Australian and New Zealand Hip Fracture Registry

Background: A minimum data set (MDS) was created for the Australian and New Zealand (ANZ) Hip Fracture Registry Steering Group. The purpose of the minimum dataset and registry is to support consistent, local collection of data across Australia and New Zealand to enable facilities to compare practice and outcomes for hip fracture care against national clinical guidelines and standards of care. The MDS has been developed to capture information relevant to ANZ Hip Fracture Guidelines and national Hip Fracture Care Clinical Care Standard and is comparable to the United Kingdom (UK) national hip fracture registry and other registries emerging across the world.

Purpose: The ultimate goal of the ANZ Hip Fracture Registry is to use data to improve performance and maximise outcomes for older people who fracture their hip by reducing mortality and morbidity, reducing rates of institutionalisation, maximising functional independence and preventing future fractures by monitoring secondary prevention interventions.

MDS development: The MDS has been reviewed by the ANZ Hip Fracture Registry Steering Group, which consists of representatives of key professional and consumer bodies from Australia and New Zealand: Australian and New Zealand Society for Geriatric Medicine (ANZSGM); Australian Orthopaedic Association (AOA); Australian and New Zealand College of Anaesthetists (ANZCA); Australasian College of Emergency Medicine (ACEM); New Zealand Orthopaedic Association (NZOA); Royal Australasian College of Surgeons (RACS); Royal Australasian College of Physicians (RACP); Australian and New Zealand Orthopaedic Nurses Association (ANZONA); Australasian Faculty of Rehabilitation Medicine (AFRM); Australian Physiotherapy Association (APA); Osteoporosis Australia (OA); and Osteoporosis New Zealand (ONZ). This version of the ANZHFR Data Dictionary includes data variables for both the Patient Level Audit (the Registry) and the Facility Level Audit (annual snapshot of hospital level processes and protocols).

The data variables collected in the MDS (Patient Level) are from six (6) key components of care and include: (1) Patient information; (2) Admission; (3) Assessment; (4) Treatment; (5) Discharge; and (7) 120 day follow-up. The data variables collected in the MDS (Facility Level) cover: (1) Hospital Information; (2) Model of Care; (3) Protocols and processes; (4) Beyond the acute hospital stay; (5) Other aspects of care.

Core and non-core data items

Core variables are those variables collected by all using the minimum dataset e.g. date and time of admission, or type of hip fracture, and will be uploaded to the ANZ Hip Fracture Registry (ANZHFR). A number of these items will be considered mandatory for the purposes of forming a meaningful registry. Non-core items are collected at a local level and are held either locally or on the central server, or are generated automatically at a central level using data uploaded.

Review: The MDS will be reviewed annually by the ANZHFR Steering Group. It is anticipated that any new item to be added must be presented with a clear case for the benefits of adding it. Equally the Committee will be charged with removing redundant items which are felt not to add value either at a facility or central level.

Patient Inclusion: A person aged 50 years or older, who has been admitted to a participating hospital with an acutely fractured hip from a minimal or low trauma injury, and who undergoes either surgical or non-surgical management of the hip fracture.

Version history:
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<th>Date Changed</th>
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<td>Jacqui Close</td>
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<td>Jacqui Close</td>
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<td>Review by the Steering Group against the 2014 ANZ Guidelines for Hip Fracture Care and the 2016 ACSQHC Hip Fracture Care Clinical Care Standard and Indicators; incorporation of definitions for the Facility Level Audit variables</td>
<td>Elizabeth Armstrong</td>
<td>August 2016</td>
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<td>Elizabeth Armstrong</td>
<td>September 2016</td>
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### Section 1 Patient information

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<td>Area</td>
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<td>The Australian or New Zealand jurisdiction of the hospital</td>
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</tr>
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<td>To allow for checking of duplicate entries for the one person and to contact the patient for the 120 day follow-up</td>
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<td>Coding Source</td>
<td>To allow for checking of duplicate entries for the one person as well as the ability to follow up patient including future data linkage</td>
</tr>
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<td>The format should be the same as that indicated by the person (for example written on a form) or in the same format as that printed on an identification card, such as Medicare card, to ensure consistent collection of name data</td>
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<td>Coding Frame</td>
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<td>DD Comments</td>
<td>The format should be the same as that indicated by the person (for example written on a form) or in the same format as that printed on an identification card, such as Medicare card, to ensure consistent collection of name data</td>
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<td>Unique person-identifier for each patient in each hospital and contributes to collection of information on follow up e.g. re-operation</td>
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<tr>
<td>DD Comments</td>
<td>Key field: must be entered to create a patient record. Individual hospitals use their own alphabetic, numeric, or alphanumeric coding systems. With the eventual move to E-Health in Australia, each patient will have a unique id nation-wide. Note: Western Australia uses URN. New Zealand to record the hospital event number.</td>
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Master, Version16, November 2023
Data Dictionary Australian and New Zealand Hip Fracture Registry (ANZHFR)
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<td>phone</td>
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<td>Definition</td>
<td>Contact telephone number of the patient</td>
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<td>To contact the patient for the 120 day follow-up</td>
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<td>DD Comments</td>
<td>Only record one telephone number. This should be the best land line telephone or mobile phone number to contact the patient for the 120 day follow-up. Record the prefix plus telephone number without punctuation, for example, 08 8226 6000 or 0417 123456.</td>
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Master, Version16, November 2023
Data Dictionary Australian and New Zealand Hip Fracture Registry (ANZHFR)
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<td>3 Both Aboriginal and Torres Strait Islander origin</td>
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<td>4 Neither Aboriginal or Torres Strait Islander origin</td>
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<td>DD Comments</td>
<td>An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives. Collected Australia only</td>
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</tr>
<tr>
<td>Definition</td>
<td>Which ethnic group or groups does the patient belong to?</td>
</tr>
<tr>
<td>Justification</td>
<td>Basic demographic details</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
</tbody>
</table>
| Coding Frame    | 10 European  
11 New Zealand European  
12 Other European  
21 Māori  
30 Pacific peoples not further defined  
31 Samoan  
32 Cook Islands Māori  
33 Tongan  
34 Niuean  
35 Tokelauan  
36 Fijian  
37 Other Pacific Peoples  
40 Asian not further defined  
41 Southeast Asian  
42 Chinese  
43 Indian  
44 Other Asian  
51 Middle Eastern  
52 Latin American  
53 African  
61 Other Ethnicity  
94 Don’t Know  
95 Refused to answer  
97 Response unidentifiable  
99 Not stated |

**DD Comments**

Patients should be asked to self-identify their ethnicity by asking them ‘Which ethnic group or groups do you belong to?’ For many patients it will not be possible to ask them this during their hospital admission. Therefore, the ethnicity that is recorded in the NZ hospital system should be used. The accuracy of ethnic group(s) can then be clarified at the 120 day follow up phone call. The collector must not limit the number of ethnicities given. Decisions around reporting of ethnic groups will be made in consultation with NZOA Nga Rata Koiwi representative on the NZIMC (New Zealand Implementation Committee). Collected New Zealand only.

The coding frame for this variable has changed. Please see current Data Variable Concordance table at [https://anzhfr.org/data-access/](https://anzhfr.org/data-access/) for details
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Patient's postcode</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Apcode</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the postcode of the suburb of the usual residence of the patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>Basic demographic details</td>
</tr>
<tr>
<td>Format</td>
<td>4 digit numeric, {NNNN}</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Australia Post or New Zealand Post websites (<a href="http://www.auspost.com.au">www.auspost.com.au</a> or <a href="http://www.nzpost.co.nz">www.nzpost.co.nz</a>) provide up-to-date postcodes and localities</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1000 No fixed abode</td>
</tr>
<tr>
<td></td>
<td>9998 Overseas</td>
</tr>
<tr>
<td></td>
<td>9999 Postcode not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Use a valid Australian or New Zealand postcode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Medicare number (Australia) / National Health Index (New Zealand)</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Medicare</td>
</tr>
<tr>
<td>Definition</td>
<td>Patient’s Medicare number</td>
</tr>
<tr>
<td>Justification</td>
<td>To allow for checking of duplicate entries for the one person and for multiple admissions</td>
</tr>
<tr>
<td>Format</td>
<td>Characters, N(11)</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td>Enter the full Medicare number for an individual (i.e. family number plus person individual reference number).</td>
</tr>
</tbody>
</table>

In Australia, if the person does not have a Medicare card or the details are unknown, enter 00000000000 (11 zeros).

Key field New Zealand: must be entered to create a patient record. New Zealand will provide the National Health Index (NHI) which is a unique number assigned to every person who uses health and disability services in New Zealand. New Zealand will use this variable as the main mechanism to identify each patient.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Patient type</td>
</tr>
<tr>
<td>Variable Name</td>
<td>ptype</td>
</tr>
<tr>
<td>Definition</td>
<td>Payment status</td>
</tr>
<tr>
<td>Justification</td>
<td>To identify the source of revenue received by a health industry relevant organisation</td>
</tr>
<tr>
<td>Format</td>
<td>3 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the National Health Data Dictionary, Version 15</td>
</tr>
</tbody>
</table>
| Coding Frame    | 1 Public  
                      2 Private  
                      3 Overseas  
                      9 Not known |
| DD Comments     | For New Zealand all surgery for hip fractures takes place in the public sector. There will be the occasional patient from overseas and this should be noted accordingly.  

In Australia, private sector patients include those with treatment funded by: private health insurance, workers’ compensation insurance, motor vehicle third party insurance, other compensation (e.g. Public liability, common law, medical negligence), private households (i.e. self-funded and out-of-pocket expenditure), non-profit institutions serving households, corporations (other than health insurance), other private sector revenue.

