

# SEVERE TRAUMATIC BRAIN INJURY

IS THERE HOPE?

# SO...SEVERE TBI – IS THERE HOPE?

- Currently there is not the data in NZ
- Over a 6 year follow up 76% of severe TBI's had poor reintegration (Tate et al., 1989)
- Good recovery was found in 16% of patients with a GCS <6
- Mortality decreased from 70% in the 70's to 30% in the late 80's. (Marshall et al., 1991)

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**ARE WE NOW SEEING GREATER FUNCTIONAL OUTCOMES FOR THIS GROUP OF PATIENTS?**



# SUMMARY

- Wide variety of outcomes
- Need for improved data collection
- Awareness and management of severe TBI has significantly improved
- Defining a successful outcome is not straightforward
- Success is in the eye of the beholder

# Cavit ABI





# CLASSIFYING SEVERITY OF TBI

SEVERITY OF INJURY	GLASGOW COMA SCALE (GCS)	DURATION IN POST TRAUMATIC AMNESIA (PTA)
MILD	13-15	<24 HOURS
MODERATE	9-12	1-6 DAYS
SEVERE	3-8	7 DAYS OR MORE

## *Glasgow coma scale*

		Score
<b>Eye opening</b>	spontaneously	4
	to speech	3
	to pain	2
	none	1
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<b>Verbal response</b>	orientated	5
	confused	4
	inappropriate	3
	incomprehensible	2
	none	1
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<b>Motor response</b>	obeys commands	6
	localises to pain	5
	withdraws from pain	4
	flexion to pain	3
	extension to pain	2
	none	1
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<b>Maximum score</b>		15

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# POSSIBLE INFLUENCES ON OUTCOME

## POSITIVE

- Short coma & PTA duration
- Age
- Good acute cognitive recovery
- Good family / social support
- Blunt trauma
- Higher pre injury education

## NEGATIVE

- Prolonged coma & PTA
- Age
- Penetrating injury
- Evidence of a DAI or traumatic hemorrhage
- History of
  - Psychological morbidity
  - Alcohol / Drug abuse
  - Childhood sexual abuse
  - Social deprivation
  - Multiple TBI's
- Co-morbidities

# POSSIBLE IMPACT FROM SEVERE TBI

## ● FATIGUE

### ● Reduced ability to:

- Plan
- Communicate
- Mobilise
- Self monitor
- Dress and shower
- Drive / Access transport
- Work
- Manage bladder and bowels
- Swallow / Feed ones self
- Retain information
- Make decisions
- Manage finances
- Cook meals
- Concentrate
- Do household chores
- Engage in social interests
- Fulfill previous role in family
- And so on...

### ● In addition:

- Painful spasms / muscle contractures
- Impaired vision / hearing
- Impaired insight and memory
- Loss of status
- Inappropriate / challenging behaviour

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