SPECIALLING IN DELIRIUM AND DEMENTIA: A cross-sectional cohort study

Research Question
“Do elderly patients with delirium and dementia who are provided with an Individual Patient Special have nursing assessments conducted in clinical practice?”

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List of Abbreviations

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<tr>
<td>ACI</td>
<td>Agency for Clinical Innovation</td>
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<tr>
<td>AHNM</td>
<td>After Hours Nurse Manager</td>
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<td>ALOS</td>
<td>Average Length of Stay</td>
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<td>APAT</td>
<td>Adult Patient Assessment Tool</td>
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<td>AIN</td>
<td>Assistant in Nursing</td>
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<td>CAM</td>
<td>Confusion Assessment Method</td>
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<td>CHHC</td>
<td>Coffs Harbour Health Campus</td>
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<tr>
<td>IPS</td>
<td>Individual Patient Special</td>
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<tr>
<td>IPS-Agg</td>
<td>Individual Patient Special Aggression</td>
</tr>
<tr>
<td>IPS-CWF</td>
<td>Individual Patient Special Confused Wandering Falls</td>
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<tr>
<td>IPS-Co</td>
<td>Individual Patient Special Confused</td>
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<td>IPS-Cust</td>
<td>Individual Patient Special Custodial</td>
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<td>IPS-Fa</td>
<td>Individual Patient Special Falls</td>
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<td>IPS-HD</td>
<td>Individual Patient Special High Dependency</td>
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<td>LOS</td>
<td>Length of Stay</td>
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<tr>
<td>MNCLHD</td>
<td>Mid North Coast Local Health District</td>
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<tr>
<td>MET</td>
<td>Medical Emergency Team</td>
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<td>MMSE</td>
<td>Mini Mental State Examination</td>
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<td>MRN</td>
<td>Medical Record Number</td>
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<td>NUM</td>
<td>Nurse Unit Manager</td>
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<tr>
<td>RACF</td>
<td>Residential Aged Care Facility</td>
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Abstract

Do patients with delirium and dementia who are provided with an Individual Patient Special (IPS) have nursing assessments conducted in clinical practice?

**Aim**

Few studies have examined the model of providing an IPS to patients who present to hospitals with delirium and dementia. This study measured rates of nursing admission assessments and adherence to IPS policy and procedure at a rural hospital.

**Method**

A quantitative retrospective medical record audit was conducted using consecutive sampling of specialised patients that were admitted to a rural 270 bed hospital over an 18 month period from June 2012 to January 2014. Inclusion criteria were patients aged 65 and over with a diagnosis of delirium and dementia who were specialled (n=150). Patients with a psychiatric illness and high dependency patients were excluded.

**Results**

The audit demonstrated low rates of completion of compulsory admission assessments for patients with delirium (21%) and dementia (20%) and low referral rates to Medical Team or Specialist Nurse for more expert care (23%). Results for compliance with the IPS model were mixed with good outcomes in completion of the daily patient behaviour chart (83%) and daily Medical Officer review (100%). Results revealed low completion rates for the reassessment process for the need for an ongoing special at 48 hours (30%).

**Conclusion**

Results indicate that the care of confused patients with challenging behaviour is complex and that compulsory admission assessments aren’t attended for all patients. Changes to the IPS policy and procedure to reflect a therapeutic rather than a custodial model is recommended. The development of criteria to cease an IPS may result in reduced length of stay for IPS patients.

**Implications for future practice**

The demand for the IPS model is likely to increase as the population ages and the prevalence of delirium and dementia increases. It is important for health service providers to evaluate care provided to patients to ensure optimal, cost effective outcomes.

**Key Words**

Specialling, assessment, delirium, dementia, constant observation.
Executive Summary

Study Implications and Recommendations

As a result of this audit on specialling patients at Coffs Harbour Health Campus (CHHC) it is recommended that the network IPS policy and procedure be revised by a working group of expert clinicians in the care of delirium and dementia. An expert group would include multidisciplinary representation from medical officers, nurses, allied health and a consumer representative. It is suggested the group focus on the following areas:

- Development of a therapeutic rather than custodial model of care that places emphasis on finding the cause of a patient’s challenging behaviour rather than merely observing and documenting the frequency of challenging behaviour.
- The development of guidelines to cease an IPS. The absence of any guidelines to assist clinicians to cease a special appears to result in prolonged and at times unnecessary use of a special, which increases cost of care. The emphasis on risk management and patient safety in current IPS policy may discourage clinicians from ceasing a special.
- Review is recommended of the large amount of unnecessary paperwork associated with securing, monitoring and reassessing a patient who is specialled. The current cumbersome process could be streamlined by utilising the current electronic medical record (EMR).
- Policy should promote the importance of family engagement in all aspects of a specialled patient’s care.

A pharmacy review should be compulsory for all specialled patients on psychotropic medication especially when these medications are prescribed as often as necessary (PRN).

The reasons for the high number of medical emergency team (MET) calls for specialled patients should be investigated through existing morbidity and mortality meetings.

It is also recommended that the Mid North Coast Local Health District (MCHLHD) continues to invest in Assistant in Nursing (AIN) IPS education and training though nurse strategy funding.

Further investigation by the Quality Team is recommended to discern why there are low rates of admission assessments for delirium and dementia on the adult patient assessment tool (APAT).
What did this study find and what does it mean?

Results of the CHHC audit showed that 83 participants had a diagnosis of dementia and 99 participants had a diagnosis of delirium. There were 78 participants who had a diagnosis of both delirium and dementia. Rates for cognitive testing were low with 21% of all participants having a confusion assessment method (CAM) test attended and 20% of all participants having the recommended mini mental state examination (MMSE) attended.

On examining the district IPS model, there was full compliance with some aspects of policy and procedure including daily patient review by a Medical Officer (100%). However despite daily Medical Officer review there was a high number of patient medical emergency calls (MET) and rapid response calls for clinical deterioration (21% compared with an average 2% for the all admitted patients). The most frequent reason for a MET call was hypotension (29%) and hypertension (22%). The audit didn’t explore the cause of the MET calls but this unexpected finding may be an indication of the morbidity of this client group.

There was satisfactory compliance with nurses completing the patient behaviour chart every 30 minutes (83%) however the value this information contributes to patient care is questioned. Behaviour mapping and looking for causes of challenging behaviour may add more value in terms of looking for triggers for challenging behaviour rather than documenting a patient’s behaviour every 30 minutes.

Review rates for the need for an ongoing special as per the IPS procedure were low at the eight hour interval (17%), at 24 hours (29%) and at 48 hours (30%). These figures suggest that reassessments are not occurring and this may contribute to unnecessary length of time specialised.

Most patients in this study (93%) were specialised due to being confused, wandering and considered to be a high falls risk. On admission falls risk assessments were attended for 77% of patients however not all patients who were found to be a high falls risk were specialised. There were 17 patients who were admitted and were not specialised but became specialised after they experienced a fall. From the total number of participants (n=150), three patients fell whilst being specialised.

A literature search showed alternatives to specialling may include physical or chemical restraint. The audit results showed low documented rates of physical restraint (2%) and high rates of the administration of psychotropic medications (77%). The administration of psychotropic medication may be viewed as a form of chemical restraint. The most common antipsychotic medication prescribed in the study population was haloperidol (61%) followed by risperidone (33%). These medications should always be used judiciously in the elderly and closely monitored. It was beyond the scope of this study to explore if there was a relationship between the high numbers of prescribed psychotropic medication and the high number of MET calls in the study participants. This finding could form the basis for a future study.

The average length of stay (ALOS) for specialised patients was 8.4 days compared with 2.5 days for all patients admitted to the regional hospital which
again may be an indication of the complexity of care for this patient group. Increased ALOS results in increased costs and increased risk of adverse patient outcomes such as hospital acquired infections. The average length of time a patient was specialled was 4.8 days.

