Action Points and Recommendations

- Greater awareness and training of Police, Prison, Probation, Lawyers, Magistrates, Judges of how YP may have delayed maturity due to adversity and neurodisability.
- Screening for adversity and neurodisability issues at key points in Criminal Justice pathway.
- Explore use of Trauma Recovery and Neuro-developingly informed approaches.
- Agencies and systems need to work towards meaningful “Goals” in education, employment, wellbeing, pro-social activity as well as crime reduction.

Ensure sentencing, rehabilitation and resettlement takes account of such factors: how to manage memory, communication and attention problems by modifying how one asks a YP with TBI to follow instructions; manage impulsivity & socialising etc.

- Where to access advice and support if problems are more extensive; and who to refer to if the individual on to if necessary.
- Commissioners of social and health care & educational and employment agencies for offenders to ensure that packages of care & rehabilitation are developed and delivered that address the range of issues related to maturity and neurodisability factors.

Prevention through Public Health initiatives

- Identification of Neuro-developmental factors in children and young people that may lead to social exclusion (eg. from school/college/work).
- Provision of Neurorehabilitation linked to education and training.
- Critical when the child and/or YP may be facing transition from structured to less structured environments.


Neurodevelopmental Maturity and Crime

The Need to Account for Adversity and Brain Injury in the Criminal Justice System

Professor Huw Williams

Associate Professor in Clinical Neuropsychology
Director for International and Development
Director of Centre for Clinical Neuropsychology
Centre for Clinical Neuropsychological Research (CCNR)

w.h.williams@exeter.ac.uk
Typical Neurodevelopment
- The brain has 100 Billion neurons from birth
- Develops by strengthening & pruning connections
- With vital periods for cognitive and emotional functions to be expressed over childhood and teenage years

Traumatic Brain Injury (TBI) alters developmental trajectory
- Caused by a blow to the head, such as in a fall, assault, road traffic accident etc.
- FRONTAL and TEMPORAL lobes
- Usually injured
- Connections being sheared or compromised across the brain
- Problems with attention, memory, impulse control, social reasoning and Theory of Mind (ToM).

Brain Differences associated with Adversity
- Adversity linked to smaller corpus callosum (the bridge between hemispheres) & less activity in pre-frontal (control) and limbic (drive area) systems (McCrory 2010)
- Greater reduction in corpus callosum in boys than girls
- Age of exposure plays a role, across childhood and adolescence (Teicher & Samson, 2016)
- May be due to “adaptive” response of hyper-vigilance for threat in “unpredictable” home environments

Factors affecting early Brain Development
- “The role of early experience, especially of family and caregivers is being identified as foundational basis for later executive function maturation.”
- Bussanov-Catanzaro and Eslinger, 2016

Spike in Crime
About a quarter of inmates are between 15-24 years of age

Re-offending rates
- The most prolific offenders (PO) tend to be early starters and go on to commit around 77% of crime
- 1 year post release 45%
- 2 years post release 75%

Key Facts: TBI and Crime
TBI is linked to earlier, more violent and persistent offending.

4x increased risk of developing mental health disorder with co-existing offending after TBI.
*Raine, 2005

Violent offenders have more lesions in frontal lobes
Schiltz et al. 2013

Young offenders with a history of TBI are at greater risk of self-harming and committing suicide.
Chitsabesan, 2015

Prevalence of TBI
- Around 60% of prisoners report a history of head injury. 1-2 out of 10 have had moderate-severe TBI.

The Economic Cost
- “Re-offending costs the UK between nine and 13 billion pounds a year.”
  The taxpayer has so far got a poor return for the money invested in rehabilitation… need a new way of approaching the problem…”
  (Ex-Secretary of State for Justice, Chris Grayling MP)

- The long-term cost of a case of head injury is £155,000 for a 15-year-old in the general population ($95,000 non-crime costs and £60,000 crime costs) and £345,000 for a 15-year-old young offender ($95,000 non-crime costs and £250,000 crime costs)

See forthcoming report from “Centre for mental health” www.centreformentalhealth.org.uk/