In Australia, public sector patients include those with treatment funded by: Medicare, Pharmaceutical Benefits Scheme and Repatriation Pharmaceutical Benefits Scheme, Department of Veterans’ Affairs, National Health and Medical Research Council, Australian Health Care Agreements, other Special Purpose payments, Other Australian Government Departments, State/Territory non-health departments, or other public sector revenue.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Usual place of residence</td>
</tr>
<tr>
<td>Variable Name</td>
<td>uresidence</td>
</tr>
<tr>
<td>Definition</td>
<td>What is the usual place of residence of the patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>Type of accommodation before and after admission are collected to compare where the patient has come from (what was their usual accommodation) and where they are going to (what will become their usual accommodation). This is an indicator of patient outcome.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the Australasian Rehabilitation Outcomes Centre Inpatient Dataset, Version 3.0; NSW SNAP Data Collection, Version 4.0</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 Private residence (including unit in retirement village)</td>
</tr>
<tr>
<td></td>
<td>2 Residential aged care facility</td>
</tr>
<tr>
<td></td>
<td>3 Other</td>
</tr>
<tr>
<td></td>
<td>4 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Record the patient's usual accommodation type at admission. Residential aged care refers to a supported facility that provides accommodation and care for a person on a long-term basis. This may include multi-purpose services in Australia and private hospitals or rest homes in New Zealand. If the patient lives with a relative or in a community group home or boarding house code 'private residence'. If the patient was admitted from respite care, record their usual place of residence when not in respite care.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Statistical linkage key 581</td>
</tr>
<tr>
<td>Variable Name</td>
<td>slk581</td>
</tr>
<tr>
<td>Definition</td>
<td>A specific code (key) that can be used to bring together two or more records belonging to the same individual. It is represented by a code consisting of characters from the person’s surname, first name, date of birth and gender.</td>
</tr>
<tr>
<td>Justification</td>
<td>Brings together data from different sources to enable greater understanding of the utilisation of health care and/or services. Clinical quality registries should have the capacity to enhance their value through the use of linkage to other datasets (Australian Commission on Safety and Quality in Health Care Framework for Australian Clinical Quality Registries 2014)</td>
</tr>
<tr>
<td>Format</td>
<td>14 Characters XXXXDDMMYYYYN</td>
</tr>
<tr>
<td>Status</td>
<td>Core (created centrally)</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 16 (METeOR identifier 349895)</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>It is represented by a code consisting of the second, third and fifth characters of a person’s family name, the second and third letters of the person’s given name, the day, month and year when the person was born and the sex of the person, concatenated in that order. In Australia, the linkage key is designed to make it possible to count number of clients and services they received, without counting the same client more than once. It can also be used for linking to other related data collections. This may be useful for New Zealand, although the NHI is usually the best and only identifier used for data matching in New Zealand.</td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
</tbody>
</table>

Master, Version16, November 2023
Data Dictionary Australian and New Zealand Hip Fracture Registry (ANZHFR)
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Patient email</td>
</tr>
<tr>
<td>Variable Name</td>
<td>email</td>
</tr>
<tr>
<td>Definition</td>
<td>Email address of patient or significant other (e.g., Enduring Power of Attorney, or family member).</td>
</tr>
<tr>
<td>Justification</td>
<td>To contact the patient for follow up and/or to send letters and other information.</td>
</tr>
<tr>
<td>Format</td>
<td>String</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>1.18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Individual Health Identifier</td>
</tr>
<tr>
<td>Variable Name</td>
<td>IHI</td>
</tr>
<tr>
<td>Definition</td>
<td>An Individual Healthcare Identifier (IHI) is a unique number used to identify an individual for health care purposes.</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable linkage with other registries and administrative datasets such as the National Death Index and National Integrated Health Services Information (NIHSI)</td>
</tr>
<tr>
<td>Format</td>
<td>16 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td><a href="https://meteor.aihw.gov.au/content/432495">https://meteor.aihw.gov.au/content/432495</a></td>
</tr>
<tr>
<td>Coding Frame</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td>Collected Australia only. All people with a Medicare card or DVA card have an IHI automatically assigned.</td>
</tr>
<tr>
<td></td>
<td>New Zealand uses the National Health Index (NHI)</td>
</tr>
<tr>
<td></td>
<td>New variable added 1 January 2024</td>
</tr>
</tbody>
</table>
### Section 2 Admission

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Establishment identifier of operating hospital</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Ahoscode</td>
</tr>
<tr>
<td>Definition</td>
<td>Name of the operating hospital where the patient received surgery for the hip fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To allow for the identification of the establishment for benchmarking and comparison purposes</td>
</tr>
<tr>
<td>Format</td>
<td>Character</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Coding Frame</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Note: For data analysis each hospital will have to be given a unique number</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Admission via ED of operating hospital</td>
</tr>
<tr>
<td>Variable Name</td>
<td>EDadmit</td>
</tr>
<tr>
<td>Definition</td>
<td>Did the patient present directly to the ED of the operating hospital?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor the time spent in ED.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Coding Frame</td>
</tr>
<tr>
<td>1 Yes</td>
<td>2 No - transferred from another hospital (via ED)</td>
</tr>
<tr>
<td>3 No - in-patient fall</td>
<td></td>
</tr>
<tr>
<td>4 No - transferred from another hospital (direct to ward)</td>
<td></td>
</tr>
<tr>
<td>9 Other / not known</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td>If the patient was admitted via the ED of the operating hospital, information on the date and time that the patient arrived and left the ED of the operating hospital will be recorded. If the patient was admitted directly to a ward at the operating hospital, information on the date and time that the patient arrived on the ward will be recorded.</td>
</tr>
<tr>
<td></td>
<td>The coding frame for this variable has changed. Please see current Data Variable Concordance table at <a href="https://anzhfr.org/data-access/">https://anzhfr.org/data-access/</a> for details</td>
</tr>
<tr>
<td>Variable Number</td>
<td>2.03</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td>Variable</td>
<td>Transfer hospital</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Athoscode</td>
</tr>
<tr>
<td>Definition</td>
<td>Name of the hospital where the patient first presented and was diagnosed with a hip fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To allow for the identification of the establishment for benchmarking and comparison purposes</td>
</tr>
<tr>
<td>Format</td>
<td>Character</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>If the patient is transferred several times, this should be the hospital where the patient first presented with the hip fracture.</td>
</tr>
</tbody>
</table>

If the presenting hospital has no ED or the patient wasn't admitted through ED, state the date presenting to the transferring hospital with a hip fracture. If the hip fracture occurred as an in-patient, record the date the fracture was diagnosed.

If the date is unknown, leave blank.

---

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>ED / hospital arrival date (transfer hospital)</td>
</tr>
<tr>
<td>Variable Name</td>
<td>tarrdate</td>
</tr>
<tr>
<td>Definition</td>
<td>Date on which the patient presented to the transferring hospital with a hip fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the date of arrival in transferring hospital. Will allow for quantification of true time to surgery and overall LOS</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>If the patient is transferred several times, this should be the hospital where the patient first presented with the hip fracture.</td>
</tr>
</tbody>
</table>

If the presenting hospital has no ED or the patient wasn't admitted through ED, state the date presenting to the transferring hospital with a hip fracture. If the hip fracture occurred as an in-patient, record the date the fracture was diagnosed.

If the date is unknown, leave blank.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>ED arrival time (transfer hospital)</td>
</tr>
<tr>
<td>Variable Name</td>
<td>tarrtime</td>
</tr>
<tr>
<td>Definition</td>
<td>Time at which the patient arrived in the ED of the transferring hospital</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the time of arrival in the ED</td>
</tr>
<tr>
<td>Format</td>
<td>4 digit</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>hh:mm</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Time is recorded using the 24 hour clock.</td>
</tr>
</tbody>
</table>

If the patient is transferred several times, this should be the hospital where the patient first presented with a hip fracture.

If the presenting hospital has no ED or the patient wasn’t admitted through ED, state the time presenting to the transferring hospital with a hip fracture.

If the hip fracture occurred as an in-patient, record the time the fracture was diagnosed. Note: 00:00 indicates that the time was not known.

To be used in the calculation of total LOS in the health system for the care episode.

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>ED / other ward arrival date (operating hospital)</td>
</tr>
<tr>
<td>Variable Name</td>
<td>arrdate</td>
</tr>
<tr>
<td>Definition</td>
<td>Date on which the patient arrived in the ED / other ward of the operating hospital</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable calculation of age at presentation, time spent in ED, time to surgery and LOS</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>If the patient was not admitted through the ED but was transferred from another hospital and admitted directly to a ward of the operating hospital, state the date admitted to the ward of the operating hospital. If the patient was admitted via the ED of the operating hospital, information on the date and time that the patient left the ED of the operating hospital will be recorded. The Australian National Emergency Access Target (NEAT) aims that by 2015, 90% of patients will leave the ED within 4 hours – either by discharge, being admitted to hospital or through transfer to another hospital for treatment (<a href="http://www.ecinsw.com.au/node/128">http://www.ecinsw.com.au/node/128</a>). For New Zealand patients are expected to be discharged or admitted to hospital within 6 hours.</td>
</tr>
<tr>
<td>Variable Number</td>
<td>2.07</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>ED / other ward arrival time (operating hospital)</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>arrtime</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Time at which the patient arrived at the ED / other ward of the operating hospital</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable calculation of time spent in ED, time to surgery and LOS</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>5 digit</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>hh:mm</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>Time is recorded using the 24 hour clock.</td>
</tr>
</tbody>
</table>

If the patient was not admitted through the ED but was transferred from another hospital and admitted directly to a ward of the operating hospital, state the time admitted to the ward of the operating hospital.

Note: 00:00 indicates that the time was not known.

If the patient was admitted via the ED of the operating hospital, information on the date and time that the patient left the ED of the operating hospital will be recorded.

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.08</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>ED departure date (operating hospital)</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>depdate</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Date on which the patient departed from the ED of the operating hospital</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable calculation of time spent in ED, time to surgery and LOS</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>Note: If the patient was admitted via the ED of the operating hospital, information on the date and time that the patient left the ED of the operating hospital will be recorded</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>ED departure time (operating hospital)</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>deptime</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Time at which the patient departed from the ED of the operating hospital</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable calculation of time spent in ED, time to surgery and LOS</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>4 digit</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>hh:mm</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>Time is recorded using the 24 hour clock.</td>
</tr>
</tbody>
</table>

Note: 00:00 indicates that the time was not known.

