

Perceptual and Cognitive Enhancement Protocol

Purpose

The purpose of this protocol is to offer health care providers an understanding of the importance of addressing cognitive and perceptual needs in patients' who have delirium or are at risk for developing delirium during their hospital admission. The protocol will also provide interventions which can be used to create a supportive environment when caring for patients who experience changes to their cognitive and perceptual abilities.

Introduction

Delirium presents with a change to cognition that can be very distressing to patients and families. The cognitive changes that occur commonly are inattention, memory loss, disorientation, language, and perceptual disturbances (e.g. visual hallucinations, delusions and misinterpretations) which cannot be explained by preexisting dementia. (American Psychiatric Association, 2000).

Patients who have a history of dementia are particularly vulnerable to delirium and it is possible to have a delirium superimposed on dementia. See (Appendix A) for differentiation between delirium and dementia. Supportive interventions can be offered to help minimize confusion and comfort the patient.

Sensory deprivation through vision and hearing impairment and relocation stress from admission to an unfamiliar hospital environment, are also risk factors for delirium. Normal aging can produce changes to vision like decreased acuity in low light conditions and poor color discrimination. Hearing impairment can also be part of the aging process, as evidenced by reduced appreciation for high frequency sounds and for distinguishing words in the presence of competing background noise. While most healthy older adults can compensate through environmental cues and context, the elderly delirious patient often cannot. These patients often require assistance from health care providers to help address their perceptual needs (Glogoski and Foti, 2001).

Definitions of Associated Terms

Cognition

Cognition deals with an individual's ability to process and use incoming information e.g. memory, language. Cognition deals with those processes that create the uniqueness of the individual. Some aspects include the intellect, the person's thoughts and feelings about self, their attitudes, values, motivations, interests, beliefs and experiences. Attention and sensitivity to these aspects of cognition is of paramount importance when caring for the hospitalized patient who may be exhibiting symptoms of delirium (Fine, 1990).

Perception

Perception is the mechanism by which the brain interprets sensory information from the environment. Information is gathered and further processed by the various cognitive functions and then can be acted upon, by verbal expression or a motor act (Wheatley, 2001). Vision and hearing are important elements within the perceptual domain.

Individuals at risk

Cognitive perceptual difficulties can arise with injury and illness affecting the brain e.g. stroke, dementia, delirium. Additionally, entry into the hospital can precipitate delirium through a heightened sensitivity to environmental changes Rapp (1998). Anecdotally, delirium rates in the ICU setting have been reported as high as 50%.

Who would most benefit from the use of this protocol?

Any individuals with risk factors for delirium or a diagnosis of delirium
Any individuals with documented cognitive/perceptual problems of a more long-term nature.

Initial assessment

- Delirious patients are often very frightened. They should be approached in a calm, reassuring manner
- It is important to ascertain the patient's perspective of his/her present situation and the cognitive and perceptual changes that have occurred. Care priorities need to be documented and followed with the multidisciplinary team.
- It is important to determine an individual's level of functioning prior to entering hospital. This should include family interview and review of patient history.
- An accurate assessment of the patient's cognitive status is necessary in order to plan interventions that are specific for the individual e.g., if the patient can best understand simple (one sentence) commands, complex commands should not be a part of the communication structure; if the patient cannot interpret time on a watch then using a watch/clock in the patient's room would not be an effective intervention to assist with orientation. Discussion with other team members such as occupational therapist, physical therapist, speech pathology, nurse, nurse practitioner, physician and pharmacist is useful in obtaining an accurate assessment of the patients current status and in developing a care plan that meets the patients individual needs.

Intervention strategies

The following is a compilation of strategies that can be used with patients with cognitive and perceptual difficulties. They can be used in a preventative manner in addition to

minimizing symptoms of delirium (Meager, 2001). Some of the strategies arise from expert opinion, others from evidenced based practice and emperic use with chronically cognitively impaired populations (Inouye, 2000; Rapp & the Iowa Veterans Affairs Nursing Research Consortium,1998).

All interventions must be guided by the expressed needs of the patient/family and individual circumstances and evaluated regularly. However, it is important to give the interventions sufficient time to declare a success or failure, since the delirium syndrome often produces a fluctuation in the patient's status. Additionally, it is suggested that the handout in (Appendix B) be discussed with families to help with communication issues and assist with implementation of the following interventions which are often underutilized.

A. Cognitive Enhancement

Elicit the patient's attention prior to speaking and minimize distractions by turning off radio/TV and closing the door.

Communicate clearly and concisely using a level of complexity the patient is able to understand e.g. use simple as opposed to complex sentence structure

When the patient engages in conversation that is not based in reality, do not insist on the patient absorbing the truth but gently explore the feelings and desires behind the expressed thoughts.

