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# Concordance of mental capacity assessments based on legal and clinical criteria: A cross-sectional study of psychiatry inpatients

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ABSTRACT

This study aimed to compare assessments of mental capacity based on legal criteria with assessments based on clinical criteria among psychiatry inpatients to establish the concordance, if any, between these two approaches to assessing mental capacity. We assessed mental capacity for treatment decisions in 215 psychiatry inpatients (176 voluntary and 39 involuntary) in four psychiatry admission units in Ireland using both legal criteria (Ireland's Assisted Decision-Making (Capacity) Act 2015) and clinical criteria (the MacArthur Competence Assessment Tool for Treatment; MacCAT-T). Over one third of participants (34.9%) lacked mental capacity for treatment decisions according to the legal criteria. Mental incapacity was associated with involuntary admission status, being unemployed, a primary diagnosis of schizophrenia or a related disorder, and older age. Patients who lacked mental capacity according to the legislation scored significantly lower on all subscales of the MacCAT-T than patients who had mental capacity. We conclude that mental capacity assessments based on legal criteria correlate closely with those based on clinical criteria. These findings support current legal definitions of mental incapacity in Ireland and other jurisdictions with similar legislation (e.g. England and Wales).

## 1. Introduction

Definitions of mental capacity vary between legislation and clinical practice, and legislative definitions can also vary between jurisdictions, with no universally agreed legal criteria for mental capacity for treatment decisions (Owen et al., 2009a). Consistent with this, international studies show considerable variation in their estimates of the rate of mental capacity among psychiatry inpatients.

A systematic review by Okai et al. (2007) found that 29% of psychiatry inpatients lack mental capacity for treatment decisions while another found the median proportion to be 45% (Lepping et al., 2015). A study by Owen et al. (2008) found that 60% (95% confidence interval: 55–65%) lacked mental capacity to make treatment decisions and Cairns et al. (2005) reported that 43.8% were incapable of making treatment decisions. To our knowledge, there have been no studies of psychiatry inpatients comparing assessments of mental capacity based on legal definitions (which generally provide a binary assessment of mental capacity as either present or absent) with assessments based on structured clinical evaluations (which often provide linear rather than categorical outputs) (Murphy et al., 2018).

The current legislative situation in Ireland presents a useful opportunity to study this issue. Ireland's new Assisted Decision-Making (Capacity) Act 2015, which has yet to be commenced, aims to assist persons in exercising their decision-making capacity and was signed by the President of Ireland in December 2015. Preparation is now underway for full implementation (Kelly et al., 2018). The new statutory framework will extensively reform the law for people whose mental capacity is in question and who need help making decisions now or in the future (Kelly, 2017).

Ireland's 2015 Act defines mental incapacity (rather than capacity) by stating that 'a person lacks the capacity to make a decision if he or she is unable (a) to understand the information relevant to the decision, (b) to retain that information long enough to make a voluntary choice, (c) to use or weigh that information as part of the process of making the decision, or (d) to communicate his or her decision' (Section 3(2)). This definition of mental *in*capacity bears a close resemblance to definitions in legislation in a number of other countries, including England and Wales.

Lack of mental capacity is not an explicit part of legal criteria for involuntary psychiatry admission in Ireland (Kelly, 2016). Ireland's Mental Health Act 2001 allows involuntary admission when a person has a 'mental disorder', which is defined as 'mental illness, severe dementia or significant intellectual disability where (a) because of the illness, disability or dementia, there is a serious likelihood of the person

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concerned causing immediate and serious harm to himself or herself or to other persons, or (b) (i) because of the severity of the illness, disability or dementia, the judgment of the person concerned is so impaired that failure to admit the person to an approved centre [i.e. inpatient psychiatry unit] would be likely to lead to a serious deterioration in his or her condition or would prevent the administration of appropriate treatment that could be given only by such admission, and (ii) the reception, detention and treatment of the person concerned in an approved centre would be likely to benefit or alleviate the condition of that person to a material extent' (Section 3(1)). The 2001 Act defines 'voluntary patient' as 'a person receiving care and treatment in an approved centre who is not the subject of an admission order or a renewal order' (Section 2(1)). This definition does not consider whether or not the 'voluntary patient' has mental capacity for treatment decisions.

