

IMPLEMENTATION GUIDE and TOOLKIT

(DRAFT-references and peer review incomplete)

Background

This document describes the process used during the “A MAP of delirium” project at Royal Perth Hospital (RPH). The project aimed to improve the assessment, management and prevention of delirium in older patients admitted to an acute tertiary hospital.

It is proposed that this implementation document will become part of a resource suite, “the orange box”, which will assist in improving management of delirium in inpatients. It is envisioned that the ‘Orange box’ will complement the “Green box” for falls prevention – the latter being recently created and implemented by the Western Australian Department of Health.[1]

Much of the project was occupied by resource development, so these resources have been made available to other health professionals to assist in implementing best practice. [10] A number of key implementation resources were used to define this process. [1,2,3 4]

Introduction

The following assumes that local medical services have identified a deficit in the management of cognitive issues in the older in-patient population and that there is a desire to improve the care delivered.

The process demonstrates the development and implementation of the changes the project made to clinical practice. This involved defining best practice and proposing a plan, then engaging the target population with a strong component of education and feedback. The changes were then implemented and the project entered a cycle of quality improvement to refining the plan, ensuring acceptability and sustainability. The tools for attaining baseline information, monitoring and evaluation are located in the appendices.

A. Ensure supports for change are present

Step 1 Identify, engage and define roles of stakeholders

The project group was made up of representatives from Geriatric medicine (head of department, project leader, advanced trainee), nursing (divisional director, clinical champion), occupational therapy, physiotherapy, pharmacy, psychiatry, and a business representative, with the addition of the local

National Action Plan project officer. A consumer representative was not identified.

The representatives provided guidance at regular committee meetings. The project officer supervised the day to day operational matters with advanced trainee support, the project leader added value as required.

Step 2 Assess organisational readiness

The application for funding to the Quality Improvement Unit of RPH was successful. After networking, additional funds were attained following application to the Western Australian Department of Health that allowed the further employment of the project officer.

The stakeholders were senior staff members who supported the project in a top down approach. The project was to integrate with existing projects, mainly the introduction of a “Comprehensive Care Team” into emergency (National Action Plan initiative) as well as a 2-3 years “Model of Care project” (re-evaluating the structure of the nursing team) being implemented on the target ward.

Step 3 Confirm required resources available

The business plan identified the appointment of a senior project officer for a 0.75 FTE over a 1 year period, and a small number of incidentals, mainly to resource the delirium box. Sustainable outcomes without ongoing resources were aimed for, such that the project design did not add a new service or create significant extra workload.

Step 4 Identify barriers to implementation

Several barriers were identified:

- Knowledge
 - target staff may not be aware that delirium may be preventable or what best practice entails.
 - medical interns have limited clinical experience.
- Attitudinal
 - delirium may not be viewed as important or as normal aging.
 - delirium is already addressed adequately.
- Organisational
 - multiple physicians admit to the ward, such that use of the new process may be fragmented and controversial.
 - high medical junior staff turnover due to 12 week rotations.
 - concern that a new system will increase paper work without benefit.
 - Due to multiple projects, the staff feeling bombarded and unreceptive.

B. Propose a PLAN for implementation

Step 5 Understand best practice (the evidence)

The Clinical Practice Guidelines for the Management of Delirium in Older People developed by the Clinical Epidemiology and Health Service Evaluation Unit, were used as the main resource for the project. [5] This resource/manual contains a series of recommendations to guide clinical assessment and management of delirium in older Australians in hospital. In addition, other key guidelines were utilised. [6,7,8]

Step 6 Define target for intervention and current practice

Wards 5A / 5B (two general medical ward of 48 beds) were chosen for the intervention due to the high proportion of older patients. The main target population was the members of the wards' multi-disciplinary team, as well as Allied Health located in the Emergency Department. To a lesser extent, the patient and carers' perspective's would be addressed.

