

# Neuropsychological Assessment of Children and Young People



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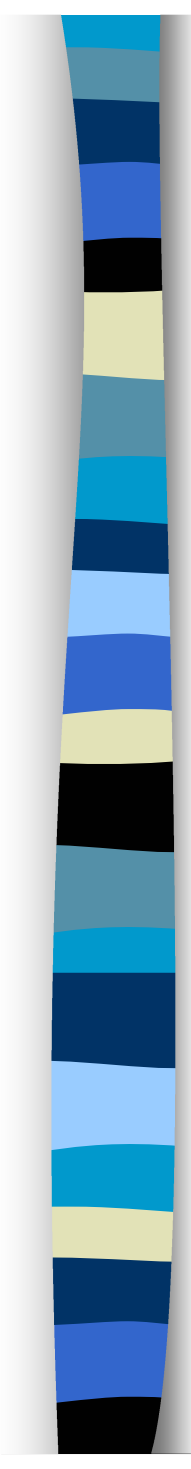
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# Neuropsychological Assessment

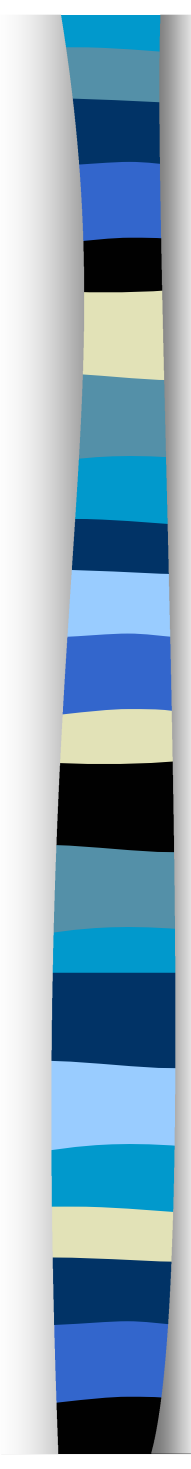
Within a developmental framework to help build up a composite picture of child's abilities and difficulties (intellectual, physical, social, emotional...), illuminate areas of specific deficit, unravel clusters, facilitate rehabilitation and adjustment



# Medico-Legal

## Issues in child ABI often raised by Solicitors

- What was this child's pre-morbid potential
- Family factors/opportunities/behaviour pre injury
- What effect (if any) has THIS injury had on development/memory/learning/behaviour/personality? (differentiate - pre-morbid traumas - Birth trauma? Meningitis? Previous bang on head? Epilepsy? THIS injury?)
- Will behavioural/cognitive/other intervention lead to improvement (meaningful? minimal?)
- Effect of TBI on child's position within the cultural setting
- Academic prospects/ Employability
- Independent living/Vulnerability/Capacity
- **When is it safe to settle the case?**



When dealing with the developing brain  
predicting outcome is particularly difficult  
more surprises in CHILD than in ADULT assessment

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ongoing developmental process

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possible disruption of that development

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possible recovery of function or  
compensatory development

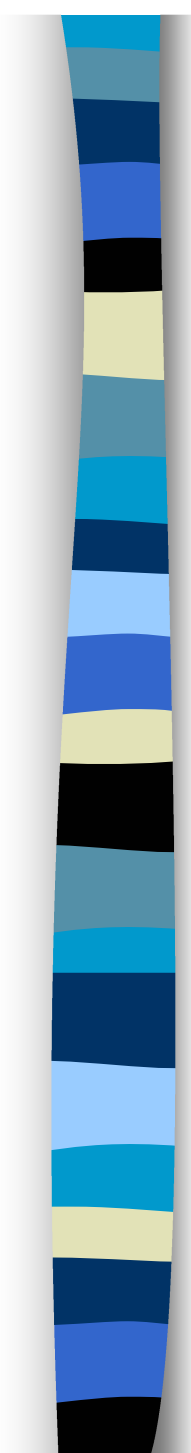
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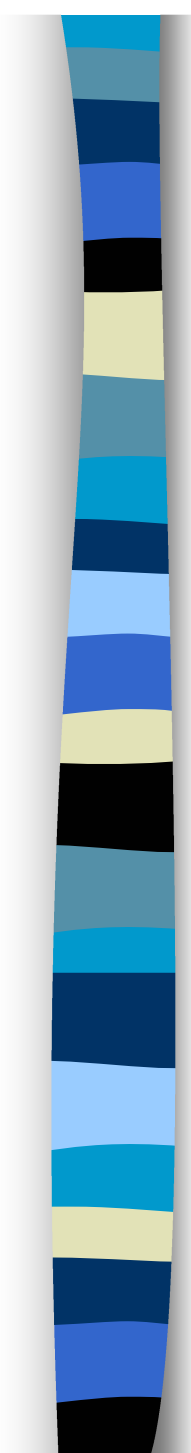
continuing development in parallel