In practice, most clinical assessments of mental capacity among psychiatry inpatients are essentially clinical cognitive assessments, similar to that outlined in the MacArthur Competence Assessment Tool for Treatment (MacCAT-T), a semi-structured interview assessing a person's ability to understand and appreciate a disorder and its treatment, their reasoning and their ability to communicate a decision (Grisso et al., 1997; Grisso and Applebaum, 1998).

Using the MacCAT-T, we previously reported that 1.9% of psychiatry inpatients lack mental capacity for treatment decisions; 50.7% have partial mental capacity; and 47.4% have full mental capacity (Curley et al., 2019a). In addition, we found that mental capacity for treatment decisions in psychiatry inpatients is significantly associated with voluntary admission status, being employed, having a primary diagnosis other than schizophrenia or a related disorder, and younger age (Curley et al., 2019b).

Against that background, the objectives of the present analysis of this dataset are to (a) assess the prevalence of mental incapacity in 215 psychiatry inpatients in Ireland using the legal criteria for mental incapacity set out in the Assisted Decision-Making (Capacity) Act 2015 (as opposed to clinical criteria), and (b) perform the first direct comparison of outcomes of legal and clinical assessments of mental incapacity, using both Ireland's new mental capacity legislation and the MacCAT-T. Identifying the MacCAT-T dimensions of incapacity that are reflected in the legislative definition could also prove useful in validating Ireland's new legislative test (and, by implication, similar tests in other jurisdictions with similar legislation) and identifying any operational divergences between legal and clinical criteria that might require examination and resolution.

## 2. Material and methods

### 2.1. Setting

This research took place in four psychiatry inpatient units in Ireland: the Acute Psychiatry Unit in Tallaght University Hospital, Dublin; the Drogheda Department of Psychiatry, Crosslanes, Drogheda, County Louth; St Brigid's Hospital, Ardee, County Louth; and the Department of Psychiatry, Connolly Hospital, Blanchardstown, Dublin. All units provide public inpatient mental health care to adult patients aged 18 years or over. They all care for both voluntary and involuntary patients under the Mental Health Act 2001. At the time of their inspections by the Inspector of Mental Health Services in 2017 (the year in which our study commenced), the Acute Psychiatry Unit in Tallaght University Hospital had 51 inpatients, nine of whom were involuntary (Inspector of Mental Health Services, 2017a); the Drogheda Department of Psychiatry had 44 inpatients, 10 of whom were involuntary (Inspector of Mental Health Services, 2017b); St Brigid's Hospital in Ardee had 16 inpatients, all of whom were voluntary and had spent over six months in the hospital (Inspector of Mental Health Services, 2017c); and the Department of Psychiatry at Connolly Hospital Blanchardstown had 38 inpatients six of whom were involuntary (Inspector of Mental Health Services, 2017d).

### 2.2. Participants, recruitment and psychiatry admission status

We recruited inpatients in the four participating psychiatry units from July 2017 to October 2018. For inclusion, a patient had to be an inpatient in one of the four inpatient psychiatry units during the study period; be proficient in the English language; and aged 18 years or over. We identified patients from inpatient census lists and recruited patients from each of the four units. We included both voluntary and involuntary patients.

As the criteria for mental incapacity according to the Assisted Decision-Making (Capacity) Act 2015 had never previously been used in studies of psychiatry inpatients, a formal sample size calculation was not feasible. A sample size of 215 participants was chosen so that our study would be comparable with, or larger than, previous studies in the field (Cairns et al., 2005; Owen et al., 2009b; Mandarelli et al., 2014, 2018). In addition, 215 participants was an achievable sample size in the study setting divided between the four participating psychiatry units.

### 2.3. Data collection methodology

The key outcome variable was mental capacity for treatment decisions assessed using the criteria outlined in the Assisted Decision-Making (Capacity) Act 2015. This was then compared with the MacCAT-T sub-scale scores. All assessments were carried out based on the patient's diagnosis and the treatment they were receiving according to the clinical file, documented by their treating team. Once a patient consented to participate in the study, the researcher gathered relevant information from their clinical file, identified the key treatment decision that the patient faced at that time, and used that decision as the focus for assessing mental capacity for treatment decisions. Researchers used information documented in the clinical file by the treating team and did not provide additional information to patients about the treatment decision they faced.

