



Neurodevelopment and Trauma

Kenneth Nunn

Senior Elver Child Psychiatrist

Senior Paediatric Neuropsychiatrist

SCHN- Westmead Campus

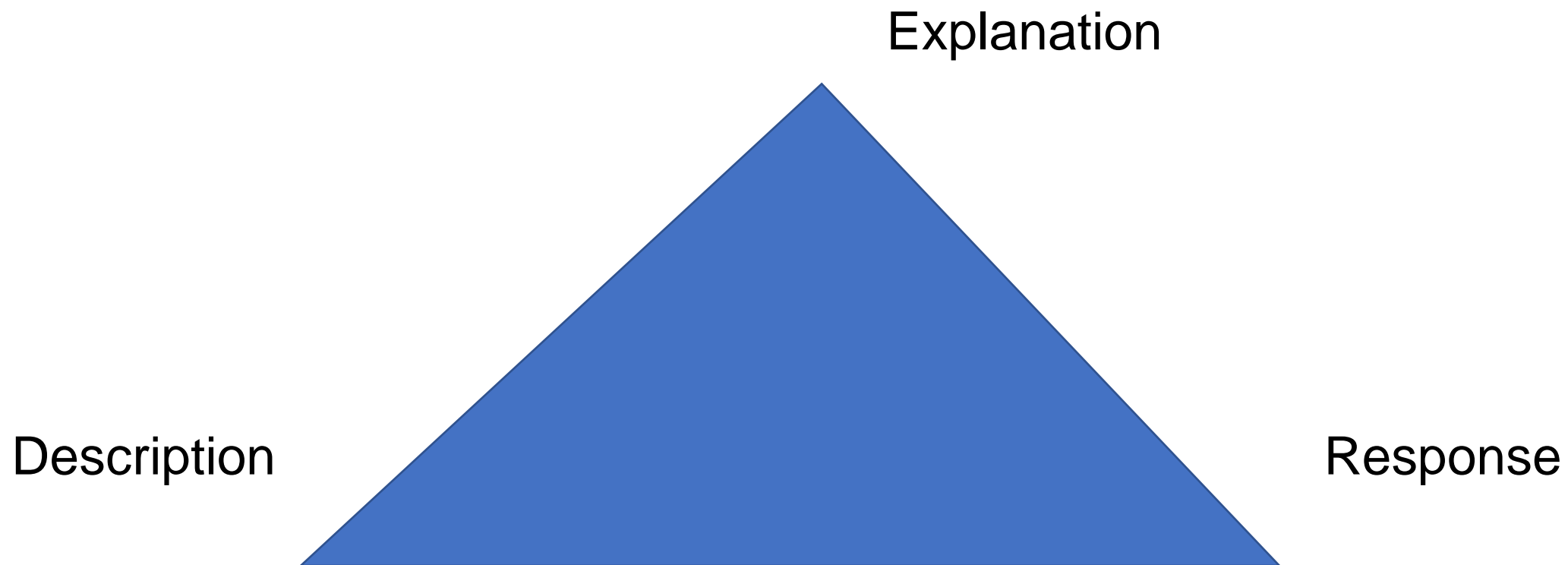
23rd June, 2022

Acknowledgments

Professor Beverley Raphael who taught me the importance of normal development to understand trauma - we cherish her memory

Professor Kim Oates who pioneered the scientific study of trauma in children when it was unpopular to do so

Three tasks



Description of This Group of Children

Out of home children are an example of chronically traumatized children

The Elver Team is a statewide combined DCJ and Health Team to deal with the 100 most troubled children out of the approx. 17,000 children at anyone time

What are these children like?

Describing This Population - a convergence of adversity

1. High COPMI genetic load for mental illness
2. High exposure to *in utero* substances – FASD and marijuana
3. High level of maltreatment, including early head injury
4. High level of neurocognitive, communication and social disability
5. High level of attachment and placement instability
6. High level of substance abuse, including chronic
7. High incidence of adverse life events
8. High incidence of self harm, attempted suicide and completed suicide
9. High incidence of presentation to Emergency Departments
10. High levels of interaction with the Justice System

Explanation: how do we explain why these children are as they are?

There are a great number of two-hour seminars, two-day seminars or two-week seminars which describe what trauma does

But almost all the children we see in Elver are **TRAUMA PLUS**

To capture this, we have developed a threefold understanding of helping others and ourselves grasp the complexity of these children



OOHC Children have very high rates of neurodisability

OOHC Children all have substantial histories of complex abuse and neglect

Adolescence is the time of life when most serious mental illnesses emerge

The task is to keep all three in perspective simultaneously

The Triple Helix of Out of Home Care Disability

How important
is a
developmental
understanding?



Person found wandering around the dining room unsure what to do next, staggering in an uncoordinated fashion, incontinent and screaming

When found by family, unable to say what they wanted or where they were going....

