Youth Suicide and Mental Health

Developmental Determinants
Data ≠ Story
Presentation Structure:

• Youth Suicide overview
• Developmental determinants of risk
• Mental illness and suicide
• Prevention
Youth Suicide Overview
Suicide

• Coroner determines that:
  – the act was self-inflicted
  – Death was the intended outcome
• Under-recorded
• Caution comparing rates across countries
  – Reporting variability
    • Denominator: 10-24yrs vs 15-24 yrs vs 15-19yrs
    • Coronial standards
Incidence

• Suicidal ideation/thoughts
  – 18% in previous 1 year

• Self Harm
  – 8% in previous 1 year

• Suicide attempt
  – 5% in previous 1 year

• Suicide
  – 0.013% (13/100,000)
Youth Suicide (15-24yrs) by Sex 1948-2013

Rate (per 100,000)
• M:F = 2.5:1
• Decrease of 35% since 1997
• Average 2002-2015 = 12.88/100,000
• Means – 90% by hanging
• Maori youth 50% higher rates
  – 24/100,000 vs 16/100,000 for males
Sources: Numerator: Mortality Review Database; Denominator: NZ MRDG Estimated Resident Population 2011–15, 10–24 years.
Suicide Rates by Life Stage Age Group
2005-2014
Youth Suicide Deaths by Year of Age and Sex

Number of deaths

Age in years

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Male Female
Maori vs Non-Maori Youth Suicide Rates 2005-2014
Youth Suicide Deaths by Age and Ethnicity 2002-2015
Rangatahi Maori

- Files with mental health service (54%), CYF (45%), Police (61%), Corrections (40%)
- Contact with mental health service in year before death (31%)
- Relatively low educational attainment
- Male (64%)
- Living in deprived areas (49%)
- Died at home (65%)
- Died by hanging (93%)
Three Main Groups

• Longstanding life and behavioural problems
  – Family discord/violence, school failure, CSA, poor peer relationships

• Major psychiatric disorder
  – Chronic and brief suicidality subgroups

• Acute response to life events

• Often combinations of all three
Suicide Risk Factors

• Very similar to those for self harm
• Genetic
  – Independent of mental illness
  – Impulsive aggression
• Poverty/deprivation
• Adverse Childhood Experiences
• Family discord, family violence
• Previous self harm
  – Esp. Medically Serious Suicide Attempt
• Mental illness
• Low self esteem, hopelessness, loneliness
• Substance use, esp. alcohol
• LGBTQI
• Social transmission/contagion
  – Media reporting
  – Glorification
  – Exposure to family or peer suicidal behaviour
  – Bullying (incl. cyberbullying)
  – Social media
  – Pro-suicide websites and chatrooms
Adverse Childhood Experiences

Up to 90% of young people seeking treatment for personality disorders, substance abuse, mental illness, as well as those in contact with the criminal justice system were exposed to significant emotional, physical or sexual abuse during childhood.
• 2-5x Increased suicide attempts
• Increases with number of ACE’s
• Mediated by:
  – impulsivity
  – aggression
  – school difficulties
  – substance abuse
Risk factors for suicidal behaviour

- **Genetic & biological factors**
- **Social & demographic factors**
  - Age, gender, ethnicity, SES
- **Family & childhood experiences**
  - Parental psychopathology, parental care, abuse, family dysfunction
- **Personality traits & cognitive styles**
  - Impulsivity, hopelessness

- **Environmental factors**
  - Life events, contagion, media, access to methods, peers

- **Psychiatric morbidity**
  - Mental disorders (depression, anxiety), substance abuse, comorbidity, previous attempts, previous psych. care

After Beautrais (2000)
Risk/Vulnerability (= Need)
Youth Suicide Rate by Deprivation 2002-2015

Rate per 100,000 resident population

NZ Deprivation Index Decile

1 2 3 4 5 6 7 8 9 10
Distribution of Suicide by Deprivation and Life Stage Age Group 2013

Percent

Age group (years)

15–24
25–44
45–64
65+

Deprivation quintile

1 2 3 4 5

Percent

45
40
35
30
25
20
15
10
5
0

15–24
25–44
45–64
65+

Age group (years)
Suicide and Mental Illness
Mental Illness as Risk Factor

– Especially in male adolescents
– Affective disorders most common
– Substance use disorders
  • Binge alcohol use
– Personality disorders
  • Borderline, Conduct/Antisocial
– ADHD (esp. with conduct and AoD problems)
  • Role of impulsive aggression
Adolescent Depression

• 1 yr prevalence up to 10%
  – Point prevalence 12-13%
• Cumulative probability of having a depressive disorder by late adolescence is 10-20%
• Common social determinants to suicide
  – Deprivation, adverse childhood events
• 40-80% report ST’s
• 16-35% previous suicide attempt
• Low mood episode in 94% suicide attempt and self harm (Youth 2012)
• Depression a factor in 65-80% youth suicides
• Youth suicide rate has ↓ by 35% since 1997, with ↑ rate of SSRI use
  – Adverse event reporting vs systematic enquiry
More than a year ago

Within the last year

Adjusted odds ratios controlling for age, gender, ethnicity, socioeconomic status and episode of low mood
CAMHS - Back of Envelope Calculations

• Specialist service – most severe 3%
• 40,000 0-17 year olds seen 2016
  – Ave. 70% adolescents (=28,000)
  – Around 50% referred with self harm/suicidality (=14,000)
• 119 youth suicides (2015)
  – 28% under 18 (=33)
  – 30% with MHS contact prior 12 months (=10)
The challenge of risk prediction

Or, how to pick the 10 from the 14,000?
• Life course developmental approach to risk
  – Rather than snapshot of proximal issues
• Concept of risk as cumulative and episodic
  – Long term vulnerabilities with acute stressors
  – Psychiatric illness as both
• Contribution of impulsivity (and alcohol)
• Availability of means
NSSI, Suicidal Behaviour and Suicide

• Continuum, esp. for females
• With other risk factors
• ↑ with
  – frequency of self harm
  – social isolation
  – functional impairment
  – concurrent suicidal thoughts
• Habituation as mechanism
Prevention
• Social and economic cost of all suicide and suicide attempts = $2.7 billion per annum
• Purely economic cost of each suicide in any one year = $587,000
• Reduction in suicide rates of 20%:
  – 110 lives saved over ten years and net savings of $92 - $178 million
  – For every one dollar spent, savings of $36-$38
Primary Prevention

• Reduce deprivation
  – UBI, Housing, social investment
• Reduce access to alcohol
  – Minimum Unit Pricing
• Bullying prevention and intervention
• “Resilience” development strategies
  – Esp. impulse control, behaviour management
• Set a target – 20% reduction
Secondary Prevention

• School based
  – Gatekeeper training
  – Psychological skills training

• Target high risk groups
  – Mental health and self harm/suicidality screening
  – AoD screening and education

• Restriction of access to means
Tertiary Prevention (CAMHS)

• Good clinical care
• Modified DBT/HYPE early intervention
Specific Health Needs of Youth

• High risk developmental period

• Primary care access for high dep groups
  – Primary care mental health capability gaps

• Case for youth mental health services – 15-24
  – Peak onset of severe mental illness
  – Accessibility/engagement
  – Leveraging off YOSS’s
Summary

• Risk = Need

• Common determinants vs causality
  – Poverty, trauma, mental illness

• Prevention sits largely in the community
  – Importance of primary prevention strategies
  – Family focus more than education