The project found that current practice for assessing cognition was a nursing admission screen, including the presence/absence of problems with memory/confusion, hearing, vision, mobility and continence. Some modifiable risk factors for delirium translated into clinical practice but a number were absent. A clinical pathway, ward resources for assessing and managing delirium were not available. A restraint policy was in place.

It was acknowledged that the current nursing practice addressed many modifiable risk factors for delirium and that the project would formalise and complement this process.

Step 7 Develop a draft PLAN using the evidence - practice gaps identified

The project identified the following evidence of practice gaps. [5] Priority was given to delivering improved risk factor modification at the bedside. The project took the approach that delirium is a final common pathway with multiple causative factors in a vulnerable older person, such that generic risk factor modification is likely to be beneficial and assist in delirium prevention. This would result in improved care being delivered to the patient, independent of a formal delirium diagnosis.

- 1) Multi-component delirium prevention strategies targeting modifiable risk factors (trained volunteers were not used for logistical reasons). (expert opinion / grade c)

- 2) Risk factors for delirium should be routinely assessed on admission. (expert opinion)
- 3) A formal cognitive assessment should be performed on all older patients on admission to hospital (expert opinion). Serial AMT / MMSE on acute geriatric wards may improve delirium diagnosis. (grade C)
- 4) The Confusion Assessment Method is a practical effective tool for delirium diagnosis. (grade B)
- 5) Nonpharmacological methods should be first line in managing people with delirium. (expert opinion)
- 6) When drugs are indicated, this should be with caution and following a defined process. (expert opinion)
- 7) Staff and carer/patient education strategies to increase knowledge and awareness of delirium should occur in the hospital setting. (grade D)
- 8) Implementation of Delirium guidelines accompanied by education and reinforcement should occur in the hospital setting. (grade D)

From these 7 steps a draft plan was devised and felt to be feasible.

C. Understand your target groups, engage and refine project proposal

Step 8 Attain baseline data to understand the target groups and environment

A "CAM day" audit was carried out to define the point prevalence of delirium on the ward as defined by administration of the Confusion Assessment Method (CAM) by a Geriatrician. [10] D Risk factor rates, recognition of delirium by medical staff, confusion noted by nursing staff and rates of cognitive testing were defined. [Tool 1] Baseline attitude and knowledge of delirium was defined from a staff perception survey. [Tool 2]

The results from this step indicated a high - risk population (average 3.4/6 risk factors) with high rates of delirium (30%), such that a generic approach was required, as opposed to stratification of the population. Also it supported the project's perception that nurses readily identified confusion supporting a case for nurse screening and identification of cognitive decline. It was noted that the younger patients had a similar profile to the >65year old group indicating that age should not be a barrier to utilising the devised process.

Step 9 Engage, educate and feedback to staff

A multi-disciplinary focus group was carried out that was case study centred, this included feedback of the results to date and presentation of proposed new processes. [Tool 3]

This step aided identification of education needs and allowed for input and ownership of the PLAN,

Educational resources were developed, delivered and incorporated into an ongoing clinical improvement program.

Step 10 Refine the PLAN and resources, clarify methods for implementation, monitoring and evaluation.

The plan was refined on the basis of step 9 + 10. Resources were developed further and passed through a revision and peer review process. The core documents were - the amended nursing care plan (with linking strategies), the main guidelines, the clinical pathway, nursing care pathway and pharmacological guidelines.

(Step 10) The implementation process was simple, driven by the project officer and clinical champion, with the introduction of the plan combined with feedback, education and resources. An article was published in the hospital newsletter, with a grand round presentation as well as multiple presentations to interested parties.

(Step 11) Monitoring documented rates of confusion, delirium, cognitive testing as well as translation of nursing strategies into the nursing care plan is recommended. These items can be extracted from the head sheet at approximately 10 minutes per patient. The markers indicate uptake of the devised care pathway and the audit can be repeated as required. [Tool 4]

Additional markers that were considered and intend to test utility include:

- Delirium diagnosis extracted from coding (appeared to be under coded at RPH)
- AIMS reporting – falls, incidents
- Length of stay
- Companion use
- Monitoring of antipsychotic use and dosing (from impress)
- Utilisation of the delirium box

Unfortunately, due to delays in resource development, excess demands on staff with other projects and gastroenteritis outbreaks, only one audit was completed during the initial project timeframe. The project is now entering the second cycle of quality improvement - steps 10 – 14.