**Why the study was conducted?**
Care of hospitalised older patients with delirium and dementia who have behavioural problems is complex and there is a concern amongst clinicians to keep them safe from falling or other adverse outcomes such as absconding or self-harm. Historically confused wandering patients were physically restrained however NSW Health now advocates a restraint minimisation policy. Providing an IPS is one way of monitoring confused elderly patients and keeping them safe from harm. The IPS model is where one nurse is allocated to care for one patient and the process of providing an IPS is termed “specialling”. Specialling is an expensive model and there is a concern amongst health administrators regarding the growing demand for specialling as the population ages and costs escalate. There is also debate in the literature from economists who question if an IPS does keep patients safe and prevents them from falling. There is a suggestion from health administrators that cohorting patients whereby one nurse is allocated to care for more than one confused patient in the same room may assist in reducing the cost of specialling, however this concept hasn’t been explored in terms of patient care.

There were few studies found that have examined the efficacy of the IPS model in terms of patient assessment and care. The aim of this study was to examine the IPS model at CHHC and measure admission assessments for delirium and dementia and falls in patients who are specialled.

**Background of the Study**
On admission to Coffs Harbour Health Campus the compulsory Adult Patient Assessment Tool (APAT) guides nurses in patient assessment, care planning and referral. When a patient is admitted with confusion there are two assessments on the APAT that assist clinicians to assess the confused older person. The first assessment is the CAM which is a validated tool to test for delirium. The second assessment is the MMSE which assists clinicians in determining the presence of dementia and the stages of dementia. It is important to differentiate between delirium and dementia as delirium is an acute onset confusional state that is reversible once the cause or causes are known, whereas dementia is a progressive decline in cognitive functioning that is unable to be reversed. Patients with a diagnosis of dementia may also be hospitalised with a delirium superimposed on dementia. The APAT also directs nurses to refer to appropriate clinicians for further assessment and expert advice regarding care.
How the study was conducted
The study consisted of a retrospective medical record audit of patients specialled at a 270 bed regional hospital (n=150). Consecutive sampling was used and data was collected on an Excel spreadsheet by the primary researcher. All patients who were specialled between June 2012 and January 2014 were included. Inclusion criteria were patients aged 65 and over with a diagnosis of delirium and dementia as documented by a medical officer in the medical record. Exclusion criteria were patients with a psychiatric illness, patients withdrawing from alcohol and patients requiring high dependency care.

Care was measured against compulsory admission assessments and district IPS health policy and procedure. These documents are designed to guide clinicians in delivering care.

Introduction

This retrospective medical audit aimed to examine the following aspects of the Individual Patient Special (IPS) model:

- Rates of admission assessments for patients admitted to hospital with delirium and dementia who are specialled.
- Comparison between results of this audit and a similar audit conducted by Landon et.,al. (2009) on the APAT.
- The relationship between falls and falls assessments for patients who are specialled.
- Compliance rates with aspects of the health district's IPS policy and procedure including:
  - Completion of a risk assessment form every 24 hours for the need for a special
  - Completion of staff checklist and behaviour chart every 30-60 minutes.
  - Daily patient review by a Medical Officer
  - Daily nursing handover sheet completed.
  - Formal review by Nurse Unit Manager (NUM) or After Hours Nurse Manager (AHNM) every 24 hours for need for special.

Providing an IPS or “specialling” a patient in the acute hospital setting is a well-known nursing practice (Salmon & Lennon, 2003). In the literature definitions vary but specialling generally refers to providing 1:1 care to a patient by a nurse for an individual patient or a small number of cohorted patients (Harding, 2012; Moyle, Borbasi, Wallis, Olenshaw & Gracia, 2010). Specialled patients may have one or more of the following symptoms or diagnosis; agitation, high anxiety, alcohol withdrawal, behavioural disturbance, have a psychosis or personality disorder, have delirium or dementia, or may be neurologically impaired or suicidal (Nadler-Moodie, 2009).
Throughout this report the term “specialling” will mean the nursing practice of providing an individual patient special (Bowers & Park 2001, as cited in Wilkes, Jackson, Mohan & Wallis, 2010). The term “the special” will mean the staff member who is providing the care to the patient who is being “specialled”. Cohorting refers to the practice where one nurse constantly observes and cares for more than one confused patient in the same room. For the purposes of this report “delirium and dementia” will mean patients may have a diagnosis of delirium, a diagnosis of dementia or a combination of both delirium and dementia.

**Assessment of patients with delirium and dementia**

Admission assessment of the confused older person is important in order to facilitate care planning and referrals to other health professionals (Dick, La Grow, & Boddy 2009; Kaisu, Jouko, Timo & Reijo, 2006). It is important to establish the person’s baseline level of functioning and determine if they have a delirium, a dementia or a delirium superimposed on dementia (Britton & Russell, 2004). Dementia is a chronic confusional state whereas a delirium is an acute confusional state that is reversible once the cause or causes are identified (Inouye, 2006).

On the Mid North Coast and North Coast of NSW, 21 hospitals use the Adult Patient Assessment Tool (APAT) to assess all adult patients within the first 24 hours of admission (Landon, Carroll & Antoni, 2013). Completing the APAT within 24 hours of admission is compulsory for all adult patients. On the APAT there are two risk screens that relate to confusion: the Delirium Risk Screen and the Cognitive Impairment Risk Screen. These two risk screens and their associated actions were the primary outcome measured in this audit. When the Delirium Risk Screen is completed if the patient has positive signs of delirium (by a numerical score), they are to be referred to the Medical Officer or Specialist for a CAM. The CAM is a diagnostic observational instrument used to identify a new onset delirium. This tool helps to identify the syndrome’s essential and associated features and is useful in distinguishing the difference between delirium and dementia (Sendlebach & Guthrie, 2009). When the Cognitive Impairment Risk Screen is completed if the patient has two or more triggers present they are to be referred to the Medical Team or Specialist Health Worker for an MMSE. The MMSE is a validated tool that can be used to systematically assess dementia (Folstein, Folstein & McUgh 1975; Kurlowicz & Wallace, 1999).

**Background**

**Literature Review**

Despite an extensive literature search there appears to be few articles published on specialling patients with delirium and dementia. An electronic literature search was conducted using the following data bases: CINAHL, ProQuest, PsycInfo, The Cochrane Collaboration, PubMed, BMJ-Best Practice, Evidence Based Practice, OvidSP and Medline. Search terms included special*, staff special, special observation, individual patient special 1:1 nursing, companion sitter, close observation, constant observation, clinical observer, protective monitoring, delirium assessment and dementia.
assessment. Journal articles, research articles, unpublished reports, local health policies and reports were also reviewed. Terms found that were synonymous with IPS or specialling included “sitters” (Nadler-Moodie, 2009), “observation assistants” (Harding, 2012), “special observation” (Dewing, 2012), “specialling” (Dick, Grow & Boddy, 2009) or “constant observation” (Mackay, Patterson & Cassells, 2005).

The search revealed assessment of the hospitalised patient with delirium and dementia is well documented in the literature (Flagg, McDowell, Mwose & Buelow, 2010; Atkins, 2011) however minimal documentation was found on the specialling model. This finding is supported by Dewing (2012) in her paper entitled: “Special observation and older persons with dementia and or delirium a disappointing literature review”. Dewing found the lack of published empirical research evidence on specialling the older patient with delirium and dementia infers that the practice is currently not informed by gerontological research evidence and requires further investigation (Dewing, 2012).