If the patient was admitted via the ED of the operating hospital, information on the date and time that the patient left the ED of the operating hospital will be recorded.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>In-patient fracture date</td>
</tr>
<tr>
<td>Variable Name</td>
<td>admdateop</td>
</tr>
<tr>
<td>Definition</td>
<td>Date on which the admitted patient commences the episode of care at the operating hospital with radiological-confirmed diagnosis of hip fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the date of hip fracture occurring as an in-patient and calculation of time to surgery and LOS</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>If the date is unknown, leave blank. Fractures sustained while on leave from an existing hospital admission are not classified as inpatient fractures. They are recorded as a new event and date and time of presentation are recorded at 2.06 and 2.07.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>2.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>In-patient fracture time</td>
</tr>
<tr>
<td>Variable Name</td>
<td>admtimeop</td>
</tr>
<tr>
<td>Definition</td>
<td>24-hour time at which the admitted patient commences the episode of care at the operating hospital with radiological-confirmed diagnosis of hip fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the time of hip fracture occurring as an in-patient and calculation of time to surgery and LOS</td>
</tr>
<tr>
<td>Format</td>
<td>4 digit</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>hh:mm</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Time is recorded using the 24 hour clock. Note: 00:00 indicates that the time was not known.</td>
</tr>
<tr>
<td>Variable Number</td>
<td>2.13</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td>Variable</td>
<td>Pain management</td>
</tr>
<tr>
<td>Variable Name</td>
<td>painmanage</td>
</tr>
<tr>
<td>Definition</td>
<td>Did the patient receive analgesia within 30 minutes of presentation to the emergency department?</td>
</tr>
<tr>
<td>Justification</td>
<td>Acute pain associated with the hip fracture can have adverse effects on outcome. Hip Fracture Clinical Care Standard Indicator 2b.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
</tbody>
</table>
| Coding Source   | 1 Analgesia given within 30 minutes of ED presentation  
2 Analgesia given more than 30 minutes after ED presentation  
3 Analgesia not required – already provided by paramedics  
4 Analgesia not required – no pain documented on assessment  
9 Not known |
| Coding Frame    | Time to analgesia in the ED to be identified from clinical notes. Time is calculated from date and time of presentation to the emergency department of the first hospital. |
| DD Comments     | New variable added 1 January 2017. The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details |
Variable Number | 2.14  
Variable      | Ward type  
Variable Name | ward  
Definition    | What type of ward was the patient admitted to from ED?  
Justification | To enable the identification of the ward where the patient commenced their episode of care  
Format        | 1 digit  
Status        | Core  
Coding Source |  
Coding Frame  | 1 Hip fracture unit/Orthopaedic ward/ preferred ward  
                | 2 Outlying ward  
                | 3 HDU / ICU / CCU  
                | 9 Other/ not known  
DD Comments   | HDU refers to High Dependency Unit. ICU refers to Intensive Care Unit. CCU refers to Coronary Care Unit.  
                | An outlying ward refers to a ward not clinically appropriate to meet the patient’s current needs.  

Variable Number | 2.15  
Variable      | Transferred patients only: Nerve block before transfer  
Variable Name | tfanalges  
Definition    | Did the patient with a hip fracture who was transferred from another hospital for treatment receive a nerve block prior to transfer?  
Justification | Hip Fracture Clinical Care Standard Indicator 2b  
Format        | 1 digit numeric  
Status        | Core  
Coding Source |  
Coding Frame  | 1 No  
                | 2 Yes  
                | 9 Not known  
DD Comments   | If the patient was not transferred, record information on nerve blocks under variable 4.06 Analgesia-nerve block
### Section 3 Assessment

#### Variable Number 3.01

**Variable** Pre-admission walking ability

**Variable Name** walk

**Definition** What was the patient’s walking ability pre-admission?

**Justification** To enable the identification of the mobility status pre-admission

**Format** 1 digit numeric

**Status** Core

**Coding Source** Adapted from the UK National Hip Fracture Database

**Coding Frame**

- 1 Usually walks without walking aids
- 2 Usually walks with either a stick or crutch
- 3 Usually walks with two aids or frame (with or without assistance of a person)
- 4 Usually uses a wheelchair / bed bound
- 9 Not known

**DD Comments**

If a person has different levels of mobility on different surfaces then record the level of most assistance. For example, inside their residence a person usually walks without a walking aid but when outside the residence the person usually walks with a frame, then the level of mobility recorded is option 3.

If a person does not use a walking aid, but requires physical assistance e.g. from a carer or staff in Residential care, pre-admission walking ability should be coded as following: 2 if assistance of one person is required and; 3 if assistance of two people is required.

#### Variable Number 3.02

**Variable** Pre-operative cognitive assessment

**Variable Name** cogassess

**Definition** Following admission to hospital, cognitive status is assessed prior to surgery using a validated tool and recorded in the medical record

**Justification** Hip fracture patients are at high risk of having an existing cognitive impairment or developing delirium. Cognitive impairment and delirium in these patients is associated with increased morbidity and mortality, and a decrease in rehabilitation potential and return to pre-fracture functioning.

Care at Presentation Hip Fracture Clinical Care Standard Indicator 1a.

**Format** 1 digit

**Status** Core

**Coding Source** Adapted from the UK National Hip Fracture Database

**Coding Frame**

- 1 Not assessed
- 2 Assessed and normal
- 3 Assessed and abnormal or impaired
- 9 Not known

**DD Comments** Cognitive assessment requires the use of a validated tool. Some validated tools for assessing cognitive function include:

- Abbreviated Mental Test Score (AMTS) (Hodkinson 1972)
- Standardised Mini-Mental State Examination (SMMSE) (Molloy & Standish 1997)
- Modified Mini Mental State Exam (3MS) (Teng & Chui 1987)
- General Practitioner’s Assessment of Cognition (GPCOG) (Brodaty et al. 2002)
- The 4AT (Bellelli et al. 2014)
- Other tools, such as the Rowland Universal Dementia Assessment Scale (RUDAS) (Storey et al. 2004) and the Kimberly Indigenous Cognitive Assessment (KICA) (LoGiudice et al. 2006), may be more appropriate for some people from culturally and linguistically diverse groups

New variable added 1 January 2017. The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Pre-admission cognitive status</td>
</tr>
<tr>
<td>Variable Name</td>
<td>cogstat</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the cognitive status of the patient prior to admission?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the cognitive status of the patient prior to admission.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>1 Normal cognition</td>
</tr>
<tr>
<td></td>
<td>2 Impaired cognition or known dementia</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>Normal cognition refers to ‘no history of cognitive impairment or dementia’. Impaired cognition or known dementia refers to a ‘loss of cognitive ability and/or a decline in memory or other thinking skills severe enough to reduce a person’s ability to perform everyday activities’ (Alzheimer’s Association).</td>
</tr>
<tr>
<td>DD Comments</td>
<td>The coding frame for this variable has changed. Please see current Data Variable Concordance table at <a href="https://anzhfr.org/data-access/">https://anzhfr.org/data-access/</a> for details</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Bone protection medication at admission</td>
</tr>
<tr>
<td>Variable Name</td>
<td>bonemed</td>
</tr>
<tr>
<td>Definition</td>
<td>Was the patient taking bone protection medication prior to sustaining the hip fracture?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor use of bone protection medication prior to hip fracture</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>0 No bone protection medication</td>
</tr>
<tr>
<td></td>
<td>1 Yes - calcium and/or vitamin D only</td>
</tr>
<tr>
<td></td>
<td>2 Yes - bisphosphonates, denosumab, romosozumab, teriparatide, raloxifene or HRT (with or without calcium and/or vitamin D)</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Calcium or vitamin D includes Calcitriol, calcium and vitamin D or Alpha-calcidol (or one alpha). Bisphosphonates includes: Etidronate, Alendronate, Risedronate, Ibandronate, Zoledronate, Pamidronate. A patient is to be considered as taking osteoporosis specific treatment if: • Oral bisphosphonates, prescribed in the last 12 weeks. • Zoledronate, administered in the last 24 months. • Denosumab, administered the last 6 months. • Teriparatide, administered in the last 7 days. • Romosozumab, administered in the last month. These medications may be prescribed with or without calcium and / or vitamin D.</td>
</tr>
<tr>
<td></td>
<td>For changes to this variable over time, please see current Data Variable Concordance table at <a href="https://anzhfr.org/data-access/">https://anzhfr.org/data-access/</a></td>
</tr>
<tr>
<td>Variable Number</td>
<td>3.07</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>Pre-operative medical assessment</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>passess</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Who conducted the pre-operative medical assessment apart from anaesthetic and orthopaedic review?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To determine level of pre-operative medical assessment.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 0 No assessment conducted  
1 Geriatrician / Geriatric Team  
2 Physician / Physician Team  
3 GP  
4 Specialist nurse  
9 Not known |
| **DD Comments** | The pre-operative assessment is conducted in addition to an anaesthetic review and orthopaedic assessment. If the pre-operative assessment is conducted by a number of assessment team members, select the highest numerical option in the coding frame drop down list eg. the highest numerical option to select is ‘1’ geriatrician. |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.08</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Side of hip fracture</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>side</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>What was the side of the patient’s hip fracture?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable the identification of the side of the hip fracture</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 Left  
2 Right |
| **DD Comments** | Key field: must be entered to create a patient record.  
If the patient has bilateral hip fractures, a separate record should be created for each fracture. |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.09</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Atypical fracture</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>afracture</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Was the type of the patient’s hip fracture either pathological or atypical?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable the identification of fractures which are not consistent with the nature of the injury</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 0 Not a pathological or atypical fracture  
1 Pathological fracture  
2 Atypical fracture |
| **DD Comments** | A pathological fracture is considered to be a fracture that has occurred when a bone breaks in an area that has been weakened by another disease process (except osteoporosis), such as a tumour, infection or an inherited bone disorder.  
An atypical fracture is one where the radiologically observed fracture pattern is not consistent with the mechanism of injury described and is not thought to be attributable to a discrete underlying disease process. |
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Type of fracture</td>
</tr>
<tr>
<td>Variable Name</td>
<td>ftype</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the type of the patient's hip fracture?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the type of hip fracture</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 Intracapsular undisplaced/impacted displaced</td>
</tr>
<tr>
<td></td>
<td>2 Intracapsular displaced</td>
</tr>
<tr>
<td></td>
<td>3 Per/intertrochanteric</td>
</tr>
<tr>
<td></td>
<td>4 Subtrochanteric</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Basal/basicervical fractures are to the classified as per/intertrochanteric</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>3.11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Surgical repair</td>
</tr>
<tr>
<td>Variable Name</td>
<td>surg</td>
</tr>
<tr>
<td>Definition</td>
<td>Did the patient undergo surgical repair of the hip fracture?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable quantification of percentage patients undergoing surgery</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>2 Yes</td>
</tr>
<tr>
<td></td>
<td>3 No – surgical fixation not clinically indicated</td>
</tr>
<tr>
<td></td>
<td>4 No – patient for palliation</td>
</tr>
<tr>
<td></td>
<td>5 No – other reason</td>
</tr>
<tr>
<td>DD Comments</td>
<td>The coding frame for this variable has changed. Please see current Data Variable Concordance table at <a href="https://anzhfr.org/data-access/">https://anzhfr.org/data-access/</a> for details</td>
</tr>
<tr>
<td>Variable Number</td>
<td>3.12</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td>Variable</td>
<td>ASA grade</td>
</tr>
<tr>
<td>Variable Name</td>
<td>asa</td>
</tr>
<tr>
<td>Definition</td>
<td>What is the ASA grade for the patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>A marker of disease severity and operative risk and used for case-mix adjustment</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>American Society of Anaesthesiologists</td>
</tr>
</tbody>
</table>
| Coding Frame    | 1 Healthy individual with no systemic disease  
2 Mild systemic disease not limiting activity  
3 Severe systemic disease that limits activity but is not incapacitating  
4 Incapacitating systemic disease which is constantly life threatening  
5 Moribund not expected to survive 24 hours with or without surgery  
9 Not known |
| DD Comments     | ASA grade is used in case-mix adjustment for outcome at 30 and 120 days post-surgery |
Variable Number  3.13
Variable          Clinical Frailty Scale
Variable Name     frailty
Definition        What was the patient’s pre-injury frailty status?
Justification     To enable the identification of the patient’s frailty status prior to their hip fracture as a person’s level of frailty impacts outcomes. Hip Fracture Clinical Care Standard Indicator 3a.
Format            2 digit numeric
Status            Core
Coding Source     Rockwood Clinical Frailty Scale
Coding Frame      1 Very Fit
                  2 Well
                  3 Well, with treated comorbid disease
                  4 Vulnerable
                  5 Mildly frail
                  6 Moderately frail
                  7 Severely frail
                  8 Very severely frail
                  9 Terminally ill
                  10 Frailty assessment using other validated tool
                  99 Not known

