**Inter rater reliability analyses**

Summary of results

The 206 participating sites were asked to re-audit their first 5 cases, using a different auditor. 185 sites submitted 891 cases. Sites identified their own reliability cases when entering data into the audit.

Reliability (agreement between auditors) is not the same as validity (accuracy of measure). However establishing good agreement between auditors is an important part of the process of validation as valid data by definition will have to be reliable.

For categorical data the kappa statistic was used to measure agreement. Kappa values of 0.41 to 0.60 are said to indicate moderate agreement, values of 0.61 – 0.80 indicate good agreement whilst values of over 0.80 are very good. In practice any value of kappa much below 0.50 will indicate inadequate agreement.

The kappa statistic does not measure the nature of any disagreement between auditors and for this we need to inspect the raw data tables. Any future attempt to improve on the reliability of any audit item will bear most fruit if it focuses on the more frequent discrepancies in judgement.

Sometimes the overall kappa value gives an assessment of agreement that is an amalgamation of separate components. One component is agreement between auditors as to whether or not they find the required information, another is whether information is applicable and another is agreement in the codes/categories of auditors when both have found information that is relevant.

The McNemar-Bowker Test: this tests for systematic bias between main and repeat auditors in their responses to particular questions. A lack of significance for a question implies the data are consistent with there being no bias, which was the situation in the vast majority of tests in this audit. Significant test P values are stated where applicable.

Summary

The levels of agreement were generally ‘reasonable’ to ‘good’ with almost all kappa values over 0.50 and about half of kappa values over 0.60. Kappa values below 0.60 were however a feature of section 3 (Q18 to Q28). There were very few instances of significant systematic bias between the Main and Repeat auditors, and in practice the shifts were relatively minor and this is not an issue in these results.

There will be a need however to use caution when performing analyses that correlate one variable with another when one or both variables have displayed less than good inter-auditor reliability – associations between such variables may become diluted as a consequence.

A summary table is given next in which Kappa values below 0.50 are highlighted.