Most of the literature sourced by the researcher related to clinical guidelines for the constant observation of psychiatric patients who were at high risk of suicide and this appears to be shaping special observation in gerontological practice (Dewing, 2012; Dick et. al., 2009). For many years the term “constant observation” has described the routine psychiatric practice of monitoring suicidal patients by security guards (Stewart & Bowers 2012; Worley, Kunkel, Gitlin, Menefee & Conway, 2000). The model for psychiatric patients is based on a custodial model where the primary objective is to constantly “observe” the patient who is thought to be at risk of suicide, self-harm or violent behaviour (Mackay, Paterson & Cassells, 2005). For the confused hospitalised older person there is a move away from the custodial model to a more therapeutic model where the “special” is a nurse who is actively engaged in delivering direct patient care (Dewing, 2012).

**What is the purpose of an IPS?**

An IPS is designed to provide safety for patients who present with behaviour that indicates risk of harm to self or others (Nadler-Moodie, 2009). These behaviours may include high risk of falling, self-harm, pulling at medical equipment (e.g., intravenous lines and catheters), physical and verbal aggression, or intrusive behaviour and attempts to abscond (Nadler-Moodie, 2009).

The cause of these behaviours in the confused older person is often due to human distress, disorientation, and misperception that is unable to be verbally communicated (Brechin, Murphy, James & Codner, 2013). Behaviours may represent an unmet need rather than a consequence (symptom) of an illness and as such are amenable to change if those needs can be identified and met. When a special engages in a therapeutic rather than a custodial model of care, unmet patient needs can often be identified and addressed, with subsequent reduction in challenging behaviours. Non-pharmacological approaches to management such as regular toileting, relief of pain and involvement of family in care are examples of care that should be provided and trialed prior to administering any form of medication or physical restraint (Dodds, 1996; Gorski, 1995). This approach to care is known as a person-centered approach and should always be used when caring for the confused older person (NSW Agency for Clinical Innovation (ACI), 2014). The
foundation of person-centered care is respect and understanding for an individual and their right to self-determination (McCormack, Dewing & McCance, 2012). An example of a person centered tool that was developed by the Agency for Clinical Innovation (ACI) and introduced at CHHC in 2012 is the TOP 5. TOP 5 is a tool to enable staff to work with carers to communicate their knowledge and expertise of the person who has become the patient. Family and carers are requested to complete a form advising of five key strategies to better inform staff about the specific needs of a patient (NSW Health Central Coast Local Health District, 2012). The primary carer’s knowledge of the patient, especially in relation to communication and behaviour can be the key to assist staff to understand the patient’s needs (NSW ACI, 2012).

However in busy hospital environments staff are not always available to provide 1:1 care and chemical and physical restraint is often used to control patients’ challenging behaviour (Bradas and Mion, 2007; Hughes, 2008). Physical restraint is defined as anything that limits an individual’s voluntary movement such as bedrails, posy restraints, chair restraints and mittens (NSW Health, 2011). Physical restraint should only be used as a last resort as it increases morbidity and mortality, frequently leads to further confusion, skin tears, malnutrition, dehydration, incontinence of urine and faeces, decreased strength and mobility and can cause the development of decubitus ulcers (De Bellis, Masil, Curren, Prendergast, Harrington, & Muir-Cochrane, 2013). Chemical restraint is defined as the use of medication to control a person’s behaviour where the intended purpose of the drug is to sedate the person for convenience or disciplinary purposes (NSW Health, 2011). Chemical restraint when used inappropriately can undermine physical and psychological well-being and prescribing rates should be closely monitored (Hughes, 2008).

There is minimal supporting evidence in the literature to indicate that either physical or chemical restraint keeps the patient safe and prevents the elderly from falling (Gallinagh, Slevin & McCormack, 2002). NSW Health strongly advocates a restraint minimisation environment and specialling is a model that enables minimisation of both physical and chemical restraint.

**Specialling and falls prevention**

Most nurses identify that the main reason a patient is specialled is to keep them safe from falling. The confused older patient may be at risk of falling due to impulsiveness, disorientation, wandering, aggression, intrusiveness, and poor mobility (Adams and Kaplow, 2013; Dick, La Grow and Boddy, 2009). At CHHC the patient falls risk assessment screen is located on the APAT and is required to be attended for all adult patients on admission. Completion of the falls risk assessment and the resulting score alerts nurses to the degree of falls risk for each patient and prompts the nurse to implement falls prevention strategies.

Identifying a high falls risk patient from the APAT admission assessment and implementing falls minimisation strategies is essential as falls in the elderly can result in pain, injury, an ongoing fear of falling, decreased physical activity, raised levels of anxiety and depression, which in turn may result in functional decline- loss of independence and admission to residential care (Falls Injury Prevention Group, 2013).
According to the NSW Falls Injury Prevention Group (2013), falls are the single most cause of injury-related hospitalisation among people aged 65 years and over. In NSW hospitalisation rates for all fall-related injuries has increased by an estimated 3.8% annually. This equates to a total cost for health care related to falls in NSW to be an estimated $558.50 million dollars annually (Falls Injury Prevention Group, 2013).

Given the increasing numbers of elderly patients presenting to hospitals who are at high risk of falling, health administrators are questioning if specialling will be a sustainable cost effective falls prevention strategy in future years.

**Cost and patient safety**

Keeping patients safe is a serious responsibility for health care providers and failure to do so can find staff involved in investigations such as Root Cause Analysis (RCA) investigations and hospital litigation (Adams & Kaplow, 2013). Hospitals are struggling to provide safe and cost-effective healthcare outcomes while protecting patients from harm (Adams & Kaplow, 2013).

Providing an IPS is a costly nursing practice and is not well accounted for in most hospital budgets (Adams & Kaplow, 2013: Dewing, 2012). The Mid North Coast Local Health District (MNCLHD) does account for specialling costs and monitors trends monthly. In 2012-2013 the cost of specialling for the district was $776,527, with 15 staff fully employed in the specialling role (MNCLHD, 2013).

At CHHC the staff member who most frequently fulfills the specialling role is an Assistant in Nursing (AIN) or an undergraduate nurse. They are the most economical to employ as they are the least qualified nursing staff (Adams & Kaplow, 2013). A Registered Nurse (RN) is responsible for supervising the care provided and administering medication. However in practice AINs are frequently left without support or training when caring for these very ill patients. Moyle et. al, (2010) found in their study on the management of older people with dementia that care provided by unskilled staff resulted in failure to recognise when patients were deteriorating as the main focus of care was on risk management rather than focusing on the cause for changing behaviour.

**Increasing numbers of patients with delirium and dementia**

There are more than 332,000 Australians living with dementia and this number is expected to soar to almost 900,000 by 2050 (AIHW, 2012). There were 83,226 patients with dementia admitted to Australian hospitals during 2009-2010 and this is expected to increase by 400% in 2050 (Health Economics, 2009).

Despite the increasing number of elderly patients being admitted to hospital in acute confusional states there exists a lack of research on the provision of an IPS to patients with delirium and dementia.

Among those with dementia 45% have been found to develop a delirium when hospitalised resulting in a longer length of hospital stay and a higher rate of complications potentially increasing the cost of care (The Cochrane Collaboration, 2006).

Delirium is the most common cause of all hospitalised elderly patients and may affect up to 56% of frail elderly patients in hospital (Inouye, 2006). It is known to increase mortality, increase hospital length of stay (LOS), cause premature admission to residential aged care facilities (RACFs) and increase
the risk of dementia (Travers et al., 2012). Delirium is potentially reversible once the causative factors are identified however the presence of delirium is often missed, resulting in increased mortality and morbidity (McAulay-Powell, & Friedman, 2013).

In 2011/12 Emergency Department presentations at CHHC increased by 925 with the majority of increases in the 65 years and over age group (MNCLHD Services Plan, 2013). The population of the MNCLHD has increased by 8.5% between 2006-2011 with the largest increases in the age groups of 64-84 years (17%) and the over 85 years (31%) age groups. The current and projected numbers of older people will have significant service implications for the District Health Service as older people are the greatest consumers of health care (MNCLHD Services Plan, 2013).