DD Comments       NOTE: the Clinical Frailty Scale applies to the person’s usual status prior to the hip fracture. Where the person has dementia or delirium the information will need to be provided by an informant who knows the person well.

Coding Frame Definitions
1 Very fit - robust, active, energetic and well-motivated. Exercise regularly and are among the fittest for their age.
2 Well - without active disease symptoms but are less fit than category 1. Exercise occasionally.
3 Well with treated comorbid disease - disease symptoms are well controlled compared to category four. Not regularly active beyond routine walking.
4 Vulnerable - not dependent on others for daily help, but symptoms limit activities. Common complaint is being ‘slowed up’ or being tired during the day.
5 Mildly frail - more evident slowing, and need help in instrumental activities of daily living (e.g. heavy housework, medications, transportation, shopping, using the phone, managing finances, meal preparation).
6 Moderately frail - need help with both instrumental and non-instrumental activities of daily living. Includes mobility in bed, transferring on/off chairs, toilets and into/out of bed, walking, dressing, eating, toilet use, personal hygiene, bathing.
7 Severely frail - completely dependent on others for all activities of daily living for whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).
8 Very severely frail - completely dependent on others for all activities of daily living, approaching the end of life. Typically, they could not recover even from a minor illness.
9 Terminally ill - approaching the end of life. Applies to people with a life expectancy <6 months who are not otherwise evidently frail.

New variable added 1 January 2021.
The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details.
Variable Number: 3.14

Variable Name: Delirium assessment prior to surgery

Definition: Following admission to hospital, was delirium assessed prior to surgery using a validated tool and recorded in the medical record?

Justification: Identifying patients with delirium is the first step in taking action to providing high quality care. Early diagnosis and prompt treatment offers patients with delirium the best chance of recovery.

Format: 1 digit

Status: Non-Core

Coding Source: Coding Frame

Coding Frame:
- 1 Not assessed
- 2 Assessed and not identified
- 3 Assessed and identified
- 9 Not known

DD Comments: Assessment of delirium requires the use of a validated tool. There are a range of validated diagnostic tools for delirium and they include:

- Confusion Assessment Method (CAM) (Inouye et al. 2014; Shi et al. 2013)
- Confusion Assessment Method (CAM-ICU) (Ely et al. 2001)
- 3D-CAM (Marcantonio et al. 2014)
- The 4AT (Bellelli et al. 2014)

If a person declines assessment record as not assessed.

Delirium is defined as an acute change in mental status that is common among older patients in hospital (Clinical Epidemiology and Health Service Evaluation Unit 2006). It is characterised by a disturbance of consciousness, attention, cognition and perception that develops over a short period of time (usually hours to a few days) (National Institute for Health and Clinical Excellence 2010; Inouye 2014). Patients with delirium may be agitated and restless (hyperactive delirium), quiet and withdrawn (hypoactive delirium), or move between these two subtypes (mixed delirium) (Clinical Epidemiology and Health Service Evaluation Unit 2006; National Institute for Health and Clinical Excellence 2010).

New variable added 1 January 2024. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.01</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Date of surgery for hip fracture</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>sdate</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Date on which the surgery for the hip fracture takes place</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable the identification of the date of primary surgery. Hip Fracture Clinical Care Standard Indicator 4a.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>If the date is unknown, leave blank.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.02</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Time of surgery for hip fracture</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>stime</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>24-hour time at which the surgery for the hip fracture commences. This time is taken from the start of the anaesthetic process.</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>To enable the identification of the start time of the primary surgery. Hip Fracture Clinical Care Standard Indicator 4a.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>4 digit</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>hh:mm</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>Time is recorded using the 24 hour clock</td>
</tr>
</tbody>
</table>

The time of surgery for the hip fracture is taken from the start of the anaesthetic process.

Note: 00:00 indicates that the time was not known.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Surgery delay</td>
</tr>
<tr>
<td>Variable Name</td>
<td>delay</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the primary reason for the delay if the delay was greater than 36 hours from the time of arrival in the emergency department of the first hospital, or diagnosis of a fracture if the fracture occurred as an in-patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor time to surgery as a standard of care. Hip Fracture Clinical Care Standard Indicator 4a.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| Coding Frame    | 2 Delay due to patient deemed medically unfit  
3 Delay due to issues with anticoagulation  
4 Delay due to theatre availability  
5 Delay due to surgeon availability  
6 Delay due to delayed diagnosis of hip fracture  
7 Other type of delay (state reason)  
9 Not known |
| DD Comments     | Delay is calculated from the time of presentation in the emergency department of the first hospital.  
A person is considered medically unfit if he/she have acute health-related issues which need to be stabilised/optimised or reversed prior to proceeding with anaesthesia and a surgical procedure.  
If there is more than one delay to surgery, choose the reason for the first delay.  
The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Surgery delay other text</td>
</tr>
<tr>
<td>Variable Name</td>
<td>delay_txt</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the reason for the other delay, if the delay was greater than 36 hours from the time of arrival in the emergency department?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor time to surgery as a standard of care</td>
</tr>
<tr>
<td>Format</td>
<td>Character</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
<tr>
<td>Variable Number</td>
<td>4.05</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>Type of anaesthesia</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>anaesth</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>What type of anaesthesia for the hip fracture surgery?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Ability to monitor variation, post-operative complications and patient choice</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>2 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 General anaesthesia  
2 Spinal anaesthesia  
3 General and spinal anaesthesia  
97 Other  
99 Not known |
| **DD Comments** | CSE=Combined Spinal/Epidural. Recorded in anaesthetic chart  
Information on administering a peripheral nerve block is recorded in ‘Analgesia – nerve block’.  
The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.06</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Analgesia - nerve block</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>analges</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Did the patient have a nerve block?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Hip Fracture Clinical Care Standard Indicators 2b and 2c</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>2 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 Nerve block administered before arriving in OT  
2 Nerve block administered in OT  
3 Both  
4 Neither  
99 Not known |
<p>| <strong>DD Comments</strong> |  |</p>
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Consultant surgeon present</td>
</tr>
<tr>
<td>Variable Name</td>
<td>consult</td>
</tr>
<tr>
<td>Definition</td>
<td>Was the consultant surgeon operating or assisting with the operation?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor the impact of consultant surgeon presence on the quality and safety of patient outcome</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td></td>
</tr>
<tr>
<td>DD Comments</td>
<td>To record yes, consultant must be scrubbed and operating. This variable can be found by checking if the consultant surgeon is recorded on the operation sheet. The DD comments for this variable have changed over time. Please see current Data Variable Concordance table at <a href="https://anzhfr.org/data-access/">https://anzhfr.org/data-access/</a> for details</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Type of operation performed</td>
</tr>
<tr>
<td>Variable Name</td>
<td>optype</td>
</tr>
<tr>
<td>Definition</td>
<td>What type of operation was performed for the hip fracture?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the patient’s type of hip fracture operation</td>
</tr>
<tr>
<td>Format</td>
<td>2 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 Cannulated screws (e.g. multiple screws)</td>
</tr>
<tr>
<td></td>
<td>2 Sliding hip screw</td>
</tr>
<tr>
<td></td>
<td>3 Intramedullary nail short</td>
</tr>
<tr>
<td></td>
<td>4 Intramedullary nail long</td>
</tr>
<tr>
<td></td>
<td>5 Hemiarthroplasty stem cemented</td>
</tr>
<tr>
<td></td>
<td>6 Hemiarthroplasty stem uncemented</td>
</tr>
<tr>
<td></td>
<td>7 Total hip replacement stem cemented</td>
</tr>
<tr>
<td></td>
<td>8 Total hip replacement stem uncemented</td>
</tr>
<tr>
<td></td>
<td>97 Other</td>
</tr>
<tr>
<td></td>
<td>99 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Intramedullary nail includes: Proximal femoral nail, Antegrade femoral nail, Proximal femoral nail antirotation (PFNA), and Gamma nail. For cemented versus uncemented procedures, this only includes whether the stem was cemented or not. This does not include whether or not the cup was cemented. Austin Moore prosthesis to be included in hemiarthroplasty – uncemented. Sliding hip screws include dynamic hip screws (DHS)</td>
</tr>
<tr>
<td>Variable Number</td>
<td>4.10</td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td>Full weight bear</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>wbear</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>What is the patient’s immediate post-operative weight bearing status?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Ability to monitor variation in practice. Hip Fracture Clinical Care Standard Indicator 5b.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **Coding Frame** | 0 Unrestricted weight bearing  
1 Restricted / non weight bearing  
9 Not known |
| **DD Comments** | Unrestricted weight bearing refers to a patient who is able to mobilise with full use of the affected limb to weight bear as pain allows.  
Restricted weight bearing refers to a patient where there is a specific instruction that prevents the patient being allowed to fully utilise the leg irrespective of degree of pain. Restricted weight bearing includes terms such as partial weight bear, touch-weight bear and non-weight bear |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>New pressure injuries of the skin</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>Pulcers</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Did the patient acquire a new pressure injury (Stage II or above) during their stay in hospital for the treatment of their hip fracture?</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Hip Fracture Clinical Care Standard Indicator 5b Pressure injuries of the skin are potentially preventable. They can affect a person’s level of pain, quality of life, cost of care, and mortality.</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 0 No  
1 Yes  
9 Not known |
| **DD Comments** | A pressure injury is an area of localised damage to the skin and underlying tissue caused by pressure, shear or friction forces, or a combination of these. Grading for pressure ulcers consists of 4 levels:  
Stage I pressure injury: non-blanchable erythema (intact skin with non-blanchable redness of a localised area usually over a bony prominence).  
Stage II pressure injury: partial thickness skin loss (Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, with slough).  
Stage III pressure injury: full thickness skin loss (Subcutaneous fat may be visible but bone, tendon, or muscle, are not fully exposed).  
Stage IV pressure injury: full thickness tissue loss (Full thickness tissue loss with exposed bone, tendon or muscle).  
The pressure injury classification is from the National Pressure Ulcer Advisory Panel (NPUAP) and European Pressure Ulcer Advisory Panel (EPUAP), Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. 2009, Washington DC: NPUAP |
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Assessed by geriatric medicine</td>
</tr>
<tr>
<td>Variable Name</td>
<td>gerimed</td>
</tr>
<tr>
<td>Definition</td>
<td>Was the patient assessed by geriatric medicine during the acute phase of the episode of care?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor quality of care. Hip Fracture Clinical Care Standard Indicator 3a.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td>0 No</td>
</tr>
<tr>
<td></td>
<td>1 Yes</td>
</tr>
<tr>
<td></td>
<td>8 No geriatric medicine service available</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>An assessment by geriatric medicine refers to an assessment by a geriatrician or a medical practitioner (Registrar) working under the supervision of a geriatrician.</td>
</tr>
</tbody>
</table>