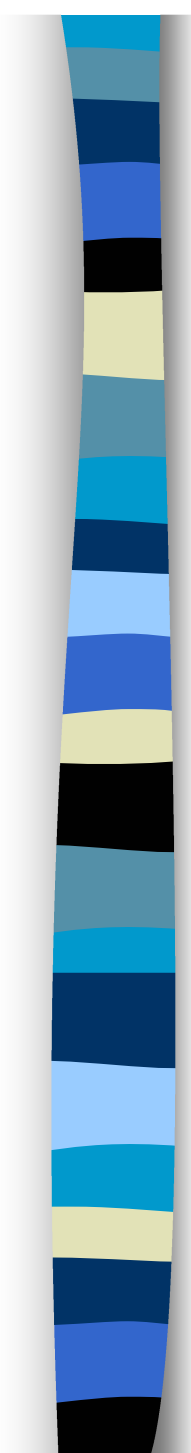


## Developmental factors depending on age of child, injury type & site

- certain functions may not have developed - if damage serious may never be acquired eg late maturing of frontal lobes - functional effect not apparent until late teens
- damage may affect further learning and consolidation process (with limited prior learning to fall back on)
- compensatory strategies may evolve

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- acquisition/reacquisition of function may take place (eg regenerative sprouting; collateral sprouting) - perhaps at expense of other function in the area, leading to anomalous “wiring” and therefore anomalous behaviour
  - some functions may be spared at the expense of normal development of other functions (eg language functions are often spared)

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- Age at which injury sustained - premorbid potential (how to assess this in a child injured at age 2 years?)
  - Discrete impact of lesion (localisation/ extent/chronicity) & knock-on effect (affecting other functions)
  - Development of secondary processes (eg oedema, epilepsy, hydrocephalus)
  - Concomitant effects of surgery/ drug therapy/ rehab/ intervention
  - Charted progress/ plateau reached over years to adulthood (refer to Adult Services)

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- It is essential to re-assess at regular intervals to monitor reacquisition and acquisition of new function in the developing brain
  - The development of frontal lobe/executive functions must be monitored long-term (difficult to test in young children)
  - Re-test implications must be considered (few tests - liaise with professionals)
  - Assessment of children from different cultural backgrounds and/or those whose first language is not English requires special consideration





# Clinical Interview

- Developmental history - including prenatal, birth, previous ABI
- Medical history (re current condition)
- Family & social history
- Educational achievements (to inform future goal setting)
- Current problems (parental/school views)



# Neuropsychological tests

- Intelligence - (sampling)
- Memory - s/l term Verbal/ Nonverbal
- Learning - Verbal/Nonverbal
- Language - Expression (Oral-Written-Fluency)/ Comprehension
- Motor - Fine Motor Speed/Manual Dexterity/Gross Motor
- Visuospatial Functions Analysis/Synthesis/ Construction
- Frontal Executive - Attention/Speed of Responding/ Response Inhibition/Tracking/ Abstraction



# Psychological Assessment of Social / Emotional Functioning

- Child Behavioural Problems
- Family Problems (pre/post neuro incident)
- Self-esteem/Self-image (insight?)
- Peer/Social Relationships (bullying)
- Mood Regulation
- Post Traumatic Stress (PTSD?)
- Appropriate Personality Development



# Psychological Rehabilitation

within multiprofessional rehabilitation - **EDUCATIONAL** context crucial

- Counselling (eg teenagers PTSD)
- Behaviour management - school, home
- Work with families/couples/siblings
- Play therapy; CBT
- Assertiveness training/self-presentation
- Schools - working on cognitive deficits
- Memory enhancement strategies
- Advice re educational needs/careers
- Peer relationship skills re-training
- Long-term follow-up testing (transitions)



# Outcome

## **Best Outcome - back to normal (relative)**

- working at pre-morbid level/potential
- independent life (how to assess - denial? acceptance?)
- appropriate social life (eg if child post-ABI since age 3?)

## **Mid Outcome**

- Cognitive/Executive/Emotional problems but coping well with degree of support

## **Worst Outcome**

- Cognitive + Executive + Physical disability
- Lost cognitive functions (fail school/professional training)
- Preserved IQ v Disrupted Personality
- Unemployable
- Incapable of independent living (vulnerable to exploitation; incapable of managing own affairs)

Danger to self & others (forensic issues – over 40%)



# Professional Issues

- Crucial levels of experience

Usually:

1. Clinical Psychologist (Degree in Psychology + 3-year Doctorate training- NHS)
2. Child specialist
3. Neuropsychological expertise

- Professional membership

1. British Psychological Society (BPS)
2. Division of Clinical Psychology (DCP)  
or other Division
3. Division of Neuropsychology (DoN)

*BPS Division of Neuropsychology supports specialist post-doctoral training in Clinical Neuropsychology - Adult/Child*