Given the increased incidence of dementia and the greater numbers of older patients presenting to hospitals, combined with the increasing requirements to keep patients safe from falling, the researcher was motivated to conduct a quantitative medical record audit to examine the care provided to specialled patients. The following research question was formulated:

**Do elderly patients with delirium and dementia who are provided with an Individual Patient Special have nursing assessments conducted in clinical practice?**
Method

Ethics Approval
This study was approved on the 08/01/2013 by the North Coast Area Health Service HREC (Q094).

Study setting
The CHHC is a 270 bed base hospital on the Mid North Coast of NSW. There are no designated specialist aged care beds and no designated beds for patients who are specialled.

Sample Choice
The study design was a quantitative study consisting of a retrospective medical record audit of patients who were specialled during an 18 month period at CHHC. Participants were chosen by consecutive sampling of patients admitted June 2012-January 2014. Inclusion criteria were patients aged 65 years and over with a diagnosis of delirium and dementia as documented as a primary or secondary diagnosis. Exclusion criteria were psychiatric patients, high dependency patients and patients withdrawing from alcohol. Data was collected on an Excel spreadsheet by the primary researcher and de-identified for patients’ confidentiality.

Participants were sourced from the hospital ProAct rostering system as the provision of an IPS is recorded in this system for staffing costs. Each occasion of specialling is recorded in hours on the ProAct data base. The Medical Record Number (MRN) of patients who are specialled is also recorded allowing for patient identification.

In the ProAct data base patients who were specialled are categorised under codes that reflect the patient’s behaviour and rationale for requesting a special (Table 1).

<table>
<thead>
<tr>
<th>ProAct Note Type</th>
<th>Rationale</th>
<th>Detail</th>
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<tbody>
<tr>
<td>IPS-CWF</td>
<td>Confused wandering and falls</td>
<td>Combined risks</td>
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<tr>
<td>IPS-Agg</td>
<td>Aggression</td>
<td>Predominate rationale is risk of aggression to others, including intrusive behaviours</td>
</tr>
<tr>
<td>IPS-Fa</td>
<td>Falls</td>
<td>Nil or mild cognitive impairment but at very high risk of falls despite maximum assessment and prevention strategies</td>
</tr>
<tr>
<td>IPS-HD</td>
<td>High Dependency</td>
<td>Clinical need including patients awaiting retrieval or transfer to a special unit</td>
</tr>
<tr>
<td>IPS-Co</td>
<td>Confusion</td>
<td>Risk of harm by significantly interfering with treatment or ADLs</td>
</tr>
<tr>
<td>IPS-Cust</td>
<td>Custodial</td>
<td>Patients under custody or at risk from external persons</td>
</tr>
<tr>
<td>MH-Spec</td>
<td>Mental Health</td>
<td>Scheduled/at risk of harm to self or others or absconding</td>
</tr>
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</table>

Table 1. ProAct Codes for Requesting an IPS
Codes chosen for inclusion in the audit from the ProAct data base were: IPS-CWF, IPS-Agg, IPS-Fa. and IPS-Co. The codes IPS-Cust, and MH-Spec refer to psychiatric patients and were outside the inclusion criteria. The code IPS-HD was also excluded as this code refers to patients who require 1:1 nursing due to their high acuity nursing requirements.

Entries on the ProAct data base with the selected codes numbered 3,957 occasions of specialling. An “occasion of specialling” is defined as a time period in hours- usually an eight hour nursing shift. When repeated entries with the same MRNs were combined, the 3,597 occasions of specialling equated to 279 individual patients. Of the 279 potential participants 107 were eliminated as they did not meet the selection criteria due to age less than 65, no diagnosis of delirium or dementia or withdrawing from alcohol. The remaining 172 patients had the selected code, met the age criteria and had a primary or secondary diagnosis of delirium and dementia. A patient was considered to have a diagnosis of delirium and dementia if a health professional documented the diagnosis on admission or discharge, in the patient progress notes or in the medical officers' discharge summary. Twenty two files were not recorded in the analysis as they were unavailable for access due to records being held by other clinicians. The remaining 150 records were analysed following the selection process (Figure 1).

**Figure 1:** Medical record selection process for audit

<table>
<thead>
<tr>
<th>3597 Occasions of specialling (n=279)</th>
</tr>
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<tbody>
<tr>
<td>Met selection criteria: dementia/delirium and specialled (n=172)</td>
</tr>
<tr>
<td>Excluded as didn’t meet selection criteria (n=107)</td>
</tr>
<tr>
<td>Medical records unavailable (n=22)</td>
</tr>
<tr>
<td>Participants (n=150)</td>
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</table>
Data was collated and analysed using SPSS computer software and functions of Excel with the assistance of a biostatistician and tutor from the Rural Research Capacity Building Program. The data is largely presented as descriptive statistics with some comparative analysis.

**What was measured?**
The primary outcome measure was rates of completion of admission assessments for delirium and dementia and referral rates to medical officer or specialist nurse for more expert advice on care.
The secondary outcome measure of this audit was rates of completion of the district IPS policy and procedure. The policy and procedure state that the following must be attended for all patients who are specialled:

- A risk assessment form for the need for a special is completed every 24 hours.
- Staff checklist and behaviour chart completed every 30-60 minutes.
- Daily Medical Officer patient review
- Daily nursing handover sheet /nursing care plan completed.
- Formal review by NUM or AHNM every 24 hours for the need for an ongoing special.

The third outcome measure of this audit was the relationship between falls nursing assessment on the APAT and specialling. The following was measured in relation to falls:

- The percentage of nursing falls risk assessments completed on admission on the APAT
- The reason for specialling as recorded on the ProAct data base.
- The percentage of patients with an admission diagnosis of falls.
- The number of patient who fell whilst being specialled.
- Restraint as an alternative to specialling, including physical and chemical restraint.

As there appears to be very little published documentation about patients who are specialled, a range of demographic, medical and psychosocial characteristics were collected to profile the type of patient who is specialled. A total of 53 variables were audited from the medical record regarding care of patients with delirium and dementia (Table 2).
## What was Measured: Outcome Variable

<table>
<thead>
<tr>
<th><strong>Patient Information</strong></th>
<th>Age, gender, admission date, discharge date, length of stay (LOS), where the patient was admitted from, discharge destination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnosis</strong></td>
<td>Admission diagnosis, discharge diagnosis, comorbidities, presence of delirium/dementia</td>
</tr>
<tr>
<td><strong>APAT Assessments</strong></td>
<td>Falls risk assessment tool</td>
</tr>
<tr>
<td></td>
<td>Cognitive Screen completed &amp; Folsteins’ Mini Mental State Examination (MMSE) and referral to Medical Team/Specialist Health Worker</td>
</tr>
<tr>
<td></td>
<td>Delirium screen completed &amp; Confusion Assessment Method (CAM) and referral to Medical Team/Specialist Health Worker</td>
</tr>
<tr>
<td><strong>IPS Model</strong></td>
<td>Risk assessment form to request an IPS</td>
</tr>
<tr>
<td></td>
<td>Reason for special (code)</td>
</tr>
<tr>
<td></td>
<td>Half hourly-hourly behaviour management log maintained</td>
</tr>
<tr>
<td></td>
<td>Nursing handover form completed each shift</td>
</tr>
<tr>
<td></td>
<td>Formal review by Nurse Unit Manager (NUM)/After Hours Nurse Manager (AHNM) at 24 hours</td>
</tr>
<tr>
<td></td>
<td>Daily Medical Officer review</td>
</tr>
<tr>
<td></td>
<td>Patients cohorted</td>
</tr>
<tr>
<td></td>
<td>Who requested the special</td>
</tr>
<tr>
<td></td>
<td>Who ceased the special</td>
</tr>
<tr>
<td></td>
<td>Hours patient specialised</td>
</tr>
<tr>
<td><strong>Falls</strong></td>
<td>Number of patients admitted with a fall or fall related injury</td>
</tr>
<tr>
<td><strong>Restraint</strong></td>
<td>Evidence of physical restraint</td>
</tr>
<tr>
<td></td>
<td>Evidence of chemical restraint ie psychotropic medication</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Number of Medical Emergency Team (MET) calls</td>
</tr>
<tr>
<td></td>
<td>Mortality</td>
</tr>
<tr>
<td></td>
<td>IMMs &amp; reason</td>
</tr>
<tr>
<td></td>
<td>TOP 5</td>
</tr>
<tr>
<td></td>
<td>Family engagement in care</td>
</tr>
</tbody>
</table>