The acute phase (IHPA Admitted Hospital Care Types: Guide For Use 2015) is care in which the primary clinical purpose or treatment goal is to:
- cure illness or provide definitive treatment of injury
- perform surgery
- relieve symptoms of illness or injury (excluding palliative care)
- reduce severity of an illness or injury
- protect against exacerbation and/or complication of an illness and/or injury which could threaten life or normal function
- perform diagnostic or therapeutic procedures

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Geriatric medicine assessment date</td>
</tr>
<tr>
<td>Variable Name</td>
<td>gdate</td>
</tr>
<tr>
<td>Definition</td>
<td>Date on which an admitted patient was first assessed by geriatric medicine during the acute phase of their episode of care</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the date of geriatric assessment. Hip Fracture Clinical Care Standard Indicator 3a.</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>A geriatric assessment is considered to include an assessment by a geriatrician or a medical practitioner (Registrar) working under the supervision of a geriatrician. Leave blank if not known</td>
</tr>
</tbody>
</table>
Variable Number: 4.15
Variable: Specialist falls assessment
Variable Name: fassess
Definition: Did the patient undergo a specialist falls assessment?
Justification: Ability to monitor secondary hip fracture prevention
Format: 1 digit numeric
Status: Core
Coding Source:
Coding Frame:
0 No
1 Performed during admission
2 Awaits falls clinic assessment
3 Further intervention not appropriate
8 Not relevant
9 Not known

DD Comments:
A specialist falls assessment is undertaken by a multidisciplinary team and includes a systematic assessment by a suitably trained person (i.e. geriatrician or a specialist assessment trained nurse), which must go over the following domains: (i) falls history (noting previous falls); (ii) cause of index fall (including medication review); (iii) risk factors for falling and injury (including fracture) and from this information formulate and document an individualised plan of action to prevent further falls. A specialist falls assessment is not a screening tool.

Example 1: Patient admitted with a hip fracture and managed surgically. During the post-operative period in the acute ward, a specialist falls assessment was commenced with documented assessment of falls risk and medication review. In the medical record there was a documented referral to the specialist falls service to be actioned on discharge from acute care. Option 2 would be selected.

Example 2: Patient admitted with a hip fracture and managed surgically. During the post-operative period in the acute ward, a specialist falls assessment was commenced with documented assessment of falls risk factors, falls history and cause of index fall. There was no other documentation of assessment or referral. Option 0 would be selected.

The DD comments for this variable have changed over time. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Bone protection medication at discharge from hospital</td>
</tr>
<tr>
<td>Variable Name</td>
<td>dbonemed1</td>
</tr>
<tr>
<td>Definition</td>
<td>What bone protection medication was the patient taking at discharge from hospital?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor use of bone protection medication. Hip Fracture Clinical Care Standard Indicator 6a.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Code</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| Coding Frame   | 0 No bone protection medication  
1 Yes - Calcium and/or vitamin D only  
2 Yes - Bisphosphonates, denosumab, romosozumab, teriparatide, raloxifene or HRT (with or without calcium and/or vitamin D)  
3 No but received prescription at separation from hospital  
9 Not known |
| DD Comments    | Calcium or vitamin D includes Calcitriol, calcium and vitamin D or Alpha-calcidol (or one alpha).  
Bisphosphonates includes: Etidronate, Alendronate, Risedronate, Ibandronate, Zoledronate, Pamidronate.  
A patient is to be considered as taking osteoporosis specific treatment if:  
• Oral bisphosphonates, prescribed in the last 12 weeks.  
• Zoledronate, administered in the last 24 months.  
• Denosumab, administered the last 6 months.  
• Teriparatide, administered in the last 7 days.  
• Romosozumab, administered in the last month.  
These medications may be prescribed with or without calcium and / or vitamin D. |
|                | For changes to this variable over time, please see current Data Variable Concordance table at https://anzhfr.org/data-access/ |
Variable Number: 4.17
Variable: Post-operative delirium assessment
Variable Name: delassess
Definition: Did the patient have a documented assessment of delirium in the week following surgery for their hip fracture?
Justification: Hip Fracture Clinical Care Standard Indicator 3b
Identifying patients with delirium is the first step in taking action to providing high quality care. Early diagnosis and prompt treatment offers patients with delirium the best chance of recovery.
Format: 1 digit
Status: Non-Core
Coding Source:
Coding Frame: 1) Not assessed
2) Assessed and not identified
3) Assessed and identified
9) Not known
DD Comments: Assessment of delirium requires the use of a validated tool. There are a range of validated diagnostic tools for delirium and they include:

- Confusion Assessment Method (CAM) (Inouye et al. 2014; Shi et al. 2013)
- Confusion Assessment Method (CAM-ICU) (Ely et al. 2001)
- 3D-CAM (Marcantonio et al. 2014).
- The 4AT (Bellelli et al. 2014)

If a person declines assessment record as not assessed.

Delirium is defined as an acute change in mental status that is common among older patients in hospital (Clinical Epidemiology and Health Service Evaluation Unit 2006). It is characterised by a disturbance of consciousness, attention, cognition and perception that develops over a short period of time (usually hours to a few days) (National Institute for Health and Clinical Excellence 2010; Inouye 2014). Patients with delirium may be agitated and restless (hyperactive delirium), quiet and withdrawn (hypoactive delirium), or move between these two subtypes (mixed delirium) (Clinical Epidemiology and Health Service Evaluation Unit 2006; National Institute for Health and Clinical Excellence 2010).

New variable added 1 January 2018. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Definition</th>
<th>Justification</th>
<th>Format</th>
<th>Status</th>
<th>Coding Source</th>
<th>Coding Frame</th>
<th>DD Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.18</td>
<td>Clinical malnutrition assessment</td>
<td>Did the patient undergo clinical assessment of their protein/energy nutrition status during the acute phase of the episode of care?</td>
<td>Hip fracture patients are at high risk of malnutrition. Malnutrition in these patients is associated with increased morbidity and mortality, and a decrease in return to pre-fracture functioning.</td>
<td>1 digit</td>
<td>Core</td>
<td>Adapted from the UK National Hip Fracture Database</td>
<td>0 Not done, 1 Malnourished, 2 Not malnourished, 9 Not known</td>
<td>Clinical assessment of a person’s nutritional status is encouraged during the acute phase. Sites should use tools that are validated for such purposes, and are advised to discuss with their Dietitians how best to record the results using this variable’s options. If the nutritional assessment is performed more than once, please record the first assessment after admission that uses a validated tool.</td>
</tr>
</tbody>
</table>

New variable added 1 January 2019. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>Variable Name</th>
<th>Definition</th>
<th>Justification</th>
<th>Format</th>
<th>Status</th>
<th>Coding Source</th>
<th>Coding Frame</th>
<th>DD Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.19</td>
<td>First day walking</td>
<td>Did the patient get out of bed and walk on day one post hip fracture surgery?</td>
<td>Hip Fracture Clinical Care Standard Indicator 5a. Low mobility during hospitalisation is associated with death, and declining function in activities of daily living at discharge and at one month follow-up, which induces a risk of staying dependent in these activities (Pedersen et al. 2013).</td>
<td>1 digit numeric</td>
<td>Core</td>
<td>Adapted from the UK National Hip Fracture Database</td>
<td>0 No, 1 Yes, 9 Not known</td>
<td>Day 1 post-surgery means the next calendar day following the day of the patient’s primary surgery for hip fracture. This data item is recording whether the patient actually stood and stepped or walked by day 1 post-surgery. Mobilised means the patient managed to stand and step transfer out of bed onto a chair/commode or walk. This does not include only sitting over the edge of the bed or standing up from the bed without stepping/walking.</td>
</tr>
</tbody>
</table>


New variable added in 2020. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>4.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Oral nutritional supplements</td>
</tr>
<tr>
<td>Variable Name</td>
<td>ONS</td>
</tr>
<tr>
<td>Definition</td>
<td>Did the patient receive protein and energy oral nutritional supplements (ONS) during their admission?</td>
</tr>
<tr>
<td>Justification</td>
<td>Hip Fracture Clinical Care Standard Indicator 3c.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>0 No</td>
</tr>
<tr>
<td></td>
<td>1 Yes</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>ONS are defined as protein and energy nutrient-dense products purposed to increase dietary intake when diet alone is likely to be inadequate to meet nutritional requirements. These may include energy and protein enriched drinks (e.g. milk, soy, protein-fortified juice flavours), powders, soups, and/or desserts. Documented patient-level evidence must be observed as evidence of receiving ONS. Examples include documentation in the patient’s medical record (e.g. ‘patient provided with high protein drink’) or patient-specific food services system/menu orders, documentation in the medication chart or food and fluid charts.</td>
</tr>
</tbody>
</table>