For each participant, we recorded gender, age, employment status, marital status, ethnicity (Irish or non-Irish), admission status at time of assessment (voluntary or involuntary) and clinical diagnosis derived from each participant's clinical file, coded using the World Health Organisation's (WHO) *International Classification of Mental and Behavioural Disorders (ICD-10)* (WHO, 1992).

Our primary assessment of mental capacity was based on the Assisted Decision-Making (Capacity) Act 2015 which states that 'a person lacks the capacity to make a decision if he or she is unable (a) to understand the information relevant to the decision; (b) to retain that information long enough to make a voluntary choice; (c) to use or weigh that information as part of the process of making the decision; or (d) to communicate his or her decision (whether by talking, writing, using sign language, assistive technology, or any other means) or, if the implementation of the decision requires the act of a third party, to communicate by any means with that third party' (Section 3(2)). Each of these four items was rated in a binary fashion (yes/no). In accordance with the 2015 Act, if the patient received a 'no' on one or more of these four items, the patient lacked mental capacity for treatment decisions.

The results of this assessment were then compared to the scores from the MacCAT-T, a semi-structured interview that yields scores on four separate scales: (1) understanding of the disorder, its treatment, and associated risks and benefits (rated from 0 to 6, made up of three sub-scales, each rated from 0 to 2); (2) appreciation of the disorder and its treatment (rated from 0 to 4, with two sub-scales, each rated from 0 to 2: appreciation of the disorder and appreciation of treatment); (3) reasoning, which assesses the ability to compare alternatives in view of the consequences (rated from 0 to 8, made up of four sub-scales, each rated from 0 to 2: consequential reasoning, comparative reasoning,

generating consequences and logical consistency); and (4) the ability to express a choice (which is rated from 0 to 2) (Grisso et al., 1997; Grisso and Applebaum, 1998; Murphy et al., 2018). The four elements of the MacCAT-T are measured on continuous scales with a high degree of inter-rater reliability (ranging between 0.99 for "understanding" and 0.87 for "appreciation") (Grisso et al., 1997; Sturman, 2005). When added together, these scores yield an overall score ranging from 0 to 20, but even if a participant has a high overall MacCAT-T score they may still lack mental capacity if they perform poorly on a single subscale.

In the present study, all ratings were performed by a trained clinician with more than five years training in psychiatry and membership of the Royal College of Psychiatrists (AC), consistent with established methodology (Owen et al., 2013; Murphy et al., 2018) and with ongoing supervision by another trained assessor (BDK). For additional quality control, there were joint assessments of certain patients with another trained clinician, also with more than five years training in psychiatry and membership of the Royal College of Psychiatrists (RM), and also under supervision (BDK).

### 2.4. Consent procedure

For this study, it was imperative that all eligible patients were approached and invited to participate regardless of level of mental capacity, in order to gain a complete picture of the prevalence of mental incapacity and avoid selection bias. To achieve this, we developed a detailed consent procedure:

- Any patient (with or without mental capacity) who indicated in any way that they did not wish to participate was omitted from the study.
- Written informed consent was obtained from patients with mental capacity to provide such consent.
- For patients who lacked mental capacity to consent to the study, we developed a next-of-kin/relative information leaflet and assent form. As there is a legal presumption of mental capacity in Ireland, it was only in cases where we had *prima facie* reason to believe that the patient lacked mental capacity to consent to the study that we could question the presumption of mental capacity to participate. In these cases, we obtained assent from their next-of-kin or relative when feasible. On receiving such assent, we proceeded with our assessments provided the patient assented and did not object at any point. In these cases, we sought 'deferred consent' if the patient regained mental capacity during the study period.
- For patients who lacked mental capacity to consent to the study and there was no next-of-kin or relative named or available, we proceeded with our assessments provided the patient assented and did not object. In these cases, we sought 'deferred consent' if the patient regained mental capacity during the study period.
- If, on regaining mental capacity, any patient had declined to provide such 'deferred consent', we would have destroyed the data relating to that patient, but this circumstance did not arise in the study.