The person was 18 months old and needed a nappy change...



Person found wandering around the dining room unsure what to do next, staggering in an uncoordinated fashion, incontinent and screaming

When found by family, unable to say what they wanted or where they were going....

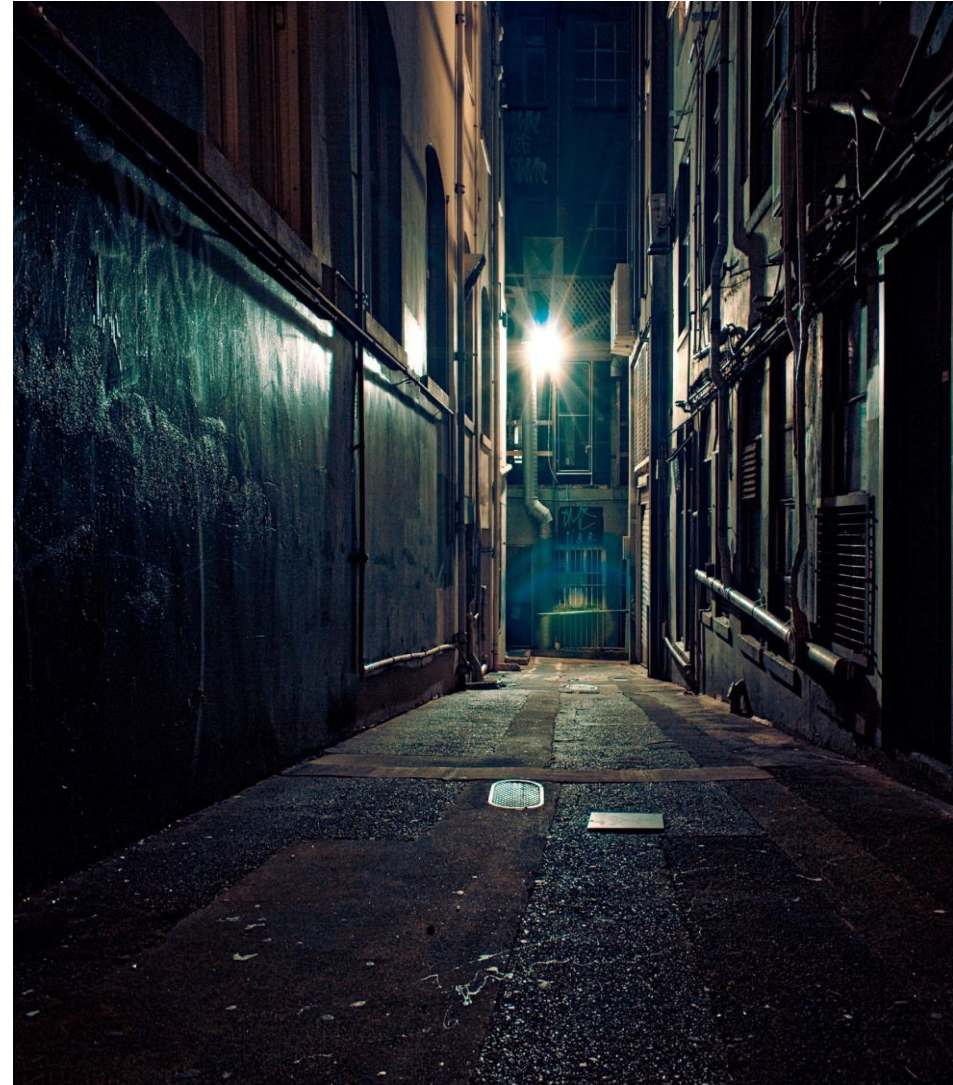
The person was 80 years old living in an aged care home...



Person found wandering around the dining room unsure what to do next, staggering in an uncoordinated fashion, incontinent and screaming

When found by family, unable to say what they wanted or where they were going....

The person was a young woman, eighteen years old and had spent the last two nights sleeping rough on the streets. She was assaulted and then took substances to find the comfort of oblivion.



Person found wandering around the dining room unsure what to do next, staggering in an uncoordinated fashion, incontinent and screaming

When found by family, unable to say what they wanted or where they were going....