| **Q** | **Variable label** | **Overall Kappa value** | **Kappa value excluding, not documented, N/A, Not stated, Not recorded** |
| --- | --- | --- | --- |
|  | Gender | 0.96 |  |
|  | Ward specialty | 0.77 |  |
|  | Ethnicity | 0.66 | 0.85 |
|  | First language | 0.55 | 0.86 |
|  | Age group (derived) | 0.96 |  |
|  | LOS group (derived) | 0.93 |  |
| 1 | Is the patient's mental health history recorded – dementia or other conditions or symptoms | 0.53 | 0.56 |
| 2 | The medical assessment includes problem list | 0.40 |  |
| 2a | The medical assessment includes co morbid conditions | 0.47 | 0.52 |
| 2b | The assessment includes a record of current medications for physical conditions | 0.64 | 0.65 |
| 2c | The assessment includes a record of current medications for mental health conditions | 0.59 | 0.73 |
| 2d | The medical assessment includes assessment of mobility | 0.43 | 0.46 |
| 2e | The medical assessment includes assessment of nutritional status | 0.59 |  |
| 2e1 | The assessment of nutritional status includes recording of weight | 0.71 | 0.78 |
| 2e2 | The assessment of nutritional status includes recording of height | 0.68 | 0.75 |
| 2e3 | The assessment of nutritional status includes whether referral is needed for specialist input | 0.52 |  |
| 2e4 | The assessment of nutritional status includes identification of any help needed with eating/ drinking | 0.49 |  |
| 2e5 | If help needed with eating/drinking is identified, is this recorded in the care plan | 0.57 |  |
| 2f | There is a management plan for medical condition | 0.35 |  |
| 2g | There is a nursing management plan for the dementia or symptoms of dementia or “confusional state” | 0.52 |  |
| 3 | Has a formal pressure sore risk assessment been carried out and score recorded | 0.61 |  |
| 4 | As part of the assessment has the patient been asked about any continence needs | 0.47 | 0.52 |
| 5 | As part of the assessment has the patient been asked about the presence of any pain | 0.48 | 0.54 |
| 6 | Has an assessment of functioning, using a standardised assessment scale, been carried out | 0.48 |  |
| 7 | Has a standardised mental status test been carried out? | 0.78 |  |
| 7a | Has a screen for delirium been carried out? | 0.54 |  |
| 7b | Has a standard mood (depression) test been carried out | 0.58 |  |
| 8 | Has an assessment of support provided to the person 'informally’ been carried out | 0.54 | 0.52 |
| 8a | Has a formal care provision assessment been carried out? | 0.54 | 0.66 |
| 8b | Has a financial support assessment been carried out? | 0.48 | 0.73 |
| 8c | Has a home safety assessment been carried out? | 0.56 | 0.64 |
| 9 | Does the care assessment contain a section dedicated to collecting information from the carer, next of kin or a person who knows the patient well? | 0.51 | 0.58 |
| 9a | Does this include: Personal details, preferences and routines (this could include preferred name, need to walk at certain times, time of rising, likes/dislikes re food) | 0.68 | 0.72 |
| 9b | Whether the person needs reminders or support with personal care (this could include washing or dressing, toileting and hygiene, eating and drinking, taking medication) | 0.67 | 0.66 |
| 9c | Recurring factors that may cause or exacerbate distress (this could include physical factors such as illness or pain, environmental factors such as noise, darkness) | 0.58 | 0.61 |
| 9d | Support or actions that can calm the person if they are agitated (this could include information about indicators, especially non-verbal, of distress or pain; any techniques that could help with distress, e.g. reminders of where they are, conversation to distract, or favourite picture or object) | 0.56 | 0.59 |
| 9e | Does the assessment also ask about life details which aid communication? (e.g. family situation, interests and past or current occupation) | 0.59 | 0.61 |
| 10 | Has information about support on discharge been given to the patient and/ or the carer | 0.54 |  |
| 11 | On admission, was the patient taking antipsychotics due to an existing regular prescription | 0.82 |  |
| 12 | Is a PRN prescription for antipsychotics in place for this admission | 0.83 |  |
| 121 | Is a PRN prescription for antipsychotics in place for this admission | 0.69 |  |
| 12a | Has the PRN been administered during this admission? | 0.78 |  |
| 13 | Has the patient been prescribed antipsychotics during this admission | 0.63 |  |
| 14 | What is the main or primary reason recorded for prescription of antipsychotics? | 0.61 | 0.69 |
| 15 | How many moves between wards/care settings took place overall | 0.57 |  |
| 15a | Did any moves take place at night (after 20:00)? | 0.54 |  |
| 16 | Were any moves unplanned? | 0.54 |  |
| 16a | Did unplanned moves take place for urgent medical reasons which are documented? | 1.00 |  |
| 17 | Was discharge planning initiated within 24 hours of admission? | 0.48 | 0.55 |
| 18a | At the point of discharge the following information is summarised and recorded:  The patient's level of cognitive impairment using a standardised assessment, e.g. MMSE, AMT | 0.57 |  |
| 18b | The cause of cognitive impairment | 0.49 |  |
| 19 | If there are any symptoms of delirium, is this summarised for discharge | 0.44 | 0.67 |
| 20 | If there have been any persistent behavioural and psychiatric symptoms of dementia, is this summarised for discharge? | 0.54 | 0.75 |
| 21 | If there have been any symptoms of depression, is this summarised for discharge? | 0.49 | 0.78 |
| 22 | The discharge plan has been coordinated by a named discharge co-ordinator | 0.54 | 0.57 |
| 23a | (Is there evidence in the notes that the discharge co-ordinator has discussed appropriate place of discharge and support needs with)  The person with dementia | 0.50 | 0.59 |
| 23b | The person's carer/relative | 0.51 | 0.55 |
| 23c | The medical consultant responsible for the patient's care | 0.51 |  |
| 23d | Other members of the multi-disciplinary team | 0.59 |  |
| 24 | Has a single plan for discharge with clear updated information been produced | 0.50 |  |
| 25 | Has the patient and/or carer received a copy of the plan or summary | 0.52 |  |
| 26 | Are any support needs that have been identified documented in the discharge plan | 0.49 | 0.60 |
| 27 | Carers or family have received advance notice of discharge | 0.49 | 0.54 |
| 28 | An assessment of the carer's current needs has taken place in advance of discharge | 0.49 | 0.57 |
| 29 | Has any referral been made to psychiatric consultation/liaison | 0.87 |  |
| 29a1 | Has any need for a referral to liaison psychiatry been noted | 0.60 |  |
| 29a2 | Has a follow up referral to community based mental health services been made on discharge | 0.70 |  |
| 29b1 | Is it stated whether the referral was emergency, urgent or routine | 0.56 | 0.66 |
| 29b2 | Please indicate time between referral and appointment: | 0.66 |  |
| 30 | Was the patient seen before discharge from hospital? | 0.64 | 0.72 |
| 30a1 | Consultant Psychiatrist | 0.84 |  |
| 30a2 | Associate Specialist Psychiatrist | 0.66 |  |
| 30a3 | Trainee Psychiatrist | 0.68 |  |
| 30a4 | Psychologist | 1.00 |  |
| 30a5 | Neuropsychologist | 1.00 |  |
| 30a6 | Consultant MH Nurse | 0.65 |  |
| 30a7 | MH Nurse | 0.78 |  |
| 30a8 | Other | 0.47 |  |
| 31 | Has a mental health assessment been recorded as a result of this appointment | 0.43 |  |
| 32 | Has any direction been given for care, treatment and discharge | 0.58 |  |
| 33 | Please indicate the place in which the person was living before admission | 0.85 |  |
| 33a | Did the person die during their stay in the hospital? | 0.98 |  |
| 34 | Please indicate the place in which the person is living or receiving care after discharge | 0.84 |  |
|  | Change in residence (derived) | 0.90 |  |
| 35 | Has a standardised test of cognitive ability been carried out on admission and on discharge | 0.55 |  |
| 35a | Test score on discharge is: | 0.73 | 0.82 |
| 36 | Has the patient's weight/BMI been recorded on admission and on discharge | 0.66 |  |
| 36a | Weight/BMI on discharge is: | - | 0.92 |
| 41 | Is information about the person's dementia quickly found in a specified place in the file | 0.54 |  |
| 42 | Is information about related care and support needs quickly found in a specified place in the file | 0.51 |  |