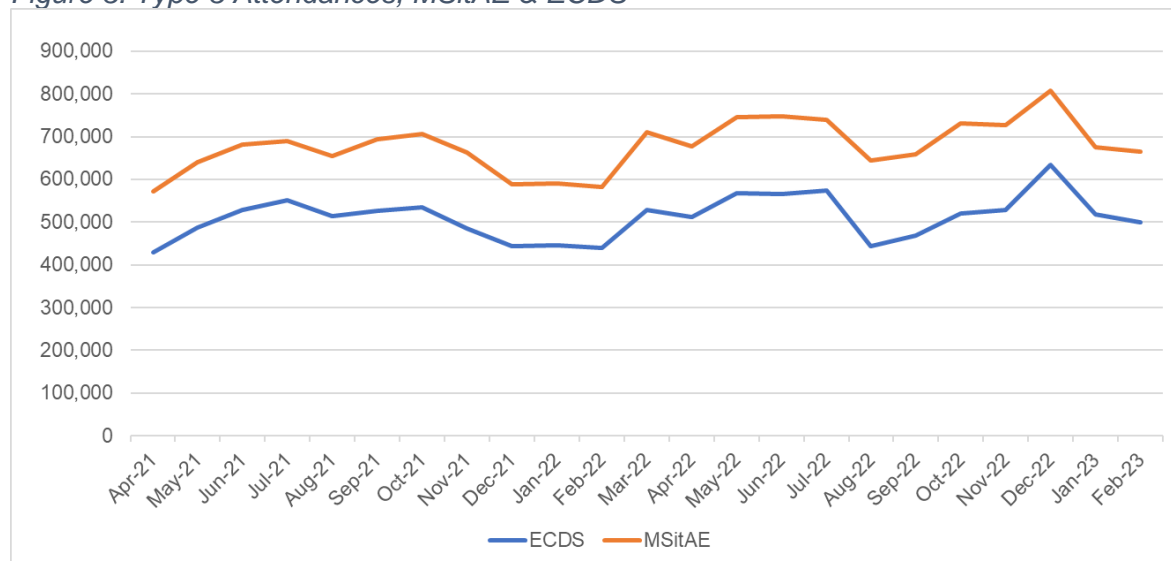
Figure 2: Type 1 Attendances, MSitAE & ECDS



The largest difference in volumes between sources has been for Type 3 activity. In February 2023, MSitAE reported 664,000 Type 3 attendances compared to 499,000 in ECDS, a difference of 33%. Since April 2021 this difference has fluctuated between 25% and 45% (Figure 3).

However, it should be noted that only designated UTCs have been mandated to submit Type 3 activity to ECDS; activity not collected through ECDS is largely from Type 3 sites that are likely to transition to alternative services, and therefore outside the scope of emergency care reporting.

Figure 3: Type 3 Attendances, MSitAE & ECDS



One area where we still see large differences between the two sources, even for Type 1 activity, is in the number of patients that are admitted via A&E. In February 2023 there were 346,000 reported in MSitAE but by contrast only 266,000 in ECDS, a difference of 30%. The main reason for this is the poor completion of the fields required to identify admissions in ECDS (see Discharge Destination completeness in the section below).

It should also be noted that the ECDS Supplementary Analysis uses a cohort of providers each month that have met data completeness requirements. Therefore, the number of providers included in the ECDS data each month may differ, and this would result in further difference in attendance numbers compared to MSitAE.

Completeness

As ECDS is a record-level dataset, the construction of metrics requires a number of key fields to be completed to a sufficiently high enough level to minimise the risk of introducing bias or skewing the data. NHS England have set a minimum threshold of 90% completeness for these fields to be included in the publication each month. Any providers who do not meet this level of completeness are not included in the calculation of that metric.

Departure Date/Time

Attendance and performance data are counted against the date and time the patient leaves the department. If these fields are not completed, activity cannot be assigned to a month and so durations in the department cannot be calculated.

Nationally, departure date and departure time are at least 99% complete each month and there is very little provider variation. This has been the case since ECDS was introduced.