### 2.5. Ethical approval

This study received ethical approval from the Tallaght University Hospital/St James's Hospital Joint Research Ethics Committee, Dublin; the Health Service Executive North East Area Research Ethics Committee, Bective Street, Kells, County Meath; and the Royal College of Surgeons in Ireland Research Ethics Committee, 121 St Stephen's Green, Dublin. This was a study of usual practice using existing routine data and administration of an interview to evaluate current mental health care practice. It was performed in accordance with appropriate data protection and research regulations and the Declaration of Helsinki (World Medical Association, 2008). Data were irrevocably anonymized, encrypted and stored on a password-protected research computer in a locked research office. Patient confidentiality was protected at all times.

### 2.6. Statistical analysis

Data were stored, described and analysed using IBM SPSS Statistics 23. Student *t*-test was used to compare scores on subscales of the MacCAT-T between patients who had mental capacity for treatment decisions according to the Assisted Decision-Making (Capacity) Act 2015 and those who did not. We generated a multi-variable binary logistic regression model with mental capacity for treatment decisions as per the 2015 Act as the dependent variable and gender, age, marital status, employment status, ethnicity, admission status, primary diagnosis and psychiatry unit of admission as the independent variables.

We tested for multicollinearity, which is when two or more variables are so closely related to each other that the model cannot reliably distinguish the independent effects of each. For this, we calculated a 'tolerance value' for each independent variable; tolerance values below 0.25 indicate possible multicollinearity, and tolerance values below 0.10 indicate significant problems with multicollinearity (Katz, 1999). There were no missing data.

## 3. Results

Two hundred and fifteen psychiatry hospital inpatients participated in the study with a mean age of 46.2 years (standard deviation [SD]: 17.1). 41.9% ($n = 90$) were female and 87% ($n = 187$) of Irish ethnicity. Majorities were unemployed (64.2%; $n = 138$) and voluntary (81.9%; $n = 176$) rather than involuntary patients (18.1%; $n = 39$). Schizophrenia and related disorders (42.8%; $n = 92$) were the most common diagnoses followed by affective (mood) disorders (36.7%; $n = 79$). People with psychoactive substance misuse disorders (including alcohol) (7.9%; $n = 17$), neurotic (anxiety) disorders (7.0%; $n = 15$), personality disorders (3.3%; $n = 7$) and other conditions (2.3%, $n = 5$) formed smaller portions of the participants.

Seventy-five (34.9%) participants lacked mental capacity for treatment decisions using the criteria in the Assisted Decision-Making (Capacity) Act 2015. Multi-variable binary logistic regression analysis showed that patients who lacked mental capacity under the 2015 Act were more likely to be, in order of strength of association, involuntary patients; unemployed; diagnosed with schizophrenia or a related disorder; and older ($p < 0.05$ in all cases; Table 1). Together, these factors accounted for 40.7% of the variance in mental capacity between participants. There was no statistically significant association between mental capacity and gender, marital status, ethnicity or psychiatry unit to which the patient was admitted. All tolerance values were greater than 0.25 indicating no problems with multicollinearity in the model.

A small minority of four patients (5.3%) met all four criteria for mental incapacity according to the 2015 Act; i.e. they were unable to understand the relevant information, retain it, weigh it up and communicate a decision. Among the 75 patients who lacked mental capacity, 48 (64.0%) were unable to understand or retain the information; 75 (100%) were unable to weigh up the information; and four (5.3%) were unable to communicate a decision.

The mean MacCAT-T score for the entire sample ($n = 215$) was 14.13 (SD: 6.34). The distribution of total MacCAT-T scores was non-normal (skewed to the left) with a median value of 17.6 (inter-quartile range: 7.65–19.5). Mean MacCAT-T score among patients who had mental capacity according to the 2015 Act was significantly higher than that for those who lacked mental capacity (18.53, SD: 1.58 versus 5.93, SD: 2.62; $t = 43.874$, $p < 0.001$) but it should be noted that even if a participant had a high overall MacCAT-T score they could still lack mental capacity if they performed poorly on a single subscale. Patients with mental capacity according to the 2015 Act, however, scored significantly higher on *all* sub-scales of the MacCAT-T compared to those without capacity ($p < 0.01$ in all cases; Table 2).