Have the patient/family write information down in a planner or memory book to reduce the patient's frustration due to memory impairment.

Offer verbal reminders of the identity of key individuals involved with the patient and if requested, orientation information.

If appropriate, provide clear signposts in the room or on the door to help the patient understand where he/she is or to find his/her room.

Ask the family to provide a calendar and clock if appropriate. Mark significant dates/events on the calendar or chart the day's schedule and post in a visible location.

Familiar objects from home and photographs give the patient a sense of security and help others see the person behind the illness.

Continuity in staff is important to give the patient a sense of security and predictability e.g. a primary nurse

Involve family and caregivers to encourage feelings of security and orientation

Television and radio may be used to help patient maintain contact with the outside world unless the patient finds them distracting.

B. Sensory Enhancement

Ensure patients have clean and correct vision aids like glasses and magnifiers.

Phone with large numbers are available from CNIB and Bell Canada

Large print books are available by calling the library located in the K wing (Phone number 416-461-6100 extension 2624)

Ensure hearing aides are in place and working. See (Appendix C) for tips on caring for hearing aides from the Audiology department.

Arrange treatments/care so that patient may have maximum periods of uninterrupted sleep

C. Environmental Enhancement

Position the patient in the bed near the window as this can help reinforce normal day/night cycles

If patient is hallucinating or delusional, help him/her to maintain a sense of control over the environment e.g. silence the alarm on the IV pump, remove unnecessary equipment/objects; cover pictures on the walls; turn television off and cover; remove plants and flowers from vision. These interventions can reduce items subject to misinterpretation.

Minimize transfers within the ward and the institution

Ensure lighting is adequate; provide a night-light to reduce misperceptions

Control sources of excess noise e.g. staff shouting, visitors, and equipment

Evaluation

Outcome measures may include:

Patient feeling more in control

Patient feeling choices/decisions are listened to

Families feeling informed about strategies to enhance cognitive, sensory and environmental domains

Multidisciplinary team discussing cognitive/ perceptual issues on a regular basis

Improved MMSE score or the Mini-Cog Score

Patient maintains adequate hearing aid/ glasses during entire hospitalization.

Appendix A

Differentiating Delirium, Depression and Dementia

CHARACTERISTIC	DELIRIUM	DEMENTIA	DEPRESSION
Onset	Sudden, abrupt	Insidious, slow and often unrecognized	Recent, may correspond with life change
Course over 24 hours	Fluctuating, usually with night-time exacerbations	Fairly stable, may see changes due to stresses	Fairly stable, may be worse in the morning
Consciousness	Reduced	Clear	Clear
Alertness	Increased, decreased or variable	Generally normal	Normal
Psychomotor activity	Increased, decreased, mixed (presents both increased and decreased at the same time), variable (sometimes increased, other times decreased)	Normal, but may have apraxia	Variable, agitation or retardation
Duration	Hours to weeks (rarely over a month)	Months to years	Variable (at least 6 weeks per DSM-IV), may be months to years
Attention	Globally disordered, fluctuates	Generally normal	Little impairment, very distractible
Orientation	Usually impaired, variable/fluctuates	Often impaired (answer may be close to right)	Usually normal, may answer "don't know"
Speech	Often incoherent, slow or rapid	Difficulty word finding, preservation	May be slow
Affect	Variable	Labile	Flat
Memory	Immediate and recent memory impaired	Recent and remote memory impaired	—
Perception	Illusions and hallucinations usually visual and common	Often absent	—

Based on Foreman and Zane, 1996; Lipowski, 1989

Adapted from Rapp, C.G., & The Iowa Veterans Affairs Nursing Research Consortium. (1998). Acute Confusion/Delirium Evidence-Based Protocol. In M.G. Titler (Series Ed.), Series on Evidence-Based Practice for Older Adults, Iowa City, IA: The University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core.

Appendix B

Guidelines for Families Visiting Patients who are Experiencing Acute Confusion

Some hospitalized patients experience rather sudden changes to their thinking and behaviour as part of their illness. Some of the changes may include the following...being easily distractible, memory loss, confused as to their location and seeing objects that are not there. They may be unusually quiet or have unexplained outbursts.

As part of the hospital team, family members are encouraged to assist staff in providing a safe and caring environment for patients. The following general guidelines may be helpful however, further discussion with team members is recommended for specific needs and issues.