Development isn't even in troubled brains and lives

- The person was:



- 18 years old
chronologically



- 6 years old
intellectually



- 3-5 years old
socially and in the speech capacity for understanding and speaking

- AND in Residential Care

All behaviour and experience needs to be seen through the lens of **development** - especially **NEURO**development



Development is the context that travels with every child

- If we don't know their developmental profile, **we have behaviour without context**
- What age are they ?
- AND in Residential Care



- 18 years old **chronologically**



- 6 years old **intellectually**



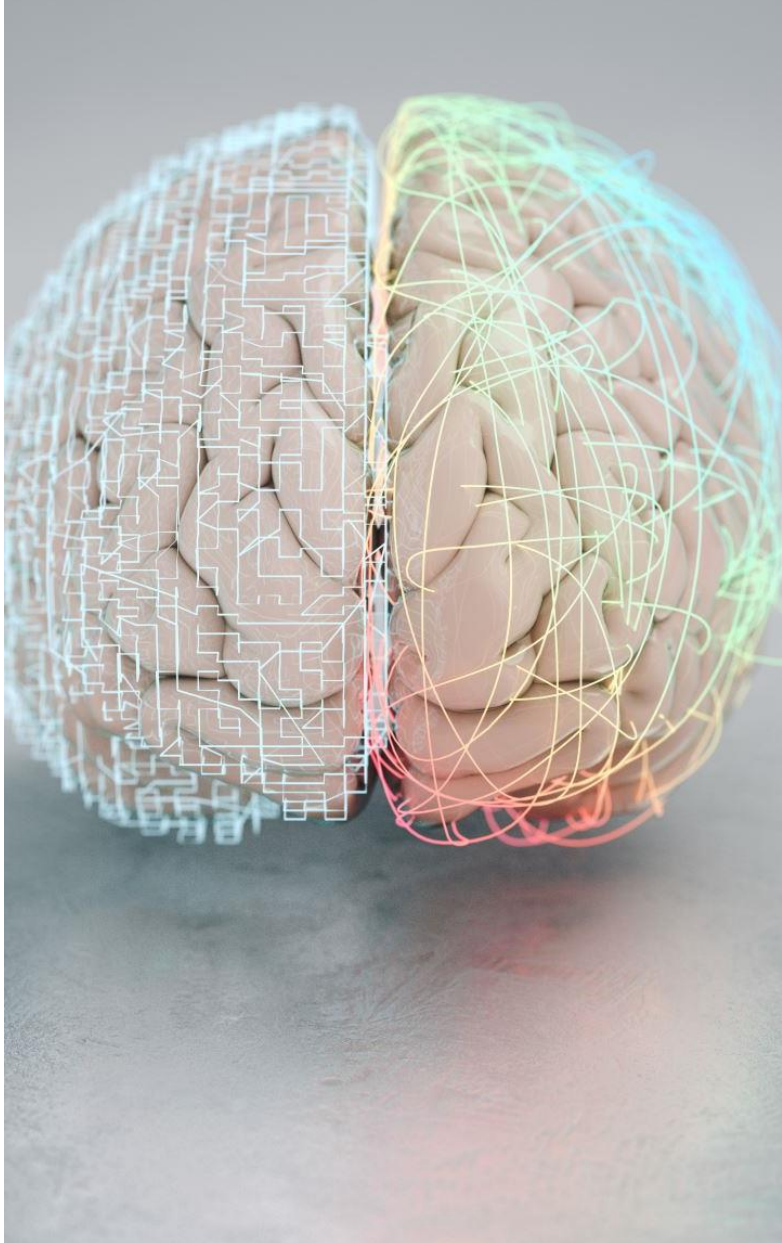
- 3-5 years old **socially and in the speech capacity** for understanding and speaking



Development is the context that travels with every child...

- If we don't know their developmental profile, **we have behaviour without context**
- **What age are they ?**
- *Intellectually ?*
- *Socially ?*
- *Emotionally ?*
- *In Language ?*
- *(Receptive & Expressive)*
- *Physically?*
- Decision-making?...
- So called executive function

Executive Function is disrupted in psychological trauma, foetal alcohol syndrome and traumatic brain injury



- Executive function is what our brain does to prepare for what comes next in our lives:
- Intentions
- Anticipation
- Preparation
- Prioritization
- Sequencing
- Monitoring
- Concentration
- Problem Solving
- Some of these functions are disrupted for children living in OOHC...

Dysexecutive Syndrome

Dysexecutive syndrome is when our brain is unprepared for what comes next:

CAUSES of Dysexecutive Syndrome

- FASD
- Traumatic brain injury to the frontal lobes
- Aerosol and solvent sniffing (chroming)
- Intellectual disability and autism
- Schizophrenia
- Bipolar disorder
- Encephalitis
- Meningitis
- Substance abuse - marijuana, MDMA and chronic cocaine abuse



The OOHC population – convergence with adversity

- High genetic load for mental illness
- High exposure to *in utero* substances – FASD and marijuana
- High level of maltreatment, including early head injury
- High level of neurocognitive, communication and social disability
- High level of attachment and placement instability
- High level of substance abuse, including chronic
- High incidence of adverse life events
- High incidence of self harm, attempted suicide and completed suicide
- High incidence of presentation to Emergency Departments
- High levels of interaction with the Justice System