No patient was deemed to lack mental capacity solely owing to

**Table 1**
Psychiatry hospital inpatients in Ireland in whom mental capacity for treatment decisions was assessed. Values are numbers (percentages) unless stated otherwise.

| Variables | | All patients ($n$ = 215) | Mental capacity status as per the Assisted Decision-Making (Capacity) Act 2015 | | Binary logistic regression analysis of mental capacity status as per the Assisted Decision-Making (Capacity) Act 2015[a] | |
|---|---|---|---|---|---|---|
| | | | Has mental capacity ($n$ = 140) | Lacks mental capacity ($n$ = 75) | β | $p$ |
| Gender | Women | 90 (41.9) | 64 (45.7) | 26 (34.7) | −0.721 | 0.087 |
| | Men | 125 (58.1) | 76 (54.3) | 49 (65.3) | | |
| Mean (SD) age (years) | | 46.22 (17.1) | 45.04 (16.62) | 48.41 (18.01) | −0.033 | 0.012 |
| Marital status | Never married | 159 (74) | 100 (71.4) | 59 (78.7) | 0.060 | 0.828 |
| | Married | 31 (14.4) | 21 (15) | 10 (13.3) | | |
| | Divorced or separated | 15 (7) | 12 (8.6) | 3 (4) | | |
| | Widowed | 10 (4.7) | 7 (5) | 3 (4) | | |
| Employment status | Employed | 77 (35.8) | 61 (43.6) | 16 (21.3) | 1.179 | 0.020 |
| | Unemployed | 138 (64.2) | 79 (56.4) | 59 (78.7) | | |
| Ethnicity | Irish | 187 (87) | 125 (89.3) | 62 (82.7) | −0.341 | 0.621 |
| | Non-Irish | 28 (13) | 15 (10.7) | 13 (17.5) | | |
| Admission Status | Voluntary | 176 (81.9) | 137 (97.9) | 39 (52) | −3.894 | <0.001 |
| | Involuntary | 39 (18.1) | 3 (2.1) | 36 (48) | | |
| Primary diagnosis | Schizophrenia and related disorders | 92 (42.8) | 37 (26.4) | 55 (25.6) | 0.877 | 0.002 |
| | Affective Disorders | 79 (36.7) | 63 (45) | 16 (21.3) | | |
| | Psychoactive substance misuse disorders | 17 (7.9) | 14 (10) | 3 (4) | | |
| | Neurotic disorders | 15 (7) | 15 (10.7) | 0 (0) | | |
| | Personality disorders | 7 (3.3) | 7 (3.3) | 0 (0) | | |
| | Other disorders | 5 (2.3) | 4 (2.9) | 1 (1.3) | | |
| Psychiatry unit in which the person was admitted | Tallaght Acute Psychiatry Unit | 62 (28.8) | 37 (26.4) | 25 (33.3) | 0.059 | 0.648 |
| | Drogheda Department of Psychiatry | 59 (27.4) | 39 (27.9) | 20 (26.7) | | |
| | St Brigid's Hospital, Ardee | 13 (6) | 6 (4.3) | 7 (9.3) | | |
| | Blanchardstown Department of Psychiatry | 81 (37.7) | 58 (41.4) | 23 (30.7) | | |

Notes.
[a] Binary logistic regression analysis of mental capacity for treatment decisions with mental capacity status (yes/no) as per the Assisted Decision-Making (Capacity) Act 2015 as the dependent variable; $r^2$ = 40.7%.

communication problems and no additional supports were required for communication in the study apart from addressing patients using clear, short sentences, which we did for all patients.

We performed a *post-hoc* power calculation based on the key outcome variable in our study (binary mental capacity for treatment decisions using the criteria in the Assisted Decision-Making (Capacity) Act 2015) and a key correlate in our multi-variable binary logistic regression model (admission status). We found that our sample of 176 voluntary and 39 involuntary patients had over 95% power to detect the differing prevalence of mental incapacity in these groups ($p < 0.05$).

