

## **Announcement of methodological changes to the Summary Hospital-level Mortality Indicator (SHMI)**

### **Background**

The Summary Hospital-level Mortality Indicator (SHMI) is calculated using Hospital Episode Statistics (HES) data, which are then linked with death registrations data from the Office for National Statistics to allow deaths which occurred outside of hospital to be captured.

HES is a data warehouse containing details of all NHS funded admissions, outpatient appointments and A&E attendances at English hospitals. HES is a unique data source, whose strength lies in the richness of detail at patient level. HES data includes specific information about the patient (such as age and gender), clinical information (such as diagnoses), administrative information (such as dates and methods of admission and discharge) and geographical information (such as where the patient was treated and the area in which they live).

### **Patient identifiers**

NHS Digital has historically created a derived field known as the HES Patient ID (HESID) to provide a way of tracking patients through the HES datasets. NHS Digital has developed a new standard person identifier using an algorithm that assigns a common ID across several NHS Digital data sets, known as the MPS Person ID.

Provisional HES data is processed and released as year-to-date data on a monthly basis. When the provisional April to July 2021 data is processed and released in September 2021, the patient identifier in HES will change from the HESID to the MPS Person ID. All prior years of data will be re-processed to assign an MPS Person ID, and from this point only the MPS Person ID will be assigned.

Users of HES will be able to use MPS Person ID for all existing uses of HESID and will also be able to use it to easily link patient activity in HES to activity for the same person in other NHS Digital data sets that use this person identifier, such as the Mental Health Services Data Set (MHSDS) or Community Services Data Set (CSDS).

### **HES derivations and reference data usage**

Some updates to HES cleaning rules and derivations are also being implemented. These will apply from the April to July 2021 provisional data release in September 2021 onwards. Prior years will not be reprocessed. This will include some changes to the way that the patient classification (CLASSPAT) field is derived.

There will also be changes to the way that HES uses organisation reference data. For example, currently a provider code is considered to be valid if it is open at the end of the HES data period. From the April to July 2021 provisional data release in September 2021,

a provider code will be considered to be valid if it is open at the activity date (attendance, episode end date or appointment date).

### **Changes to related datasets**

The HES provider spells and continuous inpatient spells<sup>1</sup> methodology will be updated so that the MPS PersonID is used to join episodes into spells rather than the HESID. Further details of the provider spells methodology are available to download from the SHMI homepage at <https://digital.nhs.uk/shmi>.

The HES data linked to Office for National Statistics (ONS) death registrations data will also be updated to use a new linkage methodology which makes use of the MPS PersonID. Further details are available at <https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/linked-hes-ons-mortality-data>.

### **Methodological changes**

The SHMI methodology currently uses a pseudonymised version of the HESID (PSEUDO\_HESID) to identify the latest provider spell in the reporting period for a particular individual. This is also used to link the HES data to the ONS death registrations data to identify whether an individual died within 30 days of discharge from hospital.

When the HESID is replaced with the MPS Person ID, the SHMI methodology will be updated to use a pseudonymised version of the MPS Person ID (TOKEN\_PERSON\_ID).

No other changes will be made to the SHMI methodology. The patient classification (CLASSPAT) field will continue to be used to exclude day cases, regular day attenders and regular night attenders from the SHMI, and this will use the amended derivation that is being implemented in the HES data. Similarly, fields such as the hospital provider code (PROCDET\_MAPPED) will be derived using the updated way of dealing with reference data.

### **Timing**

The first publication to be affected by this change will be the October 2021 release, which will cover discharges in the period June 2020 – July 2021.

### **Impact**

The impact of the above changes on the SHMI is expected to be very small. Analysis using historic data with the TOKEN\_PERSON\_ID field added showed that the change in

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<sup>1</sup> A provider spell is a continuous period of time spent as a patient within a single trust (provider). A spell may be composed of more than 1 episode (a single period of care under 1 consultant). A spell is finished when the spell ends i.e. the patient is discharged or dies.



**Digital**

Methodological Changes

the number of provider spells, observed deaths, expected deaths and SHMI values was less than 1% for all trusts.

**Further information**

Questions and feedback on the publication are welcomed and should be sent to [enquiries@nhsdigital.nhs.uk](mailto:enquiries@nhsdigital.nhs.uk) or alternatively call 0300 303 5678.