Methodology for estimating the numbers of patients discharged from hospitals into care homes

Where a patient is resident in a care home prior to admission to hospital, hospital records are commonly assigned the source of admission and discharge destination of 'Usual place of residence' at the point of discharge. Therefore, admitted patient care records within the Secondary User Service (SUS) dataset does not allow direct reporting of admissions from and discharges to care homes.

Given these constraints, a methodology has been developed to join SUS admitted patient care spells to the Master Patient Index (MPI), which is a patient-level register sourced from the National Health Application and Infrastructure Services (NHAIS). The MPI contains a history of the patients addresses, and each record has a 'Date From' and 'Date To' field allowing the period during which the patient was resident at an address to be determined. By combining these two datasets, care home residents have been identified through address tracing in the Master Patient Index allowing the proportion of patients discharged to care homes to be estimated.

The methodology comprises the following steps:

1. Care home residents have been identified within the MPI by mapping Unique Property Reference Numbers to registered residential homes, nursing homes and hospices based on Care Quality Commission registrations;
2. The MPI extract including the history of address registration changes per patient has been linked to admitted patient care spells sourced from the SUS+ Service using patients NHS Number for linkage[1];
3. The admission and discharge date for each admitted patient care spell have been compared to the 'Date from' and 'Date To' field within the MPI (that reports the month within which a patient address change was registered with the NHAIS system) to identify the address type (e.g. care home or other address) at the point the patient was admitted to and discharged from hospital;
4. In cases where an individual has more than one MPI record associated with a hospital spell, a process is used to select one address where possible.
5. The address type derived from the MPI is compared to the 'Discharge Destination' field from the admitted patient care SUS record using the following logic to determine the address type on discharge:
   - Where the Discharge Destination = 'Care Home', 'Temporary Accommodation' or 'Hospice' set the address type to 'Care home discharge'[2];
   - Where the MPI flags a patient as a care home resident set the address type to 'Care home discharge'; and
   - All other cases are set to the address type of 'Discharged to other address'
6. A similar logic has been applied to determine the type of address on admission by comparing the address type derived from the MPI and the 'Source of Admission' field from the admitted patient care SUS record.

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[1] NHS Number linkage is based on pseudonymised identifiers, and the analysis has been undertaken following data minimisation standards within secure systems in accordance with information governance best practice.
[2] This comparison requires the patient being discharged to have one of more care home address records in the MPI, and by doing so excludes patients where SUS states the patient was discharged to a care home but the patient does not appear in the MPI with a care home address at any point in time.

Following this approach, each admitted patient care spell has been assigned to either the 'Care home discharge' or 'Discharged to other address' categories, and this information has been used to monitor discharges to care homes through time.

Please note the following:

- This is an experimental analysis of developing data.
- The process assumes a progression from private addresses into care homes and this assumption is used to determine discharge destination in cases where a hospital spell links to more than one address record in the MPI.
- The mapping of registered care home addresses within the MPI is not exact and there is a risk delays in registering address changes with the NHAIS and inaccuracies in address tracing underestimate the number of patients who are resident in care homes. These inaccuracies are in part corrected for by incorporating the 'Discharge destination' information from the SUS record as part of the analysis.