**Does this mean these
children are unhelp-
able?**

We aim to address these young people's needs at the most basic level

Increase real and felt safety – through the relational aspects of both services + use of containment in the Sherwood Program

Provision of trauma informed care/treatment – all children in both programs have extensive histories of abuse, neglect and attachment disruption

Developmentally informed interventions – for the duration of their care

Permanency – work towards stabilization and placement permanency

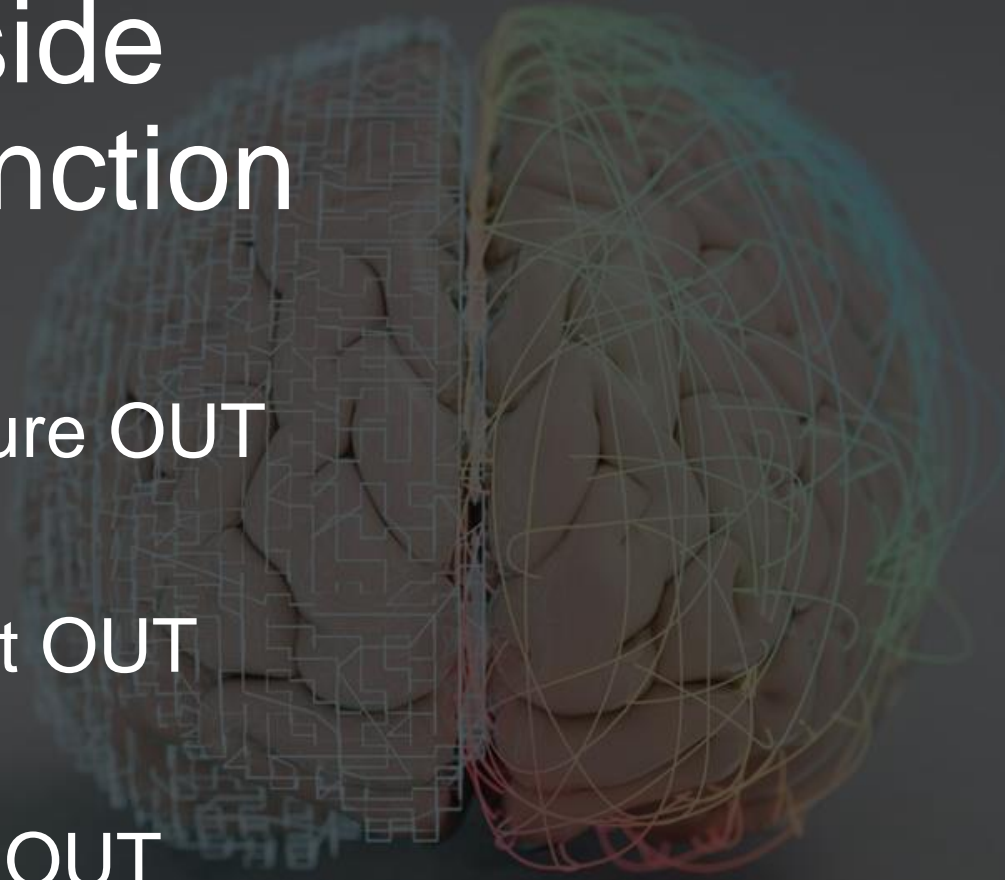
Inside-Outside of Brain Function

Nurture IN = Nurture OUT

Threat IN = Threat OUT

Anger IN = Anger OUT

Kindness IN = Kindness OUT



What do we do ?

Neuro-disability – we give a realistic portrayal of the child's developmental capacity in each area of development – ***expectations are re-calibrated***

Trauma – we aim to address the **need for protection** first, **the need for nurture**, structure and supervision second and, after ***calming systemic anxiety***, we aim to get a longterm reality-based plan and support for the future.

Mental Illness – we ***identify mental illness early*** before it can do too much damage.



Is it a tree or a seat?

The Hungry Tree at King's Inn in Dublin captures the problem:

when mental illness is **embedded**
within trauma

The Things that Mean Most to Me as a Clinician

The children and young people are **much less tormented** by their past as they find acceptance in the present – it sometimes seems so wrong that the small amount we do can have such significant positive effect.

They are less ashamed and self-loathing and hence less self-harming – it never ceases to amaze us, especially in indigenous young people, that shame for being abused, maltreated, neglected rests with the victim. Villain and victim are so inadequate to describe the relationship between trauma and behaviour.

They are more hopeful – they often have more modest expectations for themselves than we do for them and certainly we do for our own children. But they have learned to hope small because disappointments hurt and they have had lots of disappointments.

We are identifying those who might benefit earlier and earlier – we look forward to the day when every child who enters care will have full and comprehensive evaluation at the point of entry because we know the earlier intervention begins, the better the outcomes.