

Interdisciplinary Team Approach to the Acute Trauma Patient

Trauma Conference

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SURNAME: _____ NHS: _____

FIRST NAMES: _____

DATE OF BIRTH: ____/____/____ SEX: _____

Please attach patient label here



Neurology PTA Scale

	Answer	+/-	Answer	+/-	Answer	+/-	Answer	+/-	Answer	+/-	Answer	+/-	Answer	+/-
1. How old are you?														
2. What is your date of birth?														
3. What month are we in?														
4. What time of day is it? Morning, afternoon or evening														
5. What day of the week is it?														
6. What year are we in?														
7. What is the name of this place?														
8. Face														
9. Name														
10. Picture 1														
11. Picture 2														
12. Picture 3														
TOTAL														

Date		
Green	Yellow	Purple
Bike	Flower	Bed
Shirt	Dog	Car
Hat	Bug	Boat

Date		
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Interdisciplinary Goals for Week 3 - following Max-Fax surgery

- 1) Family Meeting.
- 2) Tracheostomy weaning.
- 3) To continue improving awareness through use of modified Westmead and orientation therapy.
- 4) To improve balance to $>40/56$ on Berg Balance score.
- 5) To progress walking to a distance of >50 metres with assistance of 1.



Physiotherapy
Berg Balance Scale / Scorecard

SURNAME: _____ NHI: _____

FIRST NAMES: _____

DATE OF BIRTH: ____/____/____ SEX: _____

Please attach patient label here

•
1. Sitting to standing. *"Please stand up. Try not to use your hands for support."*

- () 4 able to stand without using hands and stabilise independently
- () 3 able to stand independently using hands
- () 2 able to stand using hands after several tries
- () 1 needs minimal aid to stand or to stabilise
- () 0 needs moderate or maximal assistance to stand

2. Standing unsupported. *"Please stand for two minutes without holding"*

- () 4 able to stand safely 2 minutes
- () 3 able to stand 2 minutes with supervision
- () 2 able to stand 30 seconds unsupported
- () 1 needs several tries to stand 30 seconds unsupported
- () 0 unable to stand 30 seconds unassisted

3. Sitting with back unsupported. *"Please sit with arms folded for two minutes."*

- () 4 able to sit safely and securely 2 minutes
- () 3 able to sit 2 minutes under supervision
- () 2 able to sit 30 seconds
- () 1 able to sit 10 seconds
- () 0 unable to sit without support 10 seconds

4. Standing to sitting. *"Please sit down"*

- () 4 sits safely with minimal use of hands
- () 3 controls descent by using hands
- () 2 uses backs of legs against chair to control descent
- () 1 sits independently but has uncontrolled descent
- () 0 needs assistance to sit

5. **Transfers.** (Arrange chairs for a pivot transfer). *"Please transfer from one chair to the other."*

- () J4 able to transfer safely with minor use of hands
- () J3 able to transfer safely with definite use of hands
- () J2 able to transfer with verbal cueing and / or supervision
- () J1 needs one person to assist
- () J0 needs two people to assist or supervise to be safe

6. **Standing unsupported with eyes closed.** *"Please close your eyes and stand still for 10 seconds."*

- () J4 able to stand 10 seconds safely
- () J3 able to stand 10 seconds with supervision
- () J2 able to stand 3 seconds
- () J1 unable to keep eyes closed 3 seconds but stays steady
- () J0 needs help to keep from falling

7. **Standing unsupported with feet together.** *"Place your feet together and stand without holding."*

- () J4 able to place feet together and stand 1 minute safely
- () J3 able to place feet together and stand 1 minute with supervision
- () J2 able to place feet together but unable to hold for 30 seconds
- () J1 needs help to attain position but able to stand 15 seconds
- () J0 needs help to attain position and unable to hold 15 seconds

8. **Reaching forward with outstretched arm while standing.** *"Lift your arm to 90 degrees. Stretch out your fingers and reach as far forward as you can."*

- () J4 can reach forward confidently >25 cm
- () J3 can reach forward >12 cm safely
- () J2 can reach forward >5 cm safely
- () J1 reaches forward but needs supervision
- () J0 loses balance while trying