Ethnicity

Ethnic Group is required to assign attendances to ethnic categories, with this data being used to develop understanding of ED activity to support a reduction in health inequalities. Nationally, this field is 98% complete and there is very little provider variation. This has been the case since ECDS was introduced.

Chief Complaint

Chief Complaint is the data field identifying the main reason a patient attended A&E. Nationally, this field is 81% complete (Figure 4). In February 2023 provider variation shows that two thirds of Type 1 providers had a completion rate of over 90% and eight providers had less than 50% completion (Figure 5).

Figure 4: ECDS Field Completeness, Chief Complaint

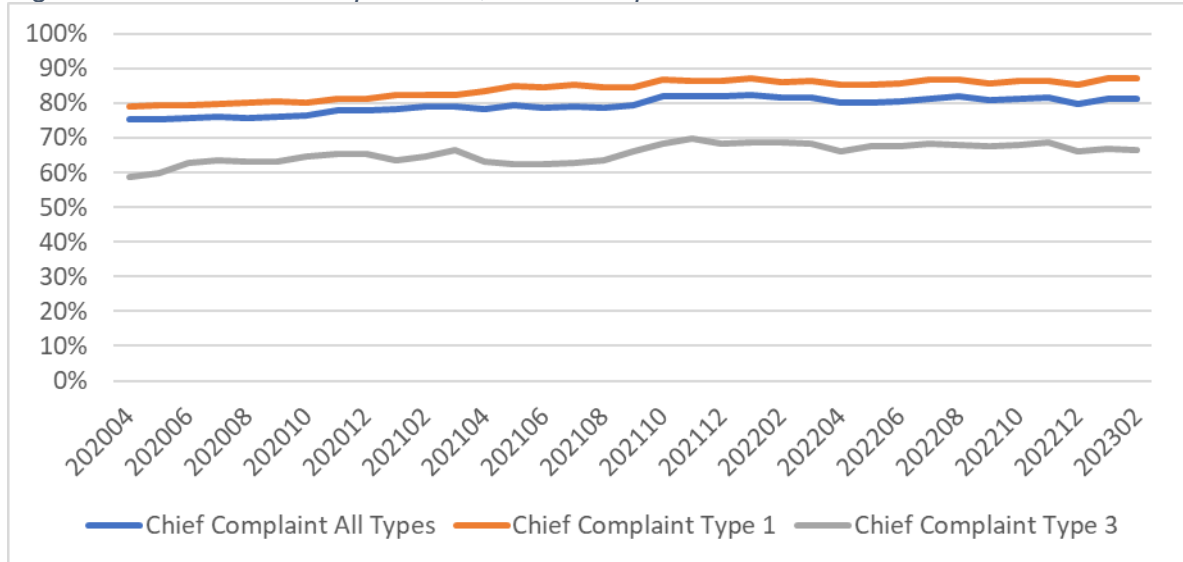
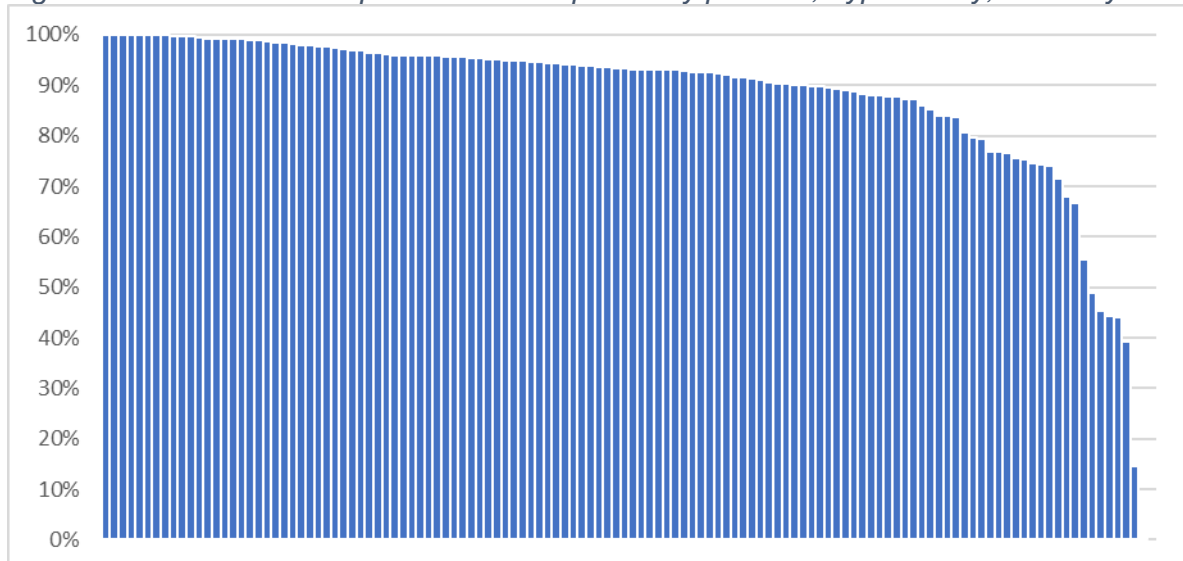


