Impact of Childhood Adversity and the First 1000 Days of Life
Adverse Childhood Experience Studies

Figure 1: Model of ACE impacts across the life course

1. Adapted from Anda et al. (1999).
How many people suffered ACEs 0-18 years

European Survey of students 18-25 years old (n=10,696)

- Turkey: 14.6%
- Russian Federation: 12.8%
- Latvia: 16.2%
- Lithuania: 12.9%
- Romania: 23.4%
- Serbia: 27.8%
- Montenegro: 6.9%
- FYR: 19.6%
- Albania: 41.0%
- Montenegro: 6.9%
- Serbia: 27.8%

Physical Abuse: 17.0%
Average: 18.6%

Adverse Childhood Experiences (ACEs) in Wales

ACEs are stressful experiences occurring during childhood that directly harm a child (e.g. sexual or physical abuse) or affect the environment in which they live (e.g. growing up in a house with domestic violence).

- 2015
- 2000 people (aged 18-69 years)
- 49% compliance
- Number of ACEs before age of 18 years
How many adults in Wales have been exposed to each ACE?

**CHILD MALTREATMENT**
- Verbal abuse: 23%
- Physical abuse: 17%
- Sexual abuse: 10%

**CHILDHOOD HOUSEHOLD INCLUDED**
- Parental separation: 20%
- Domestic violence: 16%
- Mental illness: 14%
- Alcohol abuse: 14%
- Drug use: 5%
- Incarceration: 5%
For every 100 adults in Wales 47 have suffered at least one ACE during their childhood and 14 have suffered 4 or more.

- 0 ACEs: 53%
- 1 ACE: 20%
- 2-3 ACEs: 13%
- 4+ ACEs: 14%

Figures based on population adjusted prevalence in adults aged 18-69 years in Wales.
ACEs increase individuals’ risks of developing health-harming behaviours

Compared with people with no ACEs, those with 4+ ACEs are:

4 times more likely to be a high-risk drinker
6 times more likely to have had or caused unintended teenage pregnancy
6 times more likely to smoke e-cigarettes or tobacco
6 times more likely to have had sex under the age of 16 years
11 times more likely to have smoked cannabis
14 times more likely to have been a victim of violence over the last 12 months
15 times more likely to have committed violence against another person in the last 12 months
16 times more likely to have used crack cocaine or heroin
20 times more likely to have been incarcerated at any point in their lifetime
Preventing ACEs in future generations could reduce levels of:

- Heroin/crack cocaine use (lifetime) by 66%
- Incarceration (lifetime) by 65%
- Violence perpetration (past year) by 60%
- Violence victimisation (past year) by 57%
- Cannabis use (lifetime) by 42%
- Unintended teen pregnancy by 41%
- High-risk drinking (current) by 35%
- Early sex (before age 16) by 31%
- Smoking tobacco or e-cigarettes (current) by 24%
- Poor diet (current; <2 fruit & veg portions daily) by 16%
Figure 3: Currently Smoking Tobacco or E-Cigarettes: Percentage and Adjusted Odds Ratio (AOR) by ACE count

- **ACE Count**
  - 0 ACEs
  - 1 ACE
  - 2-3 ACEs
  - 4+ ACEs

- **Percentage (%)**
  - 0 ACEs: 20%
  - 1 ACE: 20%
  - 2-3 ACEs: 20%
  - 4+ ACEs: 20%

- **Adjusted Odds Ratio (AOR) (95%CI)**
  - 0 ACEs: 1.0 (1.0-1.0)
  - 1 ACE: 2.0 (1.0-2.0)
  - 2-3 ACEs: 3.0 (2.0-4.0)
  - 4+ ACEs: 8.0 (5.0-9.0)
Figure 4: High-Risk Drinking: Percentage and Adjusted Odds Ratio (AOR) by ACE count

- ACE Count:
  - 0 ACEs
  - 1 ACE
  - 2-3 ACEs
  - 4+ ACEs

- Percentage
- AORs (95% CIs)
Figure 6: Heroin or Crack Cocaine Use: Percentage and Adjusted Odds Ratio (AOR) by ACE count

ACE Count

- 0 ACEs
- 1 ACE
- 2-3 ACEs
- 4+ ACEs

Percentage

AORs (95% CI)
Figure 11: Unintended Teenage Pregnancy: Percentage and Adjusted Odds Ratio (AOR) by ACE count

ACE Count

0 ACEs  
1 ACE  
2-3 ACEs  
4+ ACEs  

%  
AORs (95% CIs)
Trauma Informed Practice

- **Workforce Development**
  - Understand trauma, impact and referral

- **Trauma Screening**
  - Every child for exposure and trauma reactions

- **Practice Change**
  - Services and individual case plans informed by knowledge about trauma and child’s history

- **Inter-Agency**
  - Systems work together to identify and support youth with trauma exposure and symptoms

Machinger et al. 2015, Lang et al. 2015, Sethi et al. 2010
Early Years and Brain Growth

- Brain growth and maximum potential for change
- Spending on Health, Education, Income Support, Social Services and Crime

25 → 80% of Adult Size

Conception Birth 1 3 10 60 80

Dr. Jacques Vandergaag – University of Amsterdam - Calgary Presentation January 2004
Abnormal Brain Development Following Sensory Neglect in Early Childhood

3 Year Old Children

Normal

Extreme Neglect

Heckman 2008: Perry 2004
Return on Investment of Targeted Programmes by Age Period

- Programs targeted towards the earliest years
- Preschool programs
- Schooling
- Job training

Source: Heckman (2008)
Greater Manchester Early Years Economic Modelling

- Current ‘Early Years’ system costs ~ £300m/year
- Further £300m/yr spent by health, schools and local authorities. This could be reduced if risks to children’s development were addressed earlier
- Further £870m/yr spent by criminal justice system. Evidence suggests up to 50% of all crime is attributable to people who had conduct problems in childhood and adolescence
- Further £1.4bn/yr is spent by the Exchequer on out-of-work benefits for GM residents
- Further £2.1bn/yr on tax credits

‘A cautious analysis suggests the new delivery model is likely to cost £38m/yr to implement and yield benefits of around £215m over a 25-year period (£145m at net present value), a benefit : cost ratio of 4:1.’
‘United in Improving Health’

- National Leadership Group: 5 Govt depts, health, local authorities, education, housing, young ambassadors, environment, sports...
- Focus first 1000 Days (conception to 2nd birthday)
- Establishing ‘System’ for 1st 1000 days with shared outcomes, evaluation and local innovation
- Pilot in 2 areas of high deprivation then spread
- Re-aligning large scale community programmes
- Well-being of Future Generations Act