- ❑ If your family member uses glasses or a hearing aid communicate this to the staff, so these aids can be used appropriately during the patients hospitalization.
- ❑ People can often be frightened in the hospital environment. Visits from familiar people are important. Approach in a calm and reassuring manner.
- ❑ Get your family member's attention before speaking and minimize distractions by turning off the radio or TV.
- ❑ If your family member is expressing specific concerns, feelings or needs, let staff know.
- ❑ Where possible follow a familiar routine with the normal activities of daily living.
- ❑ Provide familiar objects and photographs from home. A small radio or tape machine to play music, and a calendar or clock may be beneficial. Please remember not to bring valuables to the hospital.

Appendix C

QUICK GUIDE TO DAILY MANAGEMENT OF A HEARING AID

Intranet content from the Audiology Service (April, 2001)

A. CHECK THAT THE HEARING AID IS WORKING

1. Insert battery

How: There is only one way to do this. There is a "plus" (+) sign on the battery itself and a "plus" sign on the battery door of the hearing aid. Both "plus" signs must face upwards. If you put the battery in the wrong way, the battery door may not close - don't force it.

2. Turn hearing aid on

How: If there is an O-T-M switch, turn it to "M".

M = ON (Microphone) O = Off T = Telephone

3. Turn volume wheel until you hear a whistle while you hold the aid in your hand.

If there is no whistle: try a new battery → Reminder: remove the coloured paper tab.
(if patient needs new battery, call The Hearing Aid Centre ext.4997, M1-102)

4. Turn volume wheel back down

B. INSERT THE EARMOULD/HEARING AID

1. Check that the aid is going into the correct ear

Right ear gets aid with Red dot or red printing on it.

Left ear gets aid with Blue dot or blue printing on it.

2. Insert the earmould/hearing aid

How:

- Pull the ear up and back. First insert the canal portion of the aid or earmould and slightly rotate the upper portion of the aid into the ear.
- Adjust the volume wheel so that the resident can hear your voice easily.
- The hearing aid should not whistle now.

If it does whistle:

- Mould/aid may not be inserted in the ear snugly. Try again.
- Volume may be too high so turn volume wheel down.
- An object (e.g. a pillow or a hand) may be too near hearing aid, so remove if possible e.g. re-position the pillow.

C. REMOVE THE HEARING AID

Hearing aids should be removed when:

- the patient/resident indicates that he/she does not want to use it
- there is a risk of aid getting wet e.g. when the patient/resident is going to take a bath or a shower
- bed time

D. STORE THE HEARING AID

- wipe off any wax from the earmould or hearing aid with a tissue
- open the battery door to save battery life
- store in a safe place

4. What should I do if my patient has a hearing aid but it does not seem to be working?

Hearing Aid Troubleshooting Chart

Problem	Possible Cause	Action
dead (no sound)	<ul style="list-style-type: none"> ◆ earmould or hearing aid is clogged with wax ◆ battery weak ◆ battery inserted incorrectly or battery door not closed ◆ aid not turned on ◆ behind-the-ear aid set on “O” or “T” position 	<ul style="list-style-type: none"> ◆ call Hearing Aid Centre M1-102 x4997, or Long-Term Care Audiologist: x6721 or x2925 ◆ replace battery; (can buy batteries at the Hearing Aid Centre M1-102, x4997) ◆ re-insert battery correctly and ensure battery door is closed ◆ turn aid on ◆ switch aid to “M” position
whistling or squealing	<ul style="list-style-type: none"> ◆ poorly fitting earmould or in-the-ear hearing aid ◆ earmould \ in-the-ear aid is not inserted in ear correctly ◆ volume is too high ◆ wax is in ear canal ◆ hand or object (e.g. pillow) is too near hearing aid 	<ul style="list-style-type: none"> ◆ modifications or new earmould may be required – call Hearing Aid Centre (M-wing x4997; Long-Term Care x6721 or x2925) ◆ re-insert carefully ◆ turn volume wheel down ◆ call physician ◆ remove object from area of hearing aid
Client does not hear well with aid	<ul style="list-style-type: none"> ◆ causes may vary (and may include deterioration of hearing) 	<ul style="list-style-type: none"> ◆ call Audiologist (M1-102, x4143 or Long-Term Care x 6721 or x2925)

5. If my patient or family member is deaf and cannot use a regular telephone what can be done?

There is a TDD (telephone for the deaf) at one of the telephones located at the entrance to M-Wing.

6. What should I do if I and/or my colleagues want more information or training re: how we can help our hearing impaired patients?

The Audiology Service offers staff training sessions (e.g. communication strategies, hearing aid management and trouble shooting)

Acute Care: call Marlene Cashman x4150

Long Term Care: call Brenda Lewsen x6721 or Rocchina Bellomo x2925

N.B. Long Term Care also sets up group amplification listening systems for meetings and activities involving long term care residents.

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