New variable added 1 January 2024.
### Section 5 Discharge

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>5.01</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Discharge date from acute ward</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>wdisch</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Date on which the patient was discharged from an acute ward during their episode of care</td>
</tr>
<tr>
<td><strong>Justice</strong></td>
<td>To enable the identification of the date of discharge from an acute ward so as to calculate LOS</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td>The discharge date refers to the patient physically leaving the acute ward. Record the date the patient was physically discharged from the acute orthopaedic stay. If the date is unknown, leave blank.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>5.02</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>Discharge destination from acute ward</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>wdest</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>What is the discharge (geographical) destination of the patient from the acute ward?</td>
</tr>
<tr>
<td><strong>Justice</strong></td>
<td>To assess patient outcome</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>2 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 Private residence (including unit in retirement village)  
2 Residential aged care facility  
3 Rehabilitation unit public  
4 Rehabilitation unit private  
5 Other hospital / ward / specialty  
6 Deceased  
7 Short term care in residential care facility (New Zealand only)  
97 Other  
99 Not known |
| **DD Comments** | Record the patient’s discharge destination at discharge from the acute orthopaedic stay. If the patient is discharged to live with a relative or in a community group home or boarding house code ‘private residence’. Private rehabilitation units will not be applicable in New Zealand. Residential aged care refers to a supported facility that provides accommodation and care for a person on a long-term basis. This may include multi-purpose services in Australia and private hospitals or rest homes in New Zealand. Short-term care in residential care facility may be relevant if the patient is non-weight bearing, and is used in New Zealand and, to a lesser degree, in Australia. For example, in New Zealand, some District Health Boards have programmes that fund patients who are non-weight bearing to be cared for in a residential care facility. When they are approved by the Orthopaedic Department to fully weight bear they are either admitted to Older Peoples Health for rehabilitation or discharged home. |
Variable Number: 5.03
Variable Name: hdisch
Definition: Date on which an admitted patient was discharged from hospital following their episode of care
Justification: To enable the identification of the date of discharge from hospital and calculation of LOS
Format: 8 digit date, date in DDMMYYYY
Status: Core
Coding Source: National Health Data Dictionary, Version 15
Coding Frame: DD/MM/YYYY
DD Comments: This refers to the date the patient physically leaves hospital, including cases where the patient remains a virtual inpatient. Discharge from hospital date may be the same as discharge from acute ward if patient discharged from hospital system on discharge from acute ward date.
If the date is unknown, leave blank.

Variable Number: 5.04
Variable Name: olos
Definition: The length of stay of a patient at the operating hospital, excluding leave days or days before fracture if occurred in hospital, measured in days
Justification: To enable the identification of the length of stay at the operating hospital
Format: 3 digit numeric
Status: Non-core (created centrally)
Coding Source: National Health Data Dictionary, Version 15
Coding Frame: NNN
DD Comments: Formula: Length of Stay (LOS) = Separation date - Admission date - Total leave days. The calculation is inclusive of admission and separation dates. LOS will be calculated automatically from the operating hospital separation and admission dates.
If the hip fracture occurred as an in-patient then the length of stay should be from time hip fracture was diagnosed.
Variable Number | 5.05
Variable | Length of stay (health system)
Variable Name | TLOS
Definition | The length of stay of a patient from admission/diagnosis of a hip fracture to final date of discharge from an inpatient facility (public or private), excluding leave days, measured in days
Justification | To enable the identification of the total length of stay in the health system
Format | 4 digit, unit of measure (day)
Status | Non-core
Coding Source | National Health Data Dictionary, Version 15
Coding Frame | NNNN
DD Comments | Formula: Length of stay (LOS) = Separation date - Admission date - Total leave days. The calculation is inclusive of admission and separation dates.

LOS will be calculated automatically from the ED arrival date of the transferring hospital (or the ED arrival date of the operating hospital, if no transfer occurred) and the discharge from hospital date. If the hip fracture occurred as an in-patient then the length of stay should be from time hip fracture was diagnosed. If the final date of discharge from the hospital system is known, this date should be used.

It should be noted that the total length of stay in the hospital system will be difficult to calculate in some jurisdictions, due to differences in treatment settings for rehabilitation-based care.
Variable Number: 5.06
Variable: Discharge place of residence
Variable Name: dresidence
Definition: What is the usual place of residence of the person following discharge from the whole hospital system?
Justification: Type of accommodation before and after admission are collected to compare where the patient has come from (what was their usual accommodation) and where they are going to (what will become their usual accommodation). Comparison of accommodation pre and post admission is an indicator of patient outcome.
Format: 1 digit numeric
Status: Core
Coding Source: Adapted from Australasian Rehabilitation Outcomes Centre Inpatient Dataset, Version 3.0; NSW SNAP Data Collection, Version 4.0
Coding Frame:
1 Private residence (including unit in retirement village)
2 Residential aged care facility
3 Deceased
7 Other
9 Not known
DD Comments: Record the patient’s accommodation type at discharge from the whole hospital system.

If the patient lives with a relative or in a community group home or boarding house code ‘private residence’.

Residential aged care refers to a supported facility that provides accommodation and care for a person on a long-term basis. This may include multi-purpose services in Australia and private hospitals or rest homes in New Zealand.
Section 7  120 day follow-up*

*120-day follow up is undertaken by the operating hospital

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>120 day follow-up date</td>
</tr>
<tr>
<td>Variable Name</td>
<td>fdate2</td>
</tr>
<tr>
<td>Definition</td>
<td>Date on which the 120 day follow-up was completed post the initial hip fracture surgery</td>
</tr>
<tr>
<td>Justification</td>
<td>To monitor patient outcomes post-surgery</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td>Date not known is left blank</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Survival at 120 days post-surgery</td>
</tr>
<tr>
<td>Variable Name</td>
<td>fsurvive2</td>
</tr>
<tr>
<td>Definition</td>
<td>Is the patient alive at 120 days post-surgery</td>
</tr>
<tr>
<td>Justification</td>
<td>To monitor patient outcomes post-surgery</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td>0 No</td>
</tr>
<tr>
<td></td>
<td>1 Yes</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Date health system discharge at 120 day follow-up</td>
</tr>
<tr>
<td>Variable Name</td>
<td>date120</td>
</tr>
<tr>
<td>Definition</td>
<td>What date was the patient discharged from the hospital system?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable the identification of the total length of stay in the health system</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
</tbody>
</table>
Variable Number: 7.04
Variable: Place of residence at 120 day follow-up
Variable Name: fresidence2
Definition: What is the place of residence of the person at 120 days post-surgery?
Justification: To monitor patient outcomes post-surgery. Hip Fracture Clinical Care Standard Indicator 7b.
Format: 2 digit numeric
Status: Core
Coding Source: Adapted from the Australasian Rehabilitation Outcomes Centre Inpatient Dataset, Version 3.0; NSW SNAP Data Collection, Version 4.0
Coding Frame:
1 Private residence (including unit in retirement village)
2 Residential aged care facility
3 Rehabilitation unit public
4 Rehabilitation unit private
5 Other hospital / ward / specialty
6 Deceased
7 Short term care in residential care facility (New Zealand only)
97 Other
99 Not known
DD Comments: Record the patient’s discharge destination at 120 days post-surgery. If the patient is discharged to live with a relative or in a community group home or boarding house code ‘private residence’. Private rehabilitation units will not be applicable in New Zealand.

Residential aged care facility refers to a supported facility that provides accommodation and care for a person on a long-term basis. This may include multi-purpose services in Australia and private hospitals or rest homes in New Zealand.

Short-term care in residential care facility may be relevant if the patient is non-weight bearing and is used in New Zealand and to a lesser degree in Australia. For example, in New Zealand, some District Health Boards have programmes that fund patients who are non-weight bearing to be cared for in a residential care facility. When they are approved by the Orthopaedic Department to fully weight bear they are either admitted to Older Peoples Health for rehabilitation or discharged home.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Post-admission walking ability at 120 day follow-up</td>
</tr>
<tr>
<td>Variable Name</td>
<td>fwalk2</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the patient’s walking ability at 120 days post-surgery?</td>
</tr>
<tr>
<td>Justification</td>
<td>To monitor patient mobility status post-discharge. Hip Fracture Clinical Care Standard Indicator 5d.</td>
</tr>
<tr>
<td>Format</td>
<td>2 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| Coding Frame | 1 Usually walks without walking aids  
2 Usually walks with either a stick or crutch  
3 Usually walks with two aids or frame  
4 Usually uses a wheelchair / bed bound  
8 Not relevant  
9 Not known |
| DD Comments | Usually walks with two aids or frame includes with or without assistance of a person. If a person has different levels of mobility on different surfaces then record the level of most assistance. For example, inside their residence a person usually walks with no walking aid but when outside the residence the person usually walks with a frame, then the level of mobility recorded is option 3. |

The coding frame for this variable has changed. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ for details.

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Bone protection medication at 120 day follow-up</td>
</tr>
<tr>
<td>Variable Name</td>
<td>fbonemed2</td>
</tr>
<tr>
<td>Definition</td>
<td>What bone protection medication was the patient using at 120 days post-surgery?</td>
</tr>
<tr>
<td>Justification</td>
<td>Ability to monitor use of bone protection medication</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Code</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| Coding Frame | 0 No bone protection medication  
1 Yes - Calcium and/or vitamin D only  
2 Yes - Bisphosphonates, denosumab, romosozumab, teriparatide, raloxifene or HRT (with or without calcium and/or vitamin D)  
9 Not known |
| DD Comments | Calcium or vitamin D includes Calcitriol, calcium and vitamin D or Alpha-calcidol (or one alpha). Bisphosphonates includes: Etidronate, Alendronate, Risedronate, Iblandronate, Zoledronate, Pamidronate. A patient is to be considered as taking osteoporosis specific treatment if:  
• Oral bisphosphonates, prescribed in the last 12 weeks.  
• Zoledronate, administered in the last 24 months.  
• Denosumab, administered the last 6 months.  
• Teriparatide, administered in the last 7 days.  
• Romosozumab, administered in the last month. These medications may be prescribed with or without calcium and / or vitamin D. |