**Table 2:** Data collected regarding assessments and the IPS model

### Person-Centred Care

Family and carer involvement is essential when caring for the confused older person who may be unable to communicate their needs. In this audit family consultation was considered to have occurred if there was documentation regarding any of the following: TOP 5, family meetings, telephone conversations, family staying, collaborative history supplied by family or discharge planning with family.
Results

Data was analysed for 150 participants. The mean age of participants was 83 (range 65-99). The ratio of female to male was 45% to 55%. When examining discharge destination for specialised patients a greater proportion were discharged to Residential Aged Care Facilities (RACFs) (61 patients) than those admitted from Residential Aged Care Facilities (51 patients). For those patients who were not discharged to a RACF they were either deceased, transferred to outlying facilities for sub-acute care or discharged home.

The mean number of hours a patient was specialised was 117 hours (4 days) (range 4 hours- 1,152 hours (48 days). The ALOS for a patient who was specialised was 11 days.

The specialised patients in this study were located in the emergency, medical, surgical and rehabilitation units.

The following histogram (Figure 2) shows the wards where participants were nursed:

![Figure 2: Histogram of Patients Specialled by Ward](image)

**Cohorting patients**

The number of patients cohorted on all wards was 56 with some evidence that cohorting is higher on Surgical Ward (34/73 or 46%) compared to Medical Ward (20/64 or 31%) (Chisq=3.354, df=1, p=0.067). Cohorted patients are less likely to have an APAT assessment attended.

**Completion of the APAT**

Using wards with participants greater than 10 (Medical and Surgical wards), data showed slightly higher rates of completion of the APAT on Medical Ward (19/64 or 29.7%) compared to Surgical Ward (12/61 or 16.4%) (Chisq=3.42, df=1, p=0.064).
Results of Primary Outcomes Measures related to APAT Assessments
The results of completion rates with the APAT risk assessments for delirium and cognitive impairment are presented in table 3. Results for screening for cognitive impairment were more favourable than those for delirium. However few patients who were recognised as having cognitive impairment had further diagnostic testing with the CAM and MMSE to determine if the cognitive impairment was a delirium or dementia.

<table>
<thead>
<tr>
<th>Cognition Testing Outcome Variables</th>
<th>Compliance Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive impairment risk screen attended</td>
<td>51%</td>
</tr>
<tr>
<td>Delirium risk screen attended</td>
<td>40%</td>
</tr>
<tr>
<td>Patients with delirium/dementia referred to Medical Team/Specialist Health Worker</td>
<td>23%</td>
</tr>
<tr>
<td>Delirium patients who had CAM</td>
<td>21%</td>
</tr>
<tr>
<td>Dementia patients who had MMSE</td>
<td>20%</td>
</tr>
</tbody>
</table>

Table 3: Results of primary outcome measures for completion rates of risk assessments for delirium and or dementia and referral to medical officer or specialist nurse

Results of Secondary Outcome Measures Related to the IPS Model
The results for compliance with the IPS policy and procedure for specialling is presented in table 4.

<table>
<thead>
<tr>
<th>Outcome Variable Measured for the IPS Model</th>
<th>Percentage Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients receiving a daily Medical Officer review</td>
<td>100%</td>
</tr>
<tr>
<td>Compliance with 30-60min patient behaviour chart</td>
<td>83%</td>
</tr>
<tr>
<td>Patient reassessed at 48 hours for the need for ongoing special</td>
<td>30%</td>
</tr>
<tr>
<td>Patient re-assessed at 24 hours for need for ongoing special</td>
<td>29%</td>
</tr>
<tr>
<td>Patient reassessed at 8 hours for need for ongoing special</td>
<td>17%</td>
</tr>
</tbody>
</table>

Table 4: Measurement of outcome variables for the IPS Policy and Procedure
From the above table it can be seen that all patients were reviewed daily by a medical officer however this daily patient review did not prevent unexpected deterioration in some patients. Thirty one patients had a MET call for an unanticipated clinical deterioration (21%) compared to 2% for all other admitted patients. The main reasons for a MET call or unanticipated clinical review included: hypotension, hypertension, respiratory causes or the patient was found unresponsive.
Similarly compliance with nurses completing a 30-60 minute patient behaviour chart was good (83%) however this constant observation of the patient’s behaviour doesn’t indicate triggers for challenging behaviour which may be of more value in patient care. The low compliance rates with re-assessment for the need for an ongoing special requires further investigation but may be reflective of the lack of guidelines to cease a special once it is in place.
Results of third outcome variable: falls

The main reason a patient was provided with an IPS was due to the risk of a fall. Nurses coded the requirement for a special “Confused Wandering Falls” (CWF) in 93% of all patients specialled. The second most frequent reason for requesting a special was confusion (4%). The most frequent admission diagnosis in the study population was a fall or fall related injury (27%) when comparisons were made with all other admission diagnosis for patients who were specialled. When reviewing falls risk assessment completion rates on the admission APAT, 68% of patients had a falls risk screen attended which was higher than risk assessments attended for delirium or dementia. Not all patients who had a high falls risk assessment were specialled. There were 17 patients who were assessed as being a high falls risk on admission who were not specialled. However these 17 patients subsequently fell and a special was put in place to minimise the risk of further falls. The results of the audit showed that for all participants three patients fell once specialling had commenced.

Chemical and Physical Restraint

Physical restraint was recorded for three patients and the reasons for restraint were well documented as per hospital policy. Study participants were prescribed psychotropic medication or combinations of psychotropic medications and benzodiazepines to manage challenging or escalating behaviour (Figure 3). While the prescribing of these medications is appropriate in some circumstances (eg. managing psychosis) psychotropics and benzodiazepines are recommended to be used in low doses with slow increments in the elderly as paradoxically they have many side effects such as hypotension, increased risk of falls, and decreased mobility. In this study most of these medications were prescribed as often as necessary (PRN) with the frequency of administration at the discretion of nurses. There were few patients who had a documented pharmacy review to monitor poly-pharmacy, medication interactions and alert to medication side effects.
Evidence of person-centered approaches to care
There was documented evidence in the medical record of family involvement in care for 79% of patients. Examples of family involvement included calls to families to source more information regarding patient's medical history and medications, relatives staying overnight, enquiries by family regarding care, family meetings or consultation with the family or carers regarding discharge plans.