The possibility of monitoring with a repeat CAM day was reviewed, but due to changing patient status using a point prevalence of CAM diagnosis as “gold standard” was an unreliable marker to monitor for improvement. In addition, the CAM day was relatively resource intensive.

(Step 13) For evaluation it was decided to repeat the focus group and staff perception study. This would measure whether knowledge had improved, and whether the care pathway was acceptable and utilised.

D. Implementation

Step 11 DO - apply changes

This phase began approximately 4 months into the project. This was dynamic due to staggered resource development.

Step 12 STUDY – monitor progress and evaluate success

Repeat audit showed a significant increase in the utilisation of MMSE, and a lower rate of delirium (point prevalence basis only). The AMT was not found to be used but, due to the reluctance of administration to enact the stamp, it was not being entered into the notes. The value of the AMT was reviewed by both focus groups, and despite evidence of poor compliance, the tool was found to be a useful resource and being used but not necessarily in the formal sense.

Step 13 ACT – make changes

The last phase in the PDSA cycle is to act on the information that has been gathered. [4] This means looking in depth at what has been learned and how the knowledge should be applied.

The A MAP of delirium project has provided a useful pilot but needs further refining by repeating steps 10 -13 until adequate acceptance and efficiency is demonstrated.

E. Evaluate and sustain

Step 14 Repeat data collection and compare

The staff perception survey and focus group were repeated. This showed an improvement in knowledge, more confidence in dealing with delirium, and an improved sense of support. The process was utilised by staff and felt it didn't add to workload but made sense and added to patient care, in particular the modified nursing care plan was well accepted. The resources were felt to be useful, in particular the patient / carer leaflet and the delirium box.

Feedback suggested that consultant staff required education as support and practice varied without explanation. Also, need for clarification relating to when and on who to use resources was requested, indicating a process of clinical skill improvement. The group had initiated the concept of an "orange magnet" at the bedside to indicate an individual has a problem with cognition.

Step 15 Sustain

Sustainability is being addressed with a proposal for ongoing funding to continue employment of the project officer. In addition, the project is integrating with the Western Australian Clinical Networks, by involvement in a clinical advisory committee being set up to define a model of care for delirium.

RPH nursing practice standards are under development by the project officer. EQUIP criteria have been fulfilled. The project stakeholders are continuing to link with the evolving ED Comprehensive Care project.

The education program is integrated into the nursing and intern program at RPH. The pharmacology flow chart has been approved by the RPH drug subcommittee with the drugs on the wards 5A and 5B now on impress and the flow chart is linked on the intranet to the drug formulary.

Step 16 Disseminate

The project's goal is for the system to be widely available and adaptable to different environments. The project has been a successful pilot but requires refining before this step. The most common question to our project officer is "will the project changes continue" and "will the project be extended hospital-wide"?

Tools

- 1 CAM day and baseline data collection
- 2 Staff Perception Survey
- 3 Focus group
- 4 Audit tool

References

- 1 www.safetyandquality.org
- 2 Registered Nurses Association of Ontario. *Implementation of clinical practice guidelines* Association of Ontario, 2002.
- 3 nz
- 4 www.ihl.org/resources/qi/index.asp
- 5 <http://www.health.vic.gov.au/acute-agedcare>
- 6 British guide
- 7 American psych
- 8 Cochrane review
- 9 Inouye SK, van Dyck CH, Alessi CA, Balkin S, Siegel AP, and Horwitz RI. *Clarifying confusion: the confusion assessment method. A new method for detection of delirium.* *Annals of Internal Medicine.*, 1990. 113(12): p. 941-8
- 10 <http://line-ten.net/waldron/delirium.htm>

IMPLEMENTATION PROCESS

