

Reducing Agitation in People with Brain Injury

 ENVIRONMENTAL MANAGEMENT SYSTEM

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2/20/2017 1


Objectives

- Define agitation and demonstrate understanding of how agitation can present
- Gain knowledge of how environmental modification can improve care of the agitated person
- Demonstrate understanding of red, yellow, green environmental management system and how to apply to persons with brain injury
- Gain knowledge of how to score the Agitated Behavior Scale

2/20/2017 2

UnityPoint Health – St. Luke's Hospital

- Overview
 - Located in Cedar Rapids, Iowa
 - Magnet hospital since 2009
 - 532 licensed beds
 - 17,673 admissions in 2016
 - 2,970 employees



Our mission is to give the healthcare we'd like our loved ones to receive.

2/20/2017 3

Inpatient Rehabilitation Unit (IRU)

- CARF accredited for 39 years, specialty certified in stroke and brain injury.
- 66% of eligible nurses have a specialty certification in rehabilitation or brain injury.
- 18 staff members are certified brain injury specialist



2/20/2017 4

Inpatient Rehabilitation Unit (IRU)

- 24 private rooms including a transitional apartment
- Served 443 patients in 2016
 - Stroke - 148 pts
 - Brain Injured - 47 pts
 - Patients receive 3+ hours of therapy per day at least 5 days a week
 - Physical Therapy, Occupational Therapy, & Speech Therapy
 - Patients also receive Recreational Therapy, Music Therapy, & Animal Assisted Therapy

2/20/2017 5

The Team

- Physiatrist
- Neuropsychology
- Medical Psychology
- 24 hr. Nursing staff
- Therapists
 - Physical Therapy
 - Occupational Therapy
 - Speech Therapy
 - Recreational Therapy
- Social worker
- Care Coordinators
- Prosthetist/Orthotists
- Respiratory Therapy
- Intake Coordinators
- Dietary
- Pharmacy
- Spiritual Care services
- Specialists
- Wound Care Nurses

2/20/2017 6

Brain Injury

- Brain Injury is a common diagnosis in the US
 - If afflicts the young and old
 - Can be mild to severe
 - Each brain injury is unique
- Agitation is one behavior that can occur following a brain injury
 - Agitation is not present in everyone with brain injury
 - Agitation is challenging for healthcare professionals and for family members to manage

2/20/2017 7

What is agitation?

- Agitation is an excess of one or more behaviors that occurs during an altered state of consciousness and diminished cognitive functioning (Bogner & Corrigan, 1995)
 - "Excessiveness" - the degree to which the behavior interferes with functional activities and the extent to which the behavior can be inhibited.
- Post Traumatic Agitation is a form of delirium distinguished by:
 - (1) excess of behavior, including a combination of aggression, restlessness, disinhibition and/or lability; and
 - (2) presentation during the period of posttraumatic amnesia (Sandel & Mysiw, 1996).

2/20/2017 8

Why does agitation occur?

For the most part it is poorly understood

- Neuroanatomy – several brain regions have been implicated in aggression
 - For example: Prefrontal Cortex, Amygdala, Anterior Cingulate Cortex
- Neurotransmitters
 - Higher levels of a norepinephrine metabolite: 3-methoxy-4-hydroxyphenyl-glycol
 - Lower levels of a serotonin metabolite 5-hydroxyindoleacetic acid (5-HIAA)

2/20/2017 9


Why does agitation occur?

- Other factors that possibly contribute
 - Those who were prone to aggression prior to injury
 - Tend to be younger, less educated, score higher on scales for psychoticism, anger and irritability
 - Alcohol and other substance abuse disorders prior to injury
 - Impaired cognition

2/20/2017 10

What can agitation look like?

- Restlessness
- Decreased attention
- Distractible
- Irritable, angry
- Confusion
- Not wanting to be touched
- Hitting, kicking
- Verbally inappropriate (yelling, screaming, cursing...)
- Excessive crying
- Increase in repetitive verbalizations or actions
- Increased aggression towards objects or people
- Thrashing around



2/20/2017 11

- A brain that has been newly injured is unable to make sense of all the noises, lights, touches, smells... that are occurring around it.
- Think for a minute how overwhelming a hospital may be for this patient population
 - Unfamiliar environment
 - Smells of disinfectant
 - Multiple hospital staff in and out
 - Alarms, beeps, carpet cleaners...

2/20/2017 12

Overload

- When someone with a brain injury becomes overloaded they can withdraw and shut down or become agitated
- Withdrawn and shut down examples
 - Avoiding things
 - Turning away
 - Covering up with a pillow or blanket...
- Agitated examples
 - Crying
 - Hitting
 - Yelling
 - Thrashing around...

2/20/2017 13

Treatment for Agitation

- Agitation has been associated with longer length of stay in hospitals and decreased independence at discharge
- Safety issues for patient and staff
- Medications are used to assist with agitation
 - Side effects can be an issue
 - Sedation
 - Impaired cognition
- Restraints
 - Can increase agitation
- 1:1 Sitter
 - May not be helpful if person is not trained in brain injuries
 - Costly

2/20/2017 14

What else can we do?

All of these previously mentioned methods are helpful and sometimes necessary but can we do something else to minimize the agitation from happening?

2/20/2017 15

What do we know?

- We need to keep individuals with brain injury active within reason
 - Too much rest = prolonged recovery
 - Too little rest = prolonged recovery
- We need to keep patients and staff safe
- Agitation does occur and can't be ignored
- When a person with a BI becomes agitated or withdrawn it becomes hard for the patient to be able to participate or even benefit from therapies that day and possibly the next day.

2/20/2017 16

Environmental Management System

- To help with recovery from this brain injury is important to maintain an environment that minimizes these distractions/stimulations.
- To do this we may need to provide an appropriate environment to prevent the patient's brain from becoming "overloaded".
- We need to find a way to be consistent, use the same language, and help our patients with recovery

2/20/2017 17

Common Language

- Agitated Behavior Scale
- Developed to allow objective assessment of agitation over time; track patterns and flows of agitation
 - 14 Item measure
 - Observational
- Agitation
 - Aggression
 - Disinhibition
 - Liability
- Psychometrics:
 - Supporting evidence for sound reliability and validity

2/20/2017 18

Agitated Behavior Scale

Rating 1
The behavior is not present

Rating 2:
"Slight": The behavior is present but does not prevent the conduct of other, contextually appropriate behaviors. Patients may redirect themselves spontaneously or the continuation of the agitated behavior does not preclude the conduct of the appropriate behavior

Rating 3:
"Moderate": The individual may need to be redirected from an agitated to an appropriate behavior, but is able to benefit from such cueing.

Rating 4:
"Extreme": the individual is not able to engage in appropriate behavior due to the interference of the agitated behavior, even when external cueing or redirection is provided.

2/20/2017 19

Agitated Behavior Scale

DO NOT LEAVE BLANKS.

- ___ 1. Short attention span, easy distractibility, inability to concentrate.
- ___ 2. Impulsive, impatient, low tolerance for pain or frustration.
- ___ 3. Uncooperative, resistant to care, demanding.
- ___ 4. Violent and or threatening violence toward people or property.
- ___ 5. Explosive and /or unpredictable anger.
- ___ 6. Rocking, rubbing, moaning or other self-stimulating behavior.
- ___ 7. Pulling at tubes, restraints, etc.
- ___ 8. Wandering from treatment areas.
- ___ 9. Restlessness, pacing, excessive movement.
- ___ 10. Repetitive behaviors, motor and /or verbal.
- ___ 11. Rapid, loud or excessive talking.
- ___ 12. Sudden changes of mood.
- ___ 13. Easily initiated or excessive crying and /or laughter.
- ___ 14. Self-abusiveness, physical and /or verbal.

___ Total Score

2/20/2017 20

Agitated Behavior Scale

- Calculate Total Scale (from 1 to 4)
 - Composite scores range from 13 (no agitation) to 56 (extreme agitation)
 - Rate all items; do not leave an item blank
- Subscales
 - Disinhibition Scale
 - Aggression Scale
 - Liability

2/20/2017 21

Agitated Behavior Scale

- Mean score of 21.01 and Standard Deviation of 7.35 (Corrigan, 1989)
- Clinical Purposes
 - 21 or below: within the normal limits (GREEN)
 - 22-28: mild agitation (YELLOW)
 - 35 and above: severe agitation (RED)

2/20/2017 22

Example Item #1: Short attention span, easy distractibility, inability to concentrate

Score 1 (absent) if the behavior is not present

Score 2 (slight degree) if the patient is distracted by other persons, objects, activities in the room while engaged in a task, but returns to task easily without redirection

Example: The patient becomes distracted by a television program while eating, but resumes eating after a brief period of time.

Score 3 (moderate degree) if the patient is distracted by other persons, objects, when completing a task, but returns to the task after cueing or after distractors are removed.

Example: The patient becomes distracted by a television program while eating, but allows the television to be turned off when reminded that he or she needs to eat.

Score 4 (extreme degree) if the patient is distracted by other persons, objects, activities in the room while engaged in a task, and cannot return to the task after cueing or distractors are removed, or cannot attend to task at all.

Example: The patient requires feeding by another because he or she cannot attend to the meal.

2/20/2017 23

Example Item #2: Impulsive, impatient, low tolerance for pain or frustration

Score 1 (absent) if the behavior is not present

Score 2 (slight degree) if the patient occasionally begins a task without considering all steps, but can self correct.

Example: The patient begins to get in/out of the wheelchair without locking the brakes, stops self, and locks brakes.

Score 3 (moderate degree) if the patient begins a task without considering all steps, but can be redirected to the steps with cues.

Example: The patient begins to get in/out of the wheelchair without locking the brakes; after being reminded to lock the brakes and consider the other steps, he follows through as directed, but requires supervision throughout the procedure.

Score 4 (severe degree) if the patient begins a task without considering all steps, and cannot be redirected to the steps with cues. The patient needs physical assistance to complete the task, or cannot complete task at all.

Example: The patient will not lock the brakes before getting in/out of the chair; the nurse needs to complete this step and others.

2/20/2017 24

The staff at UnityPoint St. Luke's Rehabilitation use a system of communication that identifies how the environment should be managed for each patient based on that person's needs to help aid their recovery.

2/20/2017

25

Environmental Management System

Each patient is assigned a color level that meets their needs:

- Red Light (maximum restrictions)
- Yellow Light (Medium Restrictions)
- Green Light (limited restrictions)

2/20/2017

26

(TBI Unit)	Red Light
Lighting:	*Dim/Dark *May need a lamp
Noise:	*Complete quiet
Room Décor:	*None or extremely limited *Remove extra furniture *Keep very clean and put away
TV/Video/Music:	*None
Visitors:	*Family Only! *One at a time *Limit interaction to 10 minutes every hour
Touch/Handling:	*Limit touch and handling except as absolutely necessary for providing medical care
Treatment Location:	*In room or private treatment area
Bed side report:	*Quietly in hallway *Family can come out of the room
REC Therapy:	*No
Rest Breaks:	*At least 1 hour in AM & PM
IMPORTANT:	*Strict adherence to these guidelines to: -Prevent agitation later -Help patient tolerate and benefit from therapies -Keep patient safe/comfortable



Treatment Ideas

- In Room
- In another empty patient room or apartment
- In OT or PT room
- Staff need to be prepared and bring items needed with them
- These patients do not eat in our dining room and do not go to our busy therapy gym

2/20/2017 29

(TBI Unit)	Yellow Light
Lighting:	*As tolerated
Noise:	*Avoid loud, annoying, or ongoing noises
Room Décor:	*Small amounts okay *No violent or sexual content *Avoid busy or active posters
TV/Video/Music:	*Less than 20 min at a time *No more than 2 hours *Not during rest breaks
Visitors:	*Family, close friends, and clergy *No more than 2 visitors at a time *Limit visits to 30 min, then 30 min rest break *Not during rest breaks
Touch/Handling:	*As tolerated
Treatment Location:	*In private or semi-private treatment space
Bed side report:	*As tolerated
REC Therapy:	*As tolerated
Rest Breaks:	*At least 30 min in AM & PM
IMPORTANT:	*Temporarily Implement Red Light Restrictions at the first sign(s) or agitation or withdrawal

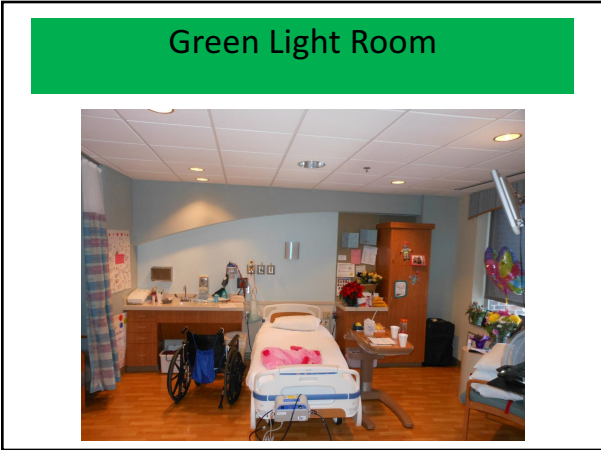


Treatment Areas

- Back Hallways
- In less busy area of gym
- Curtain off an area
- Avoid noisy times in the gym

2/20/2017 32

(TBI Unit)	Green Light
Lighting:	No restrictions
Noise:	No restrictions
Room Décor:	No restrictions
TV/Video/Music:	No restrictions but staying within hospital policy
Visitors:	No restrictions
Touch/Handling:	No restrictions
Treatment Location:	Any
Bed side report:	Yes/Normal
REC Therapy:	Yes
Rest Breaks:	As appropriate
IMPORTANT:	Provide cues to help the patient: -recognize symptoms of overload -understand factors that contributed -understand how to reduce stimulation in the environment



Environmental Management System

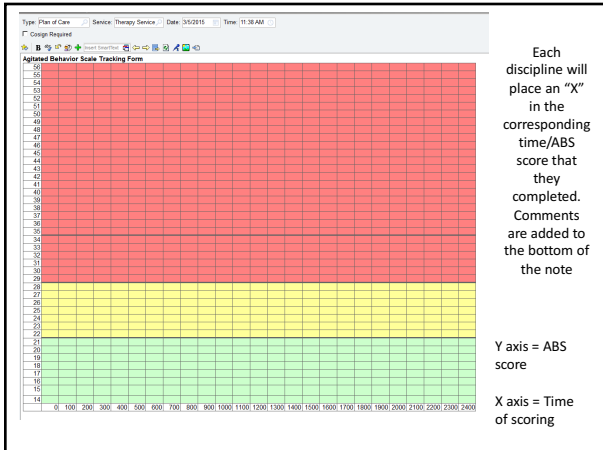
- All patients/families are educated about the EMS prior to arrival to our unit
 - Education continues during its use
- Every patient with a Brain Injury (traumatic or non-traumatic) will come into our program at a level "Yellow"
 - Room is set-up for yellow
- Stop sign posted at door to help alert staff and family/friends
- EMS laminated copy hanging on the door of the patients room to delineate what level is in use

2/20/2017 35

Environmental Management System

- Therapy staff will do an ABS for each session they are with the patient
- Nursing will do an ABS twice a shift (every 4 hours) at consistent times.
 - Nursing will also do an ABS for incidents such as those with increased agitation
- Each staff member will plot the data in the medical record

2/20/2017 36



Environmental Management System

- If a patient demonstrates increased agitation staff can use clinical decision making to implement a more restrictive color stage than what was assigned in the morning
 - Ie. Green to Yellow

2/20/2017 38

Environmental Management System

- Utilize trending to determine level of EMS needed
 - Keeping in mind should have consistency for 2 days prior to moving to lesser EMS color (ie. Yellow to green).
- A patient will be in EMS yellow for first 48 hours no matter what – if they score green the entire time – it will be discharged after 48 hours

2/20/2017 39

Environmental Management System

- Day 1 = Pt scores a 30 = Red (Patient in Red)
- Day 2 = Pt scores a 31 = Red (Patient in Red)
- Day 3 = Pt scores a 25 = Yellow (Patient in Red)
- Day 4 = Pt scores a 24 = Yellow (Patient in Red) – next day patient moved to yellow

2/20/2017 40

Environmental Management System

- All staff will need to follow the EMS and may have to have crucial conversations with family members and health care professionals regarding the rationale for EMS and how to follow the EMS.
- Education to the family, patients, and any visitors is VERY important
- Consistency is important

2/20/2017 41

What do we educate about?

- This system is to help your loved one heal and get better
- The process – how the system works
- Regarding the specific stage or “color” the patient is in.
 - And what does that look like

2/20/2017 42

Other Educational Points

- Avoid touching or stroking your loved one. This is touch input that the brain may not be able to understand. It may serve to upset rather than calm and soothe.
- Speak slowly and give your loved one time to understand what you are saying.
- Speak in simple sentences and pause between each one.
- Avoid asking too many questions as this may tend to increase nervousness and agitation.
- Avoid giving too many commands
- Do not try to reason with your loved one if they are agitated.
- Try to redirect their attention or stop interacting altogether in an attempt to calm the person down.
- One person should be speaking at a time. There should not be background conversation in the room.

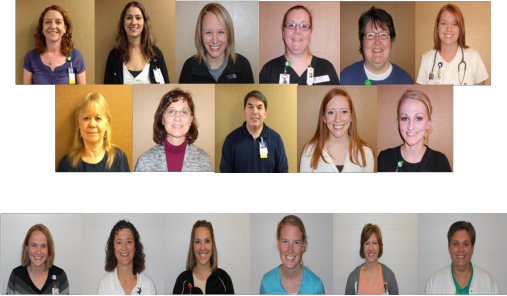
2/20/2017 43

Other Educational Points

- Don't take it personally
- Remain calm (physically and verbally)
- Avoid using logic or trying to rationalize with individual (especially if they have cognitive deficits)
- Remove stimulus that is causing increased agitation
- Implement the environmental strategies

2/20/2017 44


CBIS – Nursing & Therapy Staff



2/20/2017 45

Thank you!

Questions?



2/20/2017 46