For changes to this variable over time, please see current Data Variable Concordance table at https://anzhfr.org/data-access/
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Re-operation within 120 day follow-up</td>
</tr>
<tr>
<td>Variable Name</td>
<td>fop2</td>
</tr>
<tr>
<td>Definition</td>
<td>What kind of re-operation has been required (if any) for the patient within 120 days post-surgery?</td>
</tr>
<tr>
<td>Justification</td>
<td>To monitor patient outcomes post-surgery</td>
</tr>
<tr>
<td>Format</td>
<td>2 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the UK National Hip Fracture Database</td>
</tr>
</tbody>
</table>
| Coding Frame    | 0 No reoperation  
1 Reduction of dislocated prosthesis  
2 Washout or debridement  
3 Implant removal  
4 Revision of internal fixation  
5 Conversion to hemiarthroplasty  
6 Conversion to total hip replacement  
7 Excision arthroplasty  
9 Revision arthroplasty  
99 Not known |
| DD Comments     | Option 2 washout and debridement includes liner change. Note: record the most significant procedure only. The DD comments for this variable have changed over time. Please see current Data Variable Concordance table at https://anzhfr.org/data-access |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Preliminary date of death</td>
</tr>
<tr>
<td>Variable Name</td>
<td>predod</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the date of death of the hip fracture patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>To monitor patient outcomes and enable reporting of mortality after hip fracture Hip Fracture Clinical Care Standard Indicator 8b.</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15 (METeOR identifier 646025). Preliminary Australian date of death obtained from hospital records and/or during 120 day follow-up.</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>DD/MM/YYYY</td>
</tr>
</tbody>
</table>
| DD Comments     | Date of death may be collected either at discharge or during 120-day follow-up. New Zealand date of death may be obtained from the New Zealand Ministry of Health.  
New variable added 1 January 2020. Please see current Data Variable Concordance table at https://anzhfr.org/data-access/ |
Variable Number 7.10
Variable Final date of death
Variable Name findod
Definition What was the date of death of the hip fracture patient?
Justification To monitor patient outcomes and enable reporting of mortality after hip fracture
Hip Fracture Clinical Care Standard Indicator 8b.
Format 8 digit, date in DDMMYYYY
Status Non-core (created centrally)
Coding Source National Health Data Dictionary, Version 15 (METeOR identifier 646025).
Final Australian date of death obtained from the National Death Index.
New Zealand date of death obtained from the New Zealand Ministry of Health.
Coding Frame DD/MM/YYYY
DD Comments Final Australian date of death will be obtained from the National Death Index and final New
Zealand date of death will be obtained from the New Zealand Ministry of Health.

New variable added 1 January 2020. Please see current Data Variable Concordance table at
https://anzhfr.org/data-access/

Variable Number 7.11
Variable Underlying cause of death
Variable Name undcod
Definition What was the underlying cause of death of the hip fracture patient?
Justification To enable identification of the underlying cause of death of the hip fracture patient
Format ANN [.N [N]]
Status Non-core (created centrally)
Coding Source National Health Data Dictionary, Version 15 (METeOR identifier 307862).
Australian underlying cause of death obtained from the National Death Index.
New Zealand underlying cause of death obtained from the New Zealand Ministry of Health.
Coding Frame ICD-10
DD Comments The disease or injury which initiated the train of morbid events leading directly to a person's
death or the circumstances of the incident or violence which produced the fatal injury.
Variable Number  7.12
Variable            Other causes of death
Variable Name       Othcod1
Definition           What were the antecedent causes of death of the hip fracture patient?
Justification       To enable identification of the underlying cause of death of the hip fracture patient
Format              ANN {.N [N]}
Status              Non-core (created centrally)
Coding Source       National Health Data Dictionary, Version 15 (METeOR identifier 307862).
                    Australian other cause(s) of death obtained from the National Death Index.
                    New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame        ICD-10
DD Comments         The disease or injury which initiated the train of morbid events leading directly to a person's
d

Variable Number  7.12
Variable            Other causes of death
Variable Name       Othcod2
Definition           What were the antecedent causes of death of the hip fracture patient?
Justification       To enable identification of the underlying cause of death of the hip fracture patient
Format              ANN {.N [N]}
Status              Non-core (created centrally)
Coding Source       National Health Data Dictionary, Version 15 (METeOR identifier 307862).
                    Australian other cause(s) of death obtained from the National Death Index.
                    New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame        ICD-10
DD Comments         The disease or injury which initiated the train of morbid events leading directly to a person's
d

Variable Number  7.12
Variable            Other causes of death
Variable Name       Othcod3
Definition           What were the antecedent causes of death of the hip fracture patient?
Justification       To enable identification of the underlying cause of death of the hip fracture patient
Format              ANN {.N [N]}
Status              Non-core (created centrally)
Coding Source       National Health Data Dictionary, Version 15 (METeOR identifier 307862).
                    Australian other cause(s) of death obtained from the National Death Index.
                    New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame        ICD-10
DD Comments         The disease or injury which initiated the train of morbid events leading directly to a person's
d

Variable Number  7.12
Variable            Other causes of death
<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Othcod4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>What were the antecedent causes of death of the hip fracture patient?</td>
</tr>
<tr>
<td>Justification</td>
<td>To enable identification of the underlying cause of death of the hip fracture patient</td>
</tr>
<tr>
<td>Format</td>
<td>ANN {.N [N]}</td>
</tr>
<tr>
<td>Status</td>
<td>Non-core (created centrally)</td>
</tr>
<tr>
<td>Coding Source</td>
<td>National Health Data Dictionary, Version 15 (METeOR identifier 307862).&lt;br&gt;Australian other cause(s) of death obtained from the National Death Index.&lt;br&gt;New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>ICD-10</td>
</tr>
<tr>
<td>DD Comments</td>
<td>The disease or injury which initiated the train of morbid events leading directly to a person's death or the circumstances of the incident or violence which produced the fatal injury.</td>
</tr>
</tbody>
</table>

| Variable Number | 7.12 |
| Variable        | Other causes of death |
| Variable Name   | Othcod5 |
| Definition      | What were the antecedent causes of death of the hip fracture patient? |
| Justification   | To enable identification of the underlying cause of death of the hip fracture patient |
| Format          | ANN {.N [N]} |
| Status          | Non-core (created centrally) |
| Coding Source   | National Health Data Dictionary, Version 15 (METeOR identifier 307862).<br>Australian other cause(s) of death obtained from the National Death Index.<br>New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health. |
| Coding Frame    | ICD-10 |
| DD Comments     | The disease or injury which initiated the train of morbid events leading directly to a person's death or the circumstances of the incident or violence which produced the fatal injury. |

| Variable Number | 7.12 |
| Variable        | Other causes of death |
| Variable Name   | Othcod6 |
| Definition      | What were the antecedent causes of death of the hip fracture patient? |
| Justification   | To enable identification of the underlying cause of death of the hip fracture patient |
| Format          | ANN {.N [N]} |
| Status          | Non-core (created centrally) |
| Coding Source   | National Health Data Dictionary, Version 15 (METeOR identifier 307862).<br>Australian other cause(s) of death obtained from the National Death Index.<br>New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health. |
| Coding Frame    | ICD-10 |
| DD Comments     | The disease or injury which initiated the train of morbid events leading directly to a person's death or the circumstances of the incident or violence which produced the fatal injury. |

| Variable Number | 7.12 |
| Variable        | Other causes of death |
| Variable Name   | Othcod7 |
| Definition      | What were the antecedent causes of death of the hip fracture patient? |
Justification  To enable identification of the underlying cause of death of the hip fracture patient
Format  ANN {.N [N]}
Status  Non-core (created centrally)
Coding Source  National Health Data Dictionary, Version 15 (METeOR identifier 307862).
           Australian other cause(s) of death obtained from the National Death Index.
           New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame  ICD-10
DD Comments  The disease or injury which initiated the train of morbid events leading directly to a person's
deadth or the circumstances of the incident or violence which produced the fatal injury.

Variable Number  7.12
Variable         Other causes of death
Variable Name    Othcod8
Definition       What were the antecedent causes of death of the hip fracture patient?
Justification    To enable identification of the underlying cause of death of the hip fracture patient
Format          ANN {.N [N]}
Status          Non-core (created centrally)
Coding Source   National Health Data Dictionary, Version 15 (METeOR identifier 307862).
           Australian other cause(s) of death obtained from the National Death Index.
           New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame    ICD-10
DD Comments     The disease or injury which initiated the train of morbid events leading directly to a person's
deadth or the circumstances of the incident or violence which produced the fatal injury.

Variable Number  7.12
Variable         Other causes of death
Variable Name    Othcod9
Definition       What were the antecedent causes of death of the hip fracture patient?
Justification    To enable identification of the underlying cause of death of the hip fracture patient
Format          ANN {.N [N]}
Status          Non-core (created centrally)
Coding Source   National Health Data Dictionary, Version 15 (METeOR identifier 307862).
           Australian other cause(s) of death obtained from the National Death Index.
           New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.
Coding Frame    ICD-10
DD Comments     The disease or injury which initiated the train of morbid events leading directly to a person's
deadth or the circumstances of the incident or violence which produced the fatal injury.

Variable Number  7.12
Variable         Other causes of death
Variable Name    Othcod10
Definition       What were the antecedent causes of death of the hip fracture patient?
Justification    To enable identification of the underlying cause of death of the hip fracture patient
Format          ANN {.N [N]}
Status: Non-core (created centrally)

Australian other cause(s) of death obtained from the National Death Index.
New Zealand other cause(s) of death obtained from the New Zealand Ministry of Health.

Coding Frame: ICD-10

DD Comments: The disease or injury which initiated the train of morbid events leading directly to a person's death or the circumstances of the incident or violence which produced the fatal injury.

Variable Number: 7.13

Variable: cause of death revision status

Variable Name: cod_revstatus

Definition: What is the revision status of the cause of death?

Justification: All cause of death data from 2006 onwards are subject to a revisions process. Variable included in all data releases

Format: character

Status: Non-core (created centrally)

Australian underlying cause of death obtained from the National Death Index.
New Zealand underlying cause of death obtained from the New Zealand Ministry of Health.