The TOP 5 initiative introduced by the ACI is another example of person-centered care. The TOP 5 form was recorded for 13% of patients who were specialled.
Discussion

This study is one of the few studies evaluating the care of patients with delirium and dementia who were specialled in a rural hospital. The data revealed that there were low completion rates for compulsory cognitive assessments on the APAT and when the confused patient did have a positive risk assessment there was poor utilisation of the CAM (Flagg et al, 2010) to help differentiate between delirium and dementia. There were also low rates of use of the MMSE to assist with a dementia diagnosis (Kurlowicz & Wallace, 1990). Admission assessment rates for cognition were lower than those found in a similar study by Landon et al., (2009) who also studied completion rates with the standard hospital admission risk forms on the APAT. Landon et al. (2009) found that 43% of patients had a delirium risk screen attended on admission compared to a rate of 40% in this audit. However there was a slight improvement in the cognitive impairment risk screen in the CHHC audit (51%) compared to the Landon’s findings where 50% of patients had the cognitive risk screen attended on admission. A comparison between these two audits has shown consistency in results; however it is disappointing to find that completion results haven’t improved in cognitive risk assessments between 2009 and 2013.

For those patients who were identified as having delirium and dementia, 23% were referred to the Medical Team/Specialist Health Worker who is skilled in the management of patients with unpredictable and challenging behaviours.

The IPS policy and procedure at the regional hospital is reflective of a custodial model of surveillance rather than a therapeutic model of engagement. This finding is not unusual given the lack of published literature on IPS models for geriatric patients (Wilkes et al., 2010). Results of the audit indicated that once an IPS was established the review process at the eight hour time frame (24%), 24 hour time frame (29%) and at 48 hours (31%) was low. This study did not explore why reassessments did not occur as per hospital policy, however once the special was in place they predominantly remained allocated to the patient until discharge. There are no guidelines in place to assist staff in the decision to cease a special and this may be a contributing factor. Although there were no comparative studies found in the literature that recorded the length of time patients are specialled, a potential exists to reduce the time specialled if the review process is improved. Increased length of stay is known to increase hospital cost and place patients at risk of adverse outcomes such as hospital acquired infections (NSW Health Activity Based Funding Taskforce, 2012). Data revealed that the average length of stay (ALOS) for a specialled patient was 11.4 days compared with an ALOS for all CHHC patients of 2.5 days. Increased LOS in specialled patients may reflect the complexity of care these patients require.

In regards to the IPS model there was 100% compliance with daily medical officer review however 21% of patients had a MET call or clinical review for sudden and unexpected deterioration. A rate of 21% MET call in the study group compares with a MET call rate of 2% for all hospitalised patients and this may be another indicator of the high level of morbidity for this client group. It is recommended that this unexpected finding be investigated further.

There is uncertainty and debate in the literature as to whether providing an IPS prevents a patient from falling (Adams and Kaplow, 2013: Tzeng, Yin, Grunawalt, 2008; Flaherty, Milta and Little, 2011). The data in this audit
revealed that the main reason a patient is specialled is to keep them safe from falling and this finding is also supported in the literature (Adams & Kaplow, 2013; Moyle, Borbasi, Wallis, Olorenshaw and Gracia, 2010). The CHHC audit data revealed that in the study population 27% of elderly patients were admitted secondary to a fall or a fall related injury and the main reason for the special was to prevent them from falling again. Not all patients who were admitted with a fall or a fall related injury were specialled from admission. Some patients fell later in their admission and the IPS was commenced to prevent them from falling again. The data showed that during the time all patients were specialled three patients fell. The study design didn’t allow for conclusions to be made that the falls prevention was due to specialling, however the results look promising.

Documentation in the medical record revealed that physical restraint as an alternative to specialling was an uncommon practice. When patients were physically restrained, the reasons for the restraint were documented in the patient’s medical record as per hospital policy. In contrast pharmacological management of agitation was common with 77% of patients prescribed at least one antipsychotic medication. Antipsychotics are medications that affect the action of a number of brain chemicals (neurotransmitters) and were initially developed to manage psychosis (Peisah & Skladzien, 2014). While there is some evidence that antipsychotics are effective for the management of delirium (Hatta, Kishi, Wada, Odwara, Takeuchi et. al., 2013) there is minimal evidence for their use in the management of agitation in dementia (Bradas and Mion, 2007). Antipsychotics have side effects such as over sedation or prolonged sedation, dry mouth, constipation, urinary retention, orthostasis, tardive dyskinesia, prolonged QT syndrome, and dizziness that contribute to falls. Antipsychotics prescribed for the care of the confused older person should be used judiciously, aimed at underlying symptoms, and prescribed in low doses and for short periods (Bradas & Mion, 2010). Similarly the use of benzodiazepines in the elderly increases the risks of adverse outcomes including falls, fractures and cognitive impairment (Dolan, Omer, Glynn, Corcoran & McCarthy, 2012). It was not an aim of this study to discern if medications were prescribed with therapeutic intent or for chemical restraint, but it was noted that most patients were prescribed at least one psychotropic and some patients more than one psychotropic medications. It is recommended that at CHHC the Pharmacy Department monitor the use of psychotropic medication and benzodiazepines in this client group, especially when they are prescribed combinations of medications PRN that have the effect of sedation. Monitoring could be in the form of regular pharmacy audits. There were few documented strategies of non-pharmacological approaches to care trialed prior to the administration of psychotropic medication (Dick et al, 2009). Non pharmacological strategies may include mobilising the patient, diversional therapy by use of activity boxes, toileting, offering warm drinks, requesting family to sit with patients and the use of volunteers. Although the TOP 5 is considered a person-centered strategy that may help minimise restraint, the TOP 5 was recorded for only 13% of patients. Documentation from the multidisciplinary team revealed that the patient’s family or carers were either consulted or actively involved in care for 79% of patients.

In order to reduce the burgeoning budget of providing an IPS, some studies reveal the effectiveness of cohorting patients. Joseph & Little (2011) identified that cohorting patients in a four bed room helped to lower costs of specialling whilst maintaining positive patient outcomes. A model of care was
implemented specific to four designated beds where patients were specialled. This small unit was supported by a Geriatrician and a pre-requisite for staff to work in the unit was to undertake a training program in the care of the confused older patient. Similar results were found by Nadler-Moodie (2009) who created Specialised Adult Focused Environment (S.A.F.E.) beds where patients were cohorted and all staff who worked in the unit was given targeted education on care of the confused older person. This type of model should be differentiated from the IPS model as the care provided is no longer “individual”.

At CHHC the data revealed 37% of patients were cohorted with a higher number of patients cohorted on the surgical unit than other units. This study did not compare patient outcomes in terms of morbidity between cohorted and non cohorted patients however the study did measure the relationship between patients who were cohorted and completion of compulsory IPS paperwork. Data revealed lower compliance with IPS paperwork when patients are cohorted. The reason for this finding was not explored but may be reflective of the amount of paperwork required for an IPS.

**Strengths & Weaknesses of the Study**

The methodology of using a retrospective quantitative study is considered a strength of this study as it removes intentional bias on the participant’s or researcher’s part enabling more accurate outcome data. Limitations of this study include the small sample size and the difficulty in replicating this study with the same rigor as other hospitals do not have the records required for the dimensions of this study. Specialling records such as the ProAct rostering system may not be available in all hospitals. A weakness of this study may be the missing files of potential participants however this did not affect the selection process as this was beyond the researcher’s control.

**Bias**

Selection bias was reduced by using consecutive sampling of participants for the 18 month period. Researcher bias in relation to the study group was minimised by cross referencing methodology and data analysis with the Rural Research Capacity Building Program Officers, Biostatistician and Mentor.

**Generalisability**

This small study may be difficult to replicate with a similar design due to other hospital’s differing data collection systems. However it is hoped that the results of this may study may generalised in part to the wider population and to similar hospitals with similar client groups.
Conclusion

This small study has provided some insights into the care of patients with delirium and dementia who were specialled in a rural hospital. Results indicate that admission assessments on the APAT were not well attended and low rates of assessments such as the CAM and MMSE may result in a diagnosis of delirium being missed as these tools help differentiate between delirium and dementia.