## 4. Discussion

### 4.1. Mental incapacity for treatment decisions

We found that over one third (34.9%) of psychiatry inpatients lacked the mental capacity for treatment decisions according to Ireland's legal criteria for mental incapacity in the Assisted Decision-Making (Capacity) Act 2015. This high rate of mental incapacity highlights the underlying need for Ireland's new mental capacity legislation and emphasises the importance of timely commencement of the 2015 Act, which has yet to occur. This finding is consistent with studies from other jurisdictions which report similar rates of mental incapacity among psychiatry inpatients and highlight the importance of devoting renewed attention to mental incapacity in psychiatry settings (Okai et al., 2007; Lepping et al., 2015).

### 4.2. Mental incapacity in voluntary psychiatry inpatients

Over half (52%) of psychiatry inpatients who lacked mental capacity in our study were voluntary as opposed to involuntary patients. This paradoxical situation is of particular concern. Ireland's Mental Health Act 2001 primarily legislates for involuntary admission and the definition of voluntary patient does not require mental capacity for treatment decisions. There is, therefore, an urgent need for legislative clarity regarding 'voluntary' psychiatry admission and mental capacity, to address in particular the situation of the 'voluntary' patient who lacks decision-making capacity in relation to admission and treatment but passively acquiesces to both.

Ironically, patients involuntarily admitted under the Mental Health Act 2001 benefit from free, automatic legal representation, free, independent second opinions, and automatic external review through mental health tribunals, but there are no equivalent provisions to protect the 'voluntary' patient. The Assisted Decision-Making (Capacity) Act 2015 usefully reiterates that there is a presumption of mental capacity for all, but there is also a need to ensure that voluntary inpatients who lack mental capacity are identified in order to better promote their rights and dignity (see Section 4.3 also).

### 4.3. Mental capacity in involuntary psychiatry patients

A person may be involuntarily admitted under Ireland's Mental Health Act 2001 if they are found to be 'suffering from a mental disorder' (Section 8(1)) and meet the criteria of Section 3(1)(a) (risk criterion) and/or Section 3(1)(b) (treatment criterion), as outlined above. While a lack of mental capacity for treatment decisions is not among these criteria, it is commonly assumed in practice that involuntary patients lack such mental capacity. While our finding was that the majority of involuntary patients (92.3%) indeed lacked mental capacity for treatment decisions, we also found that a small but significant minority (7.7%) retained mental capacity despite their involuntary status.

**Table 2**
Relationship between mental capacity for treatment decisions in psychiatry inpatients in Ireland assessed using (a) legislation (Ireland's Assisted Decision-Making (Capacity) Act 2015) and (b) a semi-structured clinical interview (MacArthur Competence Assessment Tool for Treatment). Values are numbers (standard deviation).

| MacArthur Competence Assessment Tool for Treatment (MacCAT-T) scale | MacCAT-T sub-scale | MacCAT-T sub-scale scores (rated from 0 to 2, with higher scores indicating greater mental capacity) | | | Student *t*-test comparing MacCAT-T sub-scale scores in patients with and without mental capacity as per the Assisted Decision-Making (Capacity) Act 2015 | |
|---|---|---|---|---|---|---|
| | | All patients ($n$ = 215) | Patients without mental capacity as per the Assisted Decision-Making (Capacity) Act 2015 ($n$ = 140) | Patients with mental capacity as per the Assisted Decision-Making (Capacity) Act 2015 ($n$ = 75) | *t* | *p* |
| Understanding | Disorder | 1.48 (0.71) | 1.88 (0.37) | 0.73 (0.55) | 18.163 | < 0.001 |
| | Treatment | 1.63 (0.56) | 1.86 (0.29) | 1.19 (0.67) | 10.242 | < 0.001 |
| | Benefit/risks | 1.15 (0.60) | 1.42 (0.43) | 0.67 (0.54) | 11.134 | < 0.001 |
| | Summary | 4.26 (1.60) | 5.12 (0.70) | 2.60 (1.47) | 17.338 | < 0.001 |
| Appreciation | Disorder | 1.29 (0.87) | 1.82 (0.41) | 0.26 (0.50) | 24.569 | < 0.001 |
| | Treatment | 1.36 (0.84) | 1.88 (0.35) | 0.39 (0.59) | 23.280 | < 0.001 |
| | Summary | 2.64 (1.61) | 3.71 (0.58) | 0.64 (0.82) | 31.882 | < 0.001 |
| Reasoning | Consequential | 1.33 (0.91) | 1.92 (0.34) | 0.17 (0.42) | 33.175 | < 0.001 |
| | Comparative | 1.31 (0.91) | 1.94 (0.32) | 0.20 (0.43) | 33.206 | < 0.001 |
| | Generate consequences | 2.45 (1.79) | 3.61 (0.86) | 0.27 (0.70) | 28.873 | < 0.001 |
| | Logical consistency | 1.42 (0.85) | 2 (0) | 0.33 (0.53) | 37.392 | < 0.001 |
| | Summary | 5.27 (3.39) | 7.95 (0.30) | 0.46 (1.18) | 55.352 | < 0.001 |
| Expressing a choice | | 1.96 (0.27) | 2.00 (0.00) | 1.89 (0.45) | 2.795 | 0.006 |