Coding Frame: character

DD Comments:
Variable Number 7.14
Variable EQ-5D-SL Mobility
Variable Name Eq5dmob
Definition Please tick the ONE box that best describes your health TODAY
Justification Patient-reported outcome measure
Format 1 digit numeric
Status Core
Coding Source UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group
Coding Frame 1 No problems
2 Slight problems
3 Moderate problems
4 Severe problems
5 Unable to
DD Comments

Variable Number 7.15
Variable EQ-5D-SL Self Care
Variable Name Eq5dcare
Definition Please tick the ONE box that best describes your health TODAY
Justification Patient-reported outcome measure
Format 1 digit numeric
Status Core
Coding Source UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group
Coding Frame 1 No problems
2 Slight problems
3 Moderate problems
4 Severe problems
5 Unable to
DD Comments

Variable Number 7.16
Variable EQ-5D-SL Usual Activities
Variable Name Eq5dact
Definition Please tick the ONE box that best describes your health TODAY
Justification Patient-reported outcome measure
Format 1 digit numeric
Status Core
Coding Source UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group
Coding Frame 1 No problems
2 Slight problems
3 Moderate problems
4 Severe problems
5 Unable to
DD Comments
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.17</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>EQ-5D-SL Pain/Discomfort</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>Eq5dpain</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Please tick the ONE box that best describes your health TODAY</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Patient-reported outcome measure</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 = No pain  
2 = Slight pain  
3 = Moderate pain  
4 = Severe pain  
5 = Extreme pain |
| **DD Comments** | |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.18</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>EQ-5D-SL Anxiety/Depression</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>Eq5danx</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>Please tick the ONE box that best describes your health TODAY</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Patient-reported outcome measure</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>1 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group</td>
</tr>
</tbody>
</table>
| **Coding Frame** | 1 = Not anxious  
2 = Slightly anxious  
3 = Moderately anxious  
4 = Severely anxious  
5 = Extremely anxious |
| **DD Comments** | |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>7.19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
<td>EQ-5D-SL Health status</td>
</tr>
<tr>
<td><strong>Variable Name</strong></td>
<td>Eq5dhealth</td>
</tr>
<tr>
<td><strong>Definition</strong></td>
<td>We would like to know how good or bad your health is today. The scale is numbered from 0 to 100. 100 means the best health you can imagine. Zero means the worst health you can imagine.</td>
</tr>
<tr>
<td><strong>Justification</strong></td>
<td>Patient-reported outcome measure</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>2 digit numeric</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Core</td>
</tr>
<tr>
<td><strong>Coding Source</strong></td>
<td>UK (English) © 2009 EuroQol Group EQ-5D™ is a trade mark of the EuroQol Group</td>
</tr>
<tr>
<td><strong>Coding Frame</strong></td>
<td>Likert scale 0-100</td>
</tr>
<tr>
<td><strong>DD Comments</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Section 13  52-week follow-up* (50-54 weeks)

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Follow-up at 52 weeks</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Fup52</td>
</tr>
<tr>
<td>Definition</td>
<td>Was the patient followed up at 52 weeks after the index fracture?</td>
</tr>
<tr>
<td>Justification</td>
<td>To measure performance against Clinical Standards for Fracture Liaison Services</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from UK FLS-DB V2.00</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>DD Comments</td>
<td>This section is only for patients who are recommended bone therapy because of the FLS intervention. Follow up should be at between 48 and 54 weeks after the index fracture (not 52 weeks post assessment). Late follow up - If follow up has been completed, but took place after 54 weeks, please answer ‘Yes’. ‘No’ should only be selected if no follow up is planned.</td>
</tr>
</tbody>
</table>

*52-week follow up is undertaken by the operating hospital*

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>52 Week Follow Up Date</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Fup52date</td>
</tr>
<tr>
<td>Definition</td>
<td>The date that the “52 week follow up” happened</td>
</tr>
<tr>
<td>Justification</td>
<td>To measure performance against Clinical Standards for Fracture Liaison Services</td>
</tr>
<tr>
<td>Format</td>
<td>8 digit date, date in DDMMYYYY</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from UK FLS-DB V2.00</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>dd/mm/yyyy</td>
</tr>
<tr>
<td>DD Comments</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>52 Week Residence</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Fu52residence</td>
</tr>
<tr>
<td>Definition</td>
<td>What is the usual place of residence of the patient at the time of the 52 week follow up?</td>
</tr>
<tr>
<td>Justification</td>
<td>This enables comparison of the type of accommodation of the person before suffering a fragility fracture with that at follow up assessments. This is an indicator of patient outcome.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from the Australasian Rehabilitation Outcomes Centre Inpatient Dataset, Version 3.0; NSW SNAP Data Collection, Version 4.0</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 Private residence (including unit in retirement village)</td>
</tr>
<tr>
<td></td>
<td>2 Residential aged care facility</td>
</tr>
<tr>
<td></td>
<td>3 Other</td>
</tr>
<tr>
<td></td>
<td>4 Not done</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
</tbody>
</table>
DD Comments
Record the patient’s usual accommodation type the time of the 52-week follow up. Residential aged care refers to a supported facility that provides accommodation and care for a person on a long-term basis. This may include multi-purpose services in Australia and private hospitals or rest homes in New Zealand. If the patient lives with a relative or in a community group home or boarding house code ‘private residence’. If the patient is in respite care, record their usual place of residence when not in respite care.

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>52 Week Mobility</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Walk52fu</td>
</tr>
<tr>
<td>Definition</td>
<td>The patient’s mobility status at the 52-week follow-up</td>
</tr>
<tr>
<td>Justification</td>
<td>To document the patient’s mobility at the time of the 52 week follow up.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from ANZHFR Data Dictionary V13</td>
</tr>
</tbody>
</table>
| Coding Frame    | 1 Usually walks without walking aids  
2 Usually walks with either a stick or crutch  
3 Usually walks with two aids or frame (with or without assistance of a person)  
4 Usually uses a wheelchair / bed bound  
5 Not done  
9 Not known |
| DD Comments     | If a person has different levels of mobility on different surfaces, then record the level of most assistance. For example, inside their residence a person usually walks without a walking aid but when outside the residence the person usually walks with a frame, then the level of mobility recorded is option 3. |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>52 Week Medication</td>
</tr>
<tr>
<td>Variable Name</td>
<td>Med52</td>
</tr>
<tr>
<td>Definition</td>
<td>Did the patient confirm adherence to osteoporosis specific treatment</td>
</tr>
<tr>
<td>Justification</td>
<td>To document whether the patient was still taking osteoporosis specific treatment</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from UK FLS-DB V2.00</td>
</tr>
</tbody>
</table>
| Coding Frame    | 1 No longer taking osteoporosis specific treatment  
2 Alendronate  
3 Risedronate  
4 Zoledronate  
5 Denosumab  
6 Teriparatide  
7 Testosterone  
8 Systemic Oestrogens  
9 Systemic Oestrogen & Progesterone  
10 Romosozumab  
11 Raloxifene |
| DD Comments     | A patient is to be considered as ‘on/taking bone protection medication’ if:  
• For oral-osteoporosis agents patient prescribed in the last 4 weeks.  
• For Zoledronate, prescribed in the last 24 months  
• For Denosumab, prescribed the last 6 months.  
• For Teriparatide, prescribed in the last 7 days.  
• For Romosozumab, prescribed in the last month. |
Online review of prescriptions may indicate that the patient is taking osteoporosis medication regularly – this is satisfactory. If there is no evidence of this online – patient and / or GP interview will be required

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Reason for No Medication at 52 Weeks</td>
</tr>
<tr>
<td>Variable Name</td>
<td>NoMed52</td>
</tr>
<tr>
<td>Definition</td>
<td>What was the reason of the patient not continuing bone protection medication at 52 week follow up?</td>
</tr>
<tr>
<td>Justification</td>
<td>To document the reason the patient was no longer taking bone protection medication</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Adapted from UK FLS-DB V2.00</td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 No longer appropriate (clinician)</td>
</tr>
<tr>
<td></td>
<td>2 Informed decline (patient)</td>
</tr>
<tr>
<td></td>
<td>3 Side effects</td>
</tr>
<tr>
<td></td>
<td>4 Cost to patient</td>
</tr>
<tr>
<td></td>
<td>5 Nil obvious</td>
</tr>
<tr>
<td></td>
<td>6 Other</td>
</tr>
<tr>
<td></td>
<td>7 Not asked</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
</tbody>
</table>

DD Comments
If the patient’s GP or other healthcare professional stops the specific osteoporosis medication for whatever reason (including side effects), please select ‘No longer appropriate (clinician). If the patient stops the medication by the time of the follow up, please select ‘Informed decline (patient)’. |

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Further Falls</td>
</tr>
<tr>
<td>Variable Name</td>
<td>furtherfall</td>
</tr>
<tr>
<td>Definition</td>
<td>The number of further falls the patient has suffered since the index fracture</td>
</tr>
<tr>
<td>Justification</td>
<td>To document the number of further falls since the index fragility fracture suffered by the patient as a measure of patient outcome.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td></td>
</tr>
<tr>
<td>Coding Frame</td>
<td>1 None</td>
</tr>
<tr>
<td></td>
<td>2 One</td>
</tr>
<tr>
<td></td>
<td>3 Two</td>
</tr>
<tr>
<td></td>
<td>4 Three or more</td>
</tr>
<tr>
<td></td>
<td>5 Not asked</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
</tbody>
</table>

DD Comments
This is a measure of patient outcome. This is the answer to the question “since the index fracture, have you had any further falls in the last 12 months” or similar.
<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.08</th>
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</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Strength and Balance</td>
</tr>
<tr>
<td>Variable Name</td>
<td>SBpartic</td>
</tr>
<tr>
<td>Definition</td>
<td>Is the patient still participating in a strength and balance programme?</td>
</tr>
<tr>
<td>Justification</td>
<td>To document whether the patient is still participating in strength and balance training.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Coding Frame</td>
</tr>
<tr>
<td></td>
<td>1 Yes</td>
</tr>
<tr>
<td></td>
<td>2 No</td>
</tr>
<tr>
<td></td>
<td>3 Not asked</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
<tr>
<td>DD Comments</td>
<td>In the context of this question, a strength and balance programme means that the patient is still carrying out some form of regular activity that aims to improve / maintain their strength and balance. This could be the continuation of an in-home programme that has previously been set or regular attendance at an appropriate community programme. A self-directed programme of regular exercise is also satisfactory.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable Number</th>
<th>13.09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Further Fractures</td>
</tr>
<tr>
<td>Variable Name</td>
<td>furtherfract</td>
</tr>
<tr>
<td>Definition</td>
<td>Has the patient had a further fragility fracture since the index fracture 52 weeks ago?</td>
</tr>
<tr>
<td>Justification</td>
<td>To document whether the patient has had a further fragility fracture since the index fracture 52 weeks ago.</td>
</tr>
<tr>
<td>Format</td>
<td>1 digit Numeric</td>
</tr>
<tr>
<td>Status</td>
<td>Optional, non-core</td>
</tr>
<tr>
<td>Coding Source</td>
<td>Coding Frame</td>
</tr>
<tr>
<td></td>
<td>1 Yes</td>
</tr>
<tr>
<td></td>
<td>2 No</td>
</tr>
<tr>
<td></td>
<td>3 Not asked</td>
</tr>
<tr>
<td></td>
<td>9 Not known</td>
</tr>
</tbody>
</table>