The current IPS model may not be reflective of current best practice for care of the confused older patient as the model is custodial rather than therapeutic. There is an overt emphasis on risk aversion and less on person-centred care. Data revealed most patients were specialled due to a perceived risk of falling, however many patients were prescribed sedating medications with side effects that paradoxically increase the risk of falls.

There were low rates of reassessment for the need for an ongoing special which may result in prolonged and unnecessary specialling. An unexpected finding was the high number of medications prescribed that have a sedating effect and the high number of MET calls in this patient group.

Despite the widespread use of specialling in NSW hospitals, the model remains largely unexplored in the literature. Specialling is considered costly however until there is further research into alternative approaches to care, the demand is likely to continue as the population ages and the incidence of delirium and dementia increases.

Recommendations

It is recommended that NSW Health action the following in regards to the IPS model:

- Develop statewide systems for IPS data collection to include prevalence, cost and reasons for specialling. This will allow for budgeting, workforce planning and benchmarking between local health districts.
- Formulation of a state IPS policy and framework that is an evidence-based therapeutic care model.
- Reduction of the number of security guards specialling aged patients
- NSW Health to continue to invest in education programs for care of the confused older patient through online courses similar to the Confused Hospitalised Older Persons Program (CHOPS).

Formation of a CHHC working party to:

- Revise current policy and procedure to reflect best practice guidelines and person-centered approaches to care. Policy to reflect a therapeutic model rather than a custodial model of care
- Develop guidelines to cease an IPS
- Streamline the process for obtaining an IPS by changing from a paper-based system to an electronic format through the electronic medical record (EMR).
- Review the number of MET calls through existing morbidity and mortality meetings
Investigate the reasons for low compliance with APAT assessments through the existing Quality Unit.

Acknowledgements
Funding for this study was provided by the Rural Research Capacity Building Program
References


Online article http://dem.sagepub.com/content12/1/93.


## Appendix

**Adult Patient Assessment Tool**

### NORTH COAST AREA HEALTH SERVICE NSW HEALTH

## MRN: 

### SURNAME: 

### GIVEN NAMES: 

### SEX: 

### DOB: 

### HOSPITAL: 

### WARD: 

### Admission Date: / / Time:  

### CP: 

### Interpreter Required Y/N: 

### PRESENTING HEALTH PROBLEM

### CURRENT COEXISTING CONDITIONS AND RELEVANT PAST HISTORY

### ALLERGIES

<table>
<thead>
<tr>
<th>Allergy</th>
<th>Yes</th>
<th>IF YES, TYPE &amp; REACTION</th>
<th>PATIENTS OWN MEDICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latex/Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drugs/Medication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergy Band</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ORIENTATION TO WARD

<table>
<thead>
<tr>
<th>Patient informed of treating doctor</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to other patients</td>
<td></td>
</tr>
<tr>
<td>Visiting hours</td>
<td></td>
</tr>
<tr>
<td>Patient Lounge</td>
<td></td>
</tr>
<tr>
<td>Toilet/bathroom</td>
<td></td>
</tr>
</tbody>
</table>

### COMPLIMENTARY THERAPIES USED

<table>
<thead>
<tr>
<th>Complimentary Therapies Used</th>
<th>Herbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Comment</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

### VALUES

<table>
<thead>
<tr>
<th>Valuables</th>
<th>General and Prostheses Brought to Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasses</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

### TOILET/RIGHT/BATHROOM

<table>
<thead>
<tr>
<th>Ward/Unit routine</th>
<th>Valuables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sent Home</td>
<td>Glasses</td>
</tr>
<tr>
<td>Contact Lenses</td>
<td>N/A</td>
</tr>
<tr>
<td>Hospital Safe</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### ENTREPRENEURIAL TACTICS

<table>
<thead>
<tr>
<th>Orientation to WARD</th>
<th>WEBSTER PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DISCHARGE RISK SCREEN

<table>
<thead>
<tr>
<th>DISCHARGE RISK FACTORS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the patient live alone?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there concerns about returning home alone?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the patient have an identified carer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of residence (circle): Home / Unit / Caravan / Residential Aged Care Facility / Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of stairs: Front</td>
<td>Rear</td>
<td>Internal</td>
</tr>
<tr>
<td>Does the patient have any concerns about their will being?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are they being cared for whilst you are in hospital?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the patient require the services of an Aboriginal Health Liaison Officer or other cultural support?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the patient take 5 or more medications?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Discuss with clinical pharmacist/Medical Officer or Home Medicine Review)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the patient likely to have problems managing self care on discharge? eg: walking, dressing, meal preparation, shopping, wound care, etc?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the patient a candidate for an Early Discharge Program?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the patient’s transport arrangements on discharge? eg: relative/friend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the patient’s transport arrangements on discharge? eg: relative/friend</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### COMMUNITY SERVICES USED PRIOR TO ADMISSION

<table>
<thead>
<tr>
<th>Contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meals on Wheels</td>
</tr>
<tr>
<td>Home Care</td>
</tr>
<tr>
<td>Community Transport</td>
</tr>
<tr>
<td>Telecare</td>
</tr>
</tbody>
</table>

### REFEREES MADE DURING ADMISSION

<table>
<thead>
<tr>
<th>Referral to</th>
<th>Date</th>
<th>Initial</th>
<th>Date referred</th>
<th>Initial</th>
<th>Date referred</th>
</tr>
</thead>
</table>
### INFECTION CONTROL

- **Do the patient require additional Precautions?**
  - Yes
  - No

- **Have a Notifiable Disease?**
  - Yes
  - No

**Ph:** 6588 2750 (Port Macquarie Office)  
**Ph:** 6620 7500 (Lismore Office)

**If answer is 'YES' to any question implement appropriate precautions and notify Infection Control RN/CNC.**

### PHYSICAL ASSESSMENT

<table>
<thead>
<tr>
<th>Neurological Status</th>
<th>Alert</th>
<th>Vertical Response</th>
<th>Pain response only</th>
<th>Unconscious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing</td>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cough</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dyspnoea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other (Note):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vision for ADLs</th>
<th>Adequate</th>
<th>Impaired</th>
<th>Prosthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing for ADLs</td>
<td>Adequate</td>
<td>Impaired</td>
<td>Prosthesis</td>
</tr>
<tr>
<td>Mouth</td>
<td>Clean</td>
<td>Poor oral hygiene</td>
<td>Other (Note):</td>
</tr>
</tbody>
</table>

- **Swallowing:**
  - Normal
  - Impaired (Note) → Consider referral to Speech Pathology, if referred document on Referrals section (pg1)

- **Circulation:**
  - Peripheres warm & well perfused
  - Skin cool & clammy

<table>
<thead>
<tr>
<th>Skin</th>
<th>Intact</th>
<th>Poor integrity (comment):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Areas?</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>Grade:</td>
<td>Location:</td>
</tr>
</tbody>
</table>

**Assess pressure ulcer risk (Refer to Pressure Area Assessment Tool)**

- **Wounds:**
  - Description:
  - Location:

**Elimination**

- **Bladder:**
  - Normal
  - Continent / Incontinent
  - IDC/SPC
  - Date of insertion:
  - Stoma:
  - Ayepeters:

- **Muscular-Skeletal:**
  - Normal
  - Stiffness
  - Deformities
  - Other:

- **Pain:**
  - Pain Score: 0 (least pain) – 10 (worst pain)
  - Pain location:
  - Pain Duration:
  - Pain Radiation:
  - Comment:

- **Gastro-intestinal:**
  - Normal
  - Reflux
  - Nausea
  - Vomiting

- **Sleep Patterns:**
  - Normal
  - Problems
  - Sedation used:

- **Disabilities:**
  - Yes (Note):

### FALLS RISK SCREEN

The Northern Hospital Modified Str entities July 2002. Permission to reproduce this tool was granted by The Northern Hospital

