

# Australian Indigenous Mental Health: Issues and Solutions

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# Darwin Kakadu

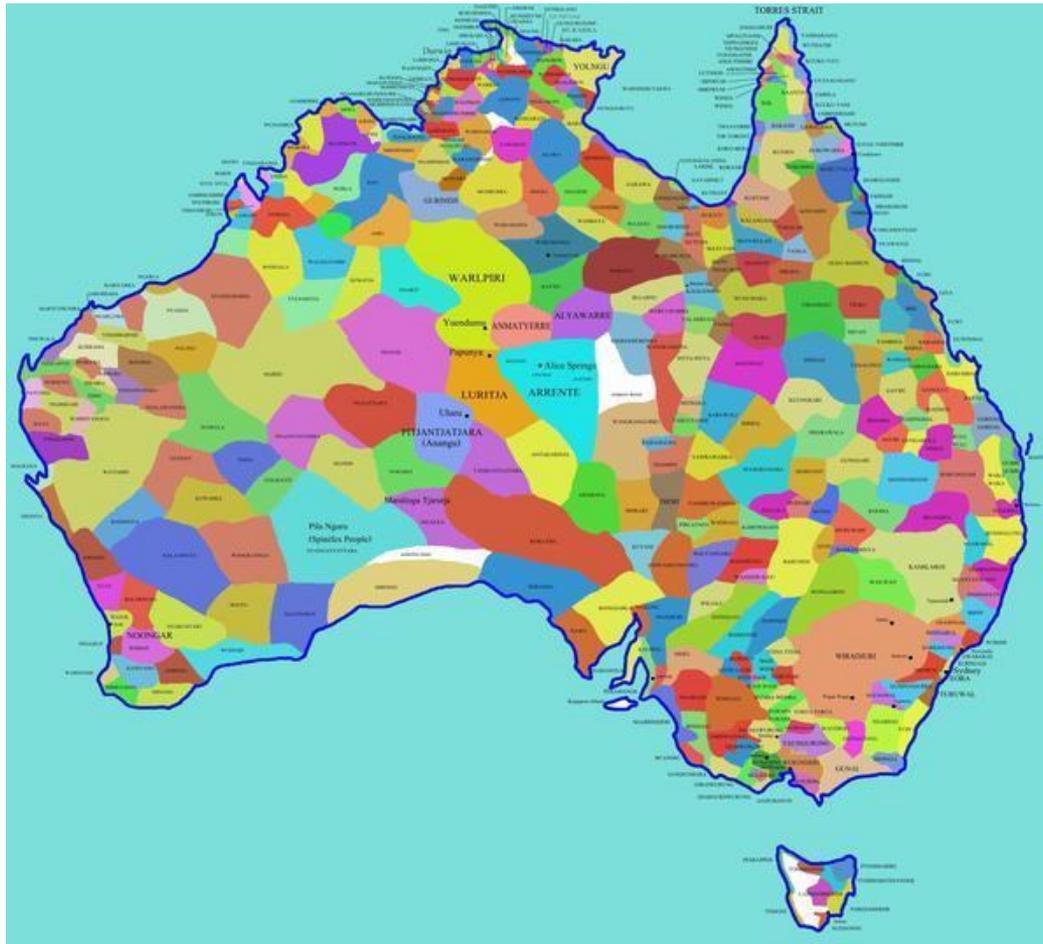


# Kakadu:Nourlangie Rock