9. **Pick up object from the floor from a standing position.** *"Pick up the slipper which is placed in front of your feet."*

- () J4 able to pick up the slipper safely and easily
- () J3 able to pick up the slipper but needs supervision
- () J2 unable to pick up but reaches 2-5 cm from slipper
- () J1 unable to pick up and needs supervision while trying
- () J0 unable to try / needs assistance to keep from losing balance

- 10. Turning to look behind over both shoulders while standing.** *"Turn to look directly behind you over your left shoulder. Repeat to the right."*
- () 4 looks behind from both sides and weight shifts well
 - () 3 looks behind one side only
 - () 2 turns sideways only but maintains balance
 - () 1 needs supervision while turning
 - () 0 needs assistance to keep from losing balance
- 11. Turn 360 degrees.** *"Turn completely around in a full circle. Pause. Then turn a full circle in the opposite direction."*
- () 4 able to turn 360 degrees safely in 4 seconds or less
 - () 3 able to turn 360 degrees safely one side only in 4 seconds or less
 - () 2 able to turn 360 degrees safely but slowly
 - () 1 needs close supervision of verbal cueing
 - () 0 needs assistance while turning
- 12. Placing alternate foot on step while standing unsupported.** *"Place each foot alternately on the step. Continue until each foot has touched the step 4 times."*
- () 4 completes 8 steps in 20 seconds safely
 - () 3 completes 8 steps in >20 seconds safely
 - () 2 able to complete 4 steps without aid with supervision
 - () 1 able to complete >2 steps with minimal assistance
 - () 0 needs assistance to keep from falling
- 13. Standing unsupported one foot in front.** *"Place one foot directly in front of the other."*
- () 4 able to place foot tandem and hold 30 seconds
 - () 3 able to place foot ahead of the other and hold 30 seconds
 - () 2 able to take small step independently and hold 30 seconds
 - () 1 needs help to step but can hold 15 seconds
 - () 0 loses balance while stepping or standing
- 14. Standing on one leg.** *"Stand on one leg as long as you can without holding."*
- () 4 able to lift leg independently and hold > 10 seconds
 - () 3 able to lift leg independently and hold 5 - 10 seconds
 - () 2 able to lift leg independently and hold > or = 3 seconds
 - () 1 tries to lift leg, unable to hold 3 seconds
 - () 0 unable to try or needs assistance to prevent fall

Berg Balance Score

- Reliable and validated outcome measure of balance.
- Related to Independence.
- Predictive of use of gait devices:
 - 49.6 - no aids
 - 48.3 - walking stick outdoors
 - 45.3 - walking stick indoors
 - 33.1 - walking frame

Mr.E's progress Week 3

- Initially unable to wean trache due to further max fax surgery.
- Joint SLT/ PT sessions; cleared for cuff deflation.
- Trache extubated.
- Inconsistently orientated to place, disorientated to time with short term memory issues. Westmead Score 7/12.
- Exercise tolerance increased to walking 100 metres with assistance of 1.

Interdisciplinary Goals- Week 4

1. To be able to eat and drink for enjoyment.
2. To maximise orientation.
3. To be able to shower and dress with supervision only.
4. To be safe and independent mobilising on ward.
5. To do 12 stairs with supervision.

Dysphagia & TBI data (Murdock & Theodoros, 2001) ...

- Literature reports incidence of dysphagia in TBI 25%-82%
- Duration of ventilation=dysphagia severity
 - more than 15 days- 90%
 - 8-14 days- 75%
 - 7 days- 42.9%
- Winstein 1983 94% of patients with dysphagia on admission achieved functional oral intake within 5 months

When oral intake will return?

- **Mackay et al 1999 cited in Murdock & Theodoros (2001)**

RLA Level 4 in order to commence oral intake

RLA Level 6 in order to manage full oral intake

Why have an interdisciplinary approach to Trauma Patients in the Acute Setting?

- Sheil et al (2001) in a prospective controlled trial of TBI patients found...
- Rehab included orientation tasks, range of movement exercises, general conversation, supervision during meals, gait re-education, education to family, home visits...
- Rehab was interdisciplinary with joint goals & health assistant input to increase rehab intensity.
- Increased intensity of early rehab led to more rapid progress & earlier discharges home.