- **FALLS RISK ASSESSMENT TOOL:**
  - Assess patient daily and when change in condition occurs
  - Score patient according to current characteristics

| Risk Score | 1. Complete Risk Assessment Tool
| 1. Use Risk Score and professional knowledge to determine risk and most appropriate Prevention Strategies
| 1. Implement most appropriate Prevention Strategies
| 1. Document details in Care Plan or Pathway
| 1. Consider referrals to other disciplines. If referred, document on Referrals section (pg1)

1. **Fall. Current admission?**
   - Yes, the patient had a fall during current admission.
   - Score: 3

2. **Fall. within 12 months?**
   - Yes, the patient had a fall/s in the last 12 months
   - Score: 1

3. **Mental State?**
   - Yes, the patient is confused, disoriented, intellectually challenged, agitated or has impulsive behaviour
   - Score: 1

4. **Mobility?**
   - Yes, the patient needs ‘supervision’ or is ‘Able to Assist’
   - ‘Able to Assist’ means can manoeuvre own body, cooperates/comprehends instructions, can stand unsupported/without aid, maintains balance but is not able to ambulate without supervision
   - Score: 1

5. **Impaired Balance?**
   - Yes, the patient has impaired balance and/or hemiplegia
   - Score: 1

6. **Age?**
   - Yes, the patient is 80 years or older
   - Score: 1

7. **Toileting?**
   - Yes, the patient is in need of frequent toileting
   - Score: 1

8. **Vision?**
   - Yes, the patient is visually impaired to the extent that everyday function is affected
   - Score: 1

9. **Drug/Alcohol?**
   - Yes, the patient presented with drug or alcohol related problems
   - Score: 1

**RISK SCORE: 3 OR MORE = HIGH FALLS RISK**

**Completed By:**

**Print:**

**Designation:**

**Date:**
### DIET

- **Diabetic**
  - **Type 1**
  - **Type 2**
- **Usual diet:**
- **Special:**

Consider Referral to Dietician/Diabetic Educator. If referred, document on Referrals section (pg 1).

### MALNUTRITION SCREEN

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you/the patient lost weight recently without trying?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Unsure</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>If YES, how much (kg)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6-10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>11-15</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>&gt;15</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Unsure</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Total Score** (add scores from Q 1 & 2)

- **If the patient has lost weight and/or eating poorly they may be at risk of malnutrition:**
  - **Score:** 2

- **If score is >2 consider referral to Dietician:**
  - Note: If referred, document on Referrals section (pg 1).

### SUBSTANCE USE RISK SCREEN

- **Yes**
- **No**

**Does the patient smoke?** (Inform of NCAHS Smoke Free policy)

**Does the patient drink alcohol?**

**Does the patient use non-prescription drugs?** (e.g. Cannabis, amphetamines, heroin)

**Is the patient prescribed drugs that can cause dependence?** (e.g. Benzodiazepines, morphine type drugs)

If YES to any of the above, complete the 'Substance Use History' form → Completed?

### MENTAL ILLNESS RISK SCREEN

- **Yes**
- **No**

1. Does the patient experience mental health problems?
2. Does the patient currently see, or has previously been seen by a psychiatrist or mental health professional?
3. Does the patient currently take medication to help with mental health problems?
4. Has the patient ever tried to harm themselves?
5. Is the patient currently thinking about harming themselves?

If the answer is **Yes** to one or more questions consider referral to Mental Health.

If answer is **"Yes"** to question 5 conduct preliminary screening for suicide risk, refer NSW Health Suicide Risk Assessment Guide, ensure patient safety, institute immediate management and refer to Mental Health for a comprehensive mental health risk assessment and further management where required. If referred, document on Referrals section (pg 1).

### DELIRIUM RISK SCREEN

- **Yes**
- **No**

**Has clinical observation identified:**

1. Acute change in mental status?
2. Difficulty focusing attention and is easily distracted?
3. Confused thinking and rambling speech?
4. An altered level of consciousness – lethargic, stuporous, comatose or hyper vigilant?

**And/or the:**

5. Informant or carer express concern regarding behaviour or mental state?

If 1 or 2 are present AND 3 or 4 and the course is acute and fluctuating refer to medical team/specialist health worker to complete a Confusion Assessment Method (CAM) tool. If referred, document on Referrals section (pg 1).

### COGNITIVE IMPAIRMENT RISK SCREEN

- **Yes**
- **No**

**Has clinical observation identified:**

1. Poor concentration and/or disorientation?
2. Conversation is tangential (not keeping with the topic) and repetitive?
3. Language deficits – difficulties understanding or expressing?
4. Memory and recall impairment?
5. Personality or behaviour changes?
6. Alteration in praxis (ability to sequence motor activity), thinking, planning and functional independence?

**And/or the:**

7. Informant or carer expresses concern regarding memory loss or behaviour?

If any two of the triggers 1 to 6 presents and the onset is not acute or associated with delirium refer to medical team/specialist health worker to complete a Folstein Mini Mental Status Examination (MMSE). If referred, document on Referrals section (pg 1).
## DISCHARGE CHECKLIST (To be completed with patient)

<table>
<thead>
<tr>
<th>DISCHARGE DATE</th>
<th>TIME</th>
<th>DISCHARGE DESTINATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RELATIVE / CARER / FRIEND NOTIFIED</td>
<td>YES</td>
<td>BY PATIENT</td>
</tr>
</tbody>
</table>

- Own medications/Webster pack / SD4 / S8 Drugs
- Medications/Medication List/Scripts
- Valuables (list items returned)
- Own X-rays
- Own equipment (list)
- Equipment and supplies provided
- Medical/Nursing Summary
- Medical devices removed (eg cannula/ECG Leads)
- Patient Education/Discharge Information provided
- Care Information provided
- Wound Care Information provided

### COMMUNITY SERVICES REFERRAL/RECONNECT

<table>
<thead>
<tr>
<th>Type</th>
<th>Yes</th>
<th>No</th>
<th>Notified</th>
<th>Service Name and Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Case Manager</td>
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<tr>
<td>Community Nurse</td>
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<tr>
<td>Home Care</td>
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<tr>
<td>Meals on Wheels</td>
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<tr>
<td>ACAT</td>
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<tr>
<td>Occupational Therapist/Physiotherapist</td>
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<tr>
<td>Allied Health</td>
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<tr>
<td>Mental Health (Discharge Summary to Mental Health)</td>
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<tr>
<td>Aboriginal Hospital Liaison Officer</td>
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<tr>
<td>Aboriginal Medical Service</td>
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<tr>
<td>Inter Agency Referral</td>
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<tr>
<td>ACTIP/CAPACS</td>
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<tr>
<td>Fax Referral To Quitline (for smokers motivated to quit)</td>
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<td>See Quitline Referral form</td>
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<tr>
<td>Other (eg. DOCS)</td>
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</tbody>
</table>

### TRANSPORT ARRANGEMENTS

<table>
<thead>
<tr>
<th>Source</th>
<th>Yes</th>
<th>Booked</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative/Friend</td>
<td></td>
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<tr>
<td>Taxi</td>
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<tr>
<td>Ambulance</td>
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<tr>
<td>Area Health Patient Transport</td>
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<tr>
<td>Community Transport provider</td>
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<tr>
<td>Aboriginal Hospital Liaison Officer</td>
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<tr>
<td>Other</td>
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</table>

### FOLLOW-UP APPOINTMENTS

<table>
<thead>
<tr>
<th>Type</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>GP</td>
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<tr>
<td>Specialist</td>
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<td>Outpatient Clinic</td>
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</tbody>
</table>

Completed By: ___________________  Print: ___________________  Designation: _______________  Date: __________

NCA/HS Adult Patient Assessment Tool - Version 2 April 2008