It is possible that these patients did not have that mental capacity on admission but had regained it by the time of our study, or that they were due for consultant review and potential revocation of their involuntary admission order in the days following our assessment. As this was a cross-sectional study, however, we did not have any other assessments to establish mental capacity at other time-points and so could not elucidate these possibilities to explain our finding. Future research could usefully do so.

In 2015, a review of Ireland's Mental Health Act 2001 considered the issue of whether criteria for involuntary admission should include a 'capacity test' but decided instead that mental capacity should be assessed under the Assisted Decision-Making (Capacity) Act 2015 *separately* to assessment for involuntary admission under the Mental Health Act 2001. The Expert Group (2015) suggested that, 'if on admission of a patient, the admitting mental health professional forms the view that the person may lack capacity to understand and give his/her informed consent to the proposed admission, they must refer the person for formal capacity assessment to be completed within 24 h'.

If, following the capacity assessment, 'it is deemed that a person has capacity to admit themselves, a voluntary admission may proceed. If it is deemed that they need support to understand, to make, or to convey their decision, that support must be provided to assist in the voluntary admission process [using the mechanisms of the 2015 Act; i.e. decision-making assistants, co-decision makers, etc.]. If it is deemed that they do not have capacity in relation to this decision, and the person has a mental illness, they may only be admitted on an involuntary basis provided they satisfy all the criteria for detention. A person who lacks capacity and has a mental illness but does not fulfil the criteria for detention may, in specified circumstances, be admitted as an 'intermediate' patient' (which would be a new category of patient).

An 'intermediate' patient 'will not be detained but will have the review mechanisms and protections of a detained person. Such patients would not have the capacity to consent to admission and equally do not fulfil the criteria for involuntary detention'. For decision-making, the supports of the Assisted Decision-Making (Capacity) Act 2015 would be required for 'intermediate' patients.

While these recommendations from the Expert Group have yet to be acted upon, they were designed to address the complex relationship between mental incapacity and psychiatry admission status, ensuring that patients who lack mental capacity but are compliant with treatment have their rights protected. It is hoped that keeping mental capacity assessments separate to involuntary admission criteria will also help ensure that criteria for involuntary admission are not applied discriminatorily to people who lack mental capacity, consistent with the Convention on the Rights of Persons with Disabilities (CRPD).

### 4.4. Clinical and legal criteria for mental incapacity

We found that, among psychiatry inpatients, assessments of mental incapacity for treatment decisions based on Ireland's Assisted Decision-Making (Capacity) Act 2015 (i.e. legal criteria) accord very closely with assessments using the Mac-CAT-T (i.e. clinical criteria). This suggests that the MacCAT-T could reasonably be used both in *clinical* practice and for assessments of whether or not patients meet the *legal* criteria for mental incapacity. The MacCAT-T is, however, considerably longer than the legal criteria for mental incapacity outlined in Irish legislation and similar legislation in other jurisdictions (e.g. England and Wales). While this permits a more nuanced exploration of different aspects of mental incapacity with the MacCAT-T, and also possibly helps deepen therapeutic understandings, the MacCAT-T is more time-consuming than the legislative test and also requires training.

It is also worth noting that, despite the similarity in outcomes, the MacCAT-T will not necessarily always accord with legal criteria in every way; for example, the MacCAT-T includes 'appreciation' in its criteria while the Assisted Decision-Making (Capacity) Act 2015 does not. Nonetheless, we still recommend use of the MacCAT-T in clinical

practice once it is used following appropriate training, with an awareness of its strengths and limitations, and with an understanding of its relationship with legal criteria (which, in Ireland at least, is a very close relationship).