Figure 5: ECDS Chief Complaint Field Completion by provider, Type 1 Only, February 2023



Discharge Destination

Discharge destination is the data field that enables identification of the patient outcome - e.g., were they discharged, admitted, or transferred. This in turn allows us to calculate the number of attendances that were admitted each month. Nationally, this field is 88% complete (Figure 6). In February 2023 provider variation shows that 85% of Type 1 providers had a completion rate of over 90% and seven providers had less than 50% completion (Figure 7).

Figure 6: ECDS Field Completeness, Discharge Destination

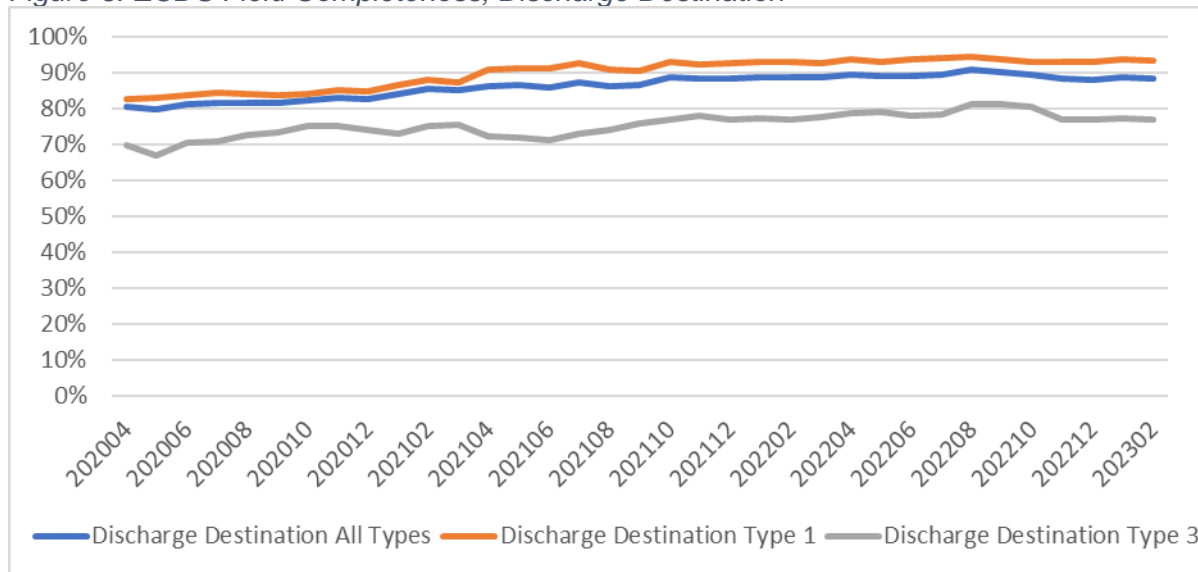
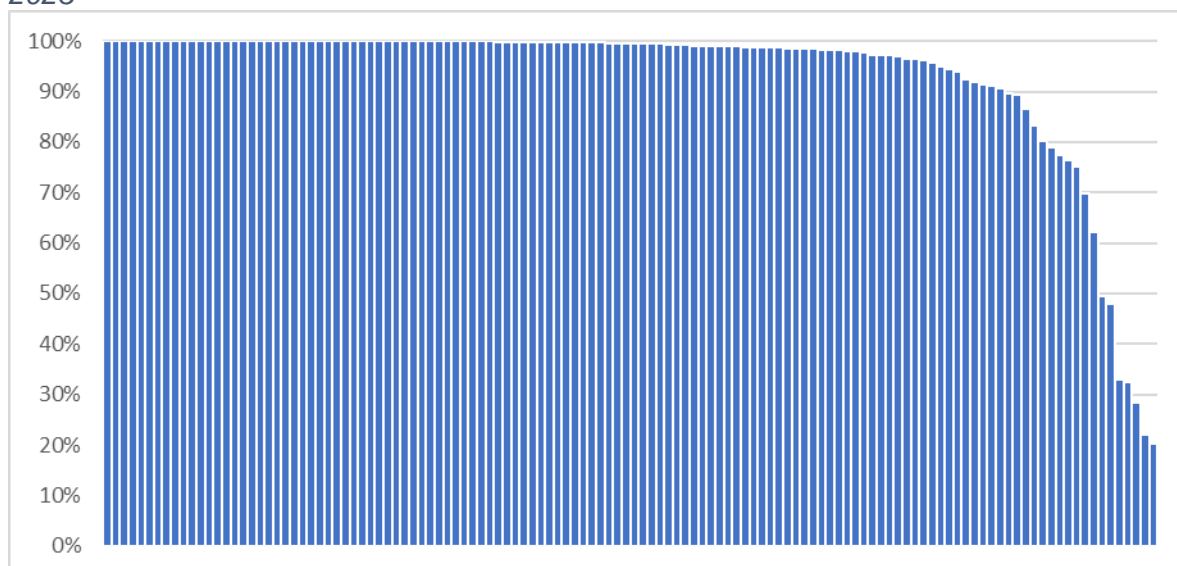


Figure 7: ECDS Discharge Destination Field Completion by provider, Type 1 Only, February 2023



Ongoing Work to Improve Coverage and Completeness

Improvement of ECDS data quality and coverage is an ongoing piece of work led by the national ECDS and UTC programmes, with additional support from regional engagement and analytical teams.

Identification of non-submitting Type 3 sites and the improvement in completion of core ECDS fields are priorities and are essential requirements for the expansion of ECDS publications.

Other Sources of Emergency Care Data

Comparable data is published by each of the devolved nations. A description of the technical differences between data from the four administrations can be found here:

<https://gss.civilservice.gov.uk/health-waiting-time-statistics/>

The Welsh Government publishes monthly data on A&E attendances and 12-hour from arrival performance. Data can be found here: <https://stats.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Hospital-Waiting-Times/Accident-and-Emergency>

ISD Scotland publishes weekly and monthly updates on A&E attendances and 12-hour from arrival performance. This can be found here: <http://www.isdscotland.org/Health-Topics/Emergency-Care/Publications/index.asp?ID=1251>

The Department of Health, Social Services and Public Safety publishes quarterly data on A&E attendances and 12-hour from arrival performance. Data can be found here: <https://www.health-ni.gov.uk/articles/emergency-care-waiting-times>

NHS England publish Emergency Care statistics based on ECDS as part of the HES publication. Monthly reports are available here: <https://digital.nhs.uk/data-and-information/publications/statistical/provisional-monthly-hospital-episode-statistics-for-admitted-patient-care-outpatient-and-accident-and-emergency-data>

In addition, NHS England publish an Annual A&E report incorporating both ECDS and MSitAE data: <https://digital.nhs.uk/data-and-information/publications/statistical/hospital-accident--emergency-activity>

Full details of A&E and emergency admissions data for individual organisations are available at: <http://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/>

Contact Information

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