Mr.E's progress Week 4

- **Speech 100% intelligible.**
- **Tolerating fluids through a straw but unable to trial solids due to bands on teeth.**
- **Orientated to place although not fully orientated to time.**
- **Starting to look around his environment.**
- **Trying to initiate conversation.**
- **Can walk to toilet with supervision.**
- **Needs minimal assistance with personal cares.**
- **Able to mobilise 400m to gym with supervision.**
- **Able to complete 24 stairs with supervision.**

Mr.E's presentation on discharge to Rehab Week 5...

- **Good family support.**
- **RLA Level 6. Short term memory issues persisted.**
- **Cognitive & cognitive-communication deficits relating to persisting PTA (9/12 on Westmead).**
- **Drinking well through a straw, all other intake through PEG due to tightness of rubber bands on teeth.**
- **Safe and Independent mobilising on ward.**
- **Berg Balance = 56/56.**

After rehab (2 months post onset)

- PEG removed & total oral intake, needing swallowing monitoring.
- Independent with personal cares.
- Reduced short term memory.
- Fatigue issues.
- Reduced community mobility.
- Mr. E was discharged home to his supportive wife with ongoing follow up and support from neuropsychologist, OT, SLT, PT.

Conclusion

- This has been a model of an interdisciplinary team approach to the treatment and rehab of trauma patients.
- Interdisciplinary working can help to optimise outcome by ensuring all team members are working towards the same, patient orientated goals.

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Presenters contacts if any further questions....

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Background History of Patient's admission

- 61 year old man.
- Work place accident- a large steel tube shot out of a 250 ton ram at high pressure & hit him in the face.
- GCS 12/15 at the scene. Breathing difficulties due to excessive bleeding. Intubated & ventilated. Pharynx/ mouth packed.
- CT head: left Frontal & Temporal Contusions. Small Sub Arachnoid Haemorrhage.
- Multiple Facial lacerations & #s including trauma to orbit, maxillary sinuses, nose, maxilla, hard palate & mandible.

Early Intervention (Week 1) included...

- Max-Fax surgery.
- ITU admission.
- Oro-gastric feeding.
- PEG inserted early secondary to facial injuries.
- Weaned from ventilation. Tracheostomy still insitu.
- Drowsy but following commands.

Transferred to Neurosurgery High Dependency Unit (Day 6)...

- Patient/Family introduced to roles.
- IDT assessments commenced.
- Initial goals set.
- Early education provided (verbal & written).
- Patient remained drowsy but able to participate in 5-10 minutes of therapy input.
- Awaiting further Max-Fax Surgery.

Interdisciplinary Goals for Week 2...

1. Maximise communication ability through variety of augmentative communication devices.
 2. To improve awareness and orientation.
 3. To manage secretions and prevent chest complications.
 4. To maintain passive & active joint range of movement.
 5. To aim to sit out of bed for >30 mins per day.
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Russell (1999) Journal of Advanced Nursing, Vol 29 (4) found the following in an exploratory study of people who'd been in ICU...

- The psychological problems experienced after discharge may be prevented by improved communication between staff & patients in ICU.
 - Good communication led to optimised outcomes.
 - Poor communication caused anxiety & contributed to less than optimal recoveries after discharge.
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Cognitive- Communication Strategies used...

- Limit number of visitors & visitor duration
- Ask short, simple questions especially yes/no questions
- Re-orientate regularly
- Use nod/shake head for yes/no
- Use white board while sitting in chair
- Use picture chart to communicate basic needs with nurses

Modified Westmead PTA Assessment

- **This standardised assessment was developed by Shores et al (1996) at Westmead Hospital, NSW, Australia.**
- **The scale is suitable for assessment of Post Traumatic Amnesia (PTA) in clients with closed head injury.**
- **The scale is divided into two major sections:**
 - 1.) Seven questions on orientation**
 - 2.) Five questions of recent memories.**
- **The client is considered as being out of PTA when he has achieved a perfect score of 12/12 over three consecutive days.**