### 4.5. Strengths and limitations of the present study

This is the first quantitative study of mental incapacity to use the new criteria outlined in the Assisted Decision-Making (Capacity) Act 2015 among psychiatry inpatients in Ireland. It is also, to our knowledge, the first to compare assessments of mental incapacity in psychiatry inpatients based on a legal definition of mental incapacity with assessments based on structured clinical assessment (the MacCAT-T). Our study also included both voluntary and involuntary patients and is comparable in size with leading studies in the broader field (Cairns et al., 2005; Owen et al., 2009b; Mandarelli et al., 2014, 2018), thus optimising generalisability. In addition, our *post-hoc* power calculation indicated that our sample of 176 voluntary and 39 involuntary patients had adequate power to detect the differing prevalence of mental incapacity across these groups.

Limitations include the fact that our analysis was cross-sectional and did not take account of changes in mental capacity over time; this was to establish what proportion of hospital inpatients lack mental capacity at a given time. We are, however, aware that in clinical practice non-urgent treatment decisions may be postponed if there is potential for the patient to regain mental capacity (as recommended in the 2015 Act). Therefore, a study involving repeated assessments of mental capacity over time would be a valuable addition to the field.

We did not measure cognitive performance, which is important in the MacCAT-T assessment (Breden and Vollmann, 2004; Mandarelli et al., 2012). However, to reduce bias, we included both voluntary and involuntary patients, studied four psychiatry inpatient units, and developed a notably inclusive consent procedure. We used the same rater for both clinical and legal assessments of mental capacity in order to facilitate simultaneous assessment (as mental capacity can fluctuate over time) and in order to reflect clinical practice (where it is common for the same doctor to perform both clinical and legal assessments of mental capacity, although this is, arguably, not ideal). The use of a single rater for both assessments, however, had the potential to introduce assessment bias, and while we provided careful training and supervision to minimise this possibility, it is possible that residual bias remained.

## 5. Conclusions

Among psychiatry inpatients, assessments of mental incapacity for treatment decisions based on Ireland's Assisted Decision-Making (Capacity) Act 2015 accord very closely with assessments using clinical criteria (in this study, the MacCAT-T). This finding supports the usefulness of Ireland's new legal test and similar tests in other jurisdictions with comparable legislation (e.g. England and Wales). Once Ireland's 2015 Act is commenced in practice, it would be useful to study this matter again, with assessments of mental capacity performed over time, as recommended in the legislation, rather than at just one time-point.

The high rate of mental incapacity in our study (34.9%) highlights the need to commence Ireland's new legislation in a timely fashion. Preparation of relevant codes of practice is already underway. Throughout the process of implementation, it is imperative that rights of psychiatry inpatients, both voluntary and involuntary, who lack mental capacity for treatment decisions are protected. While the rights of involuntary patients are already protected to a significant degree through legal representation, independent second opinions and mental health tribunals, those who are voluntary and lack mental capacity are not afforded similar protections. They should be.

Finally, as the rate of mental incapacity among psychiatry inpatients in our study is broadly consistent with those in other jurisdictions, our findings support the more general need to pay greater attention to these issues in legislation and practice at both national and international levels. Resource planning and development of consent protocols for patients who lack mental capacity are clearly essential in order protect autonomy and rights, and provide better, more patient-centred care to all.

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## Conflict of interest

BDK was a member of the Expert Group on the Review of the Mental Health Act 2001 (2015).

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## Appendix. Mental capacity assessment tools

This study assessed mental capacity for treatment decisions using two assessment tools:

- Section 3(2) of Ireland's Assisted Decision-Making (Capacity) Act 2015, which is freely accessible at this link: http://www.irishstatutebook.ie/eli/2015/act/64/section/3/enacted/en/html#sec3
- The MacArthur Competence Assessment Tool for Treatment (MacCAT-T), which is accessible at this link: https://www.prpress.com/MacArthur-Competence-Assessment-Tool-for-Treatment-MacCAT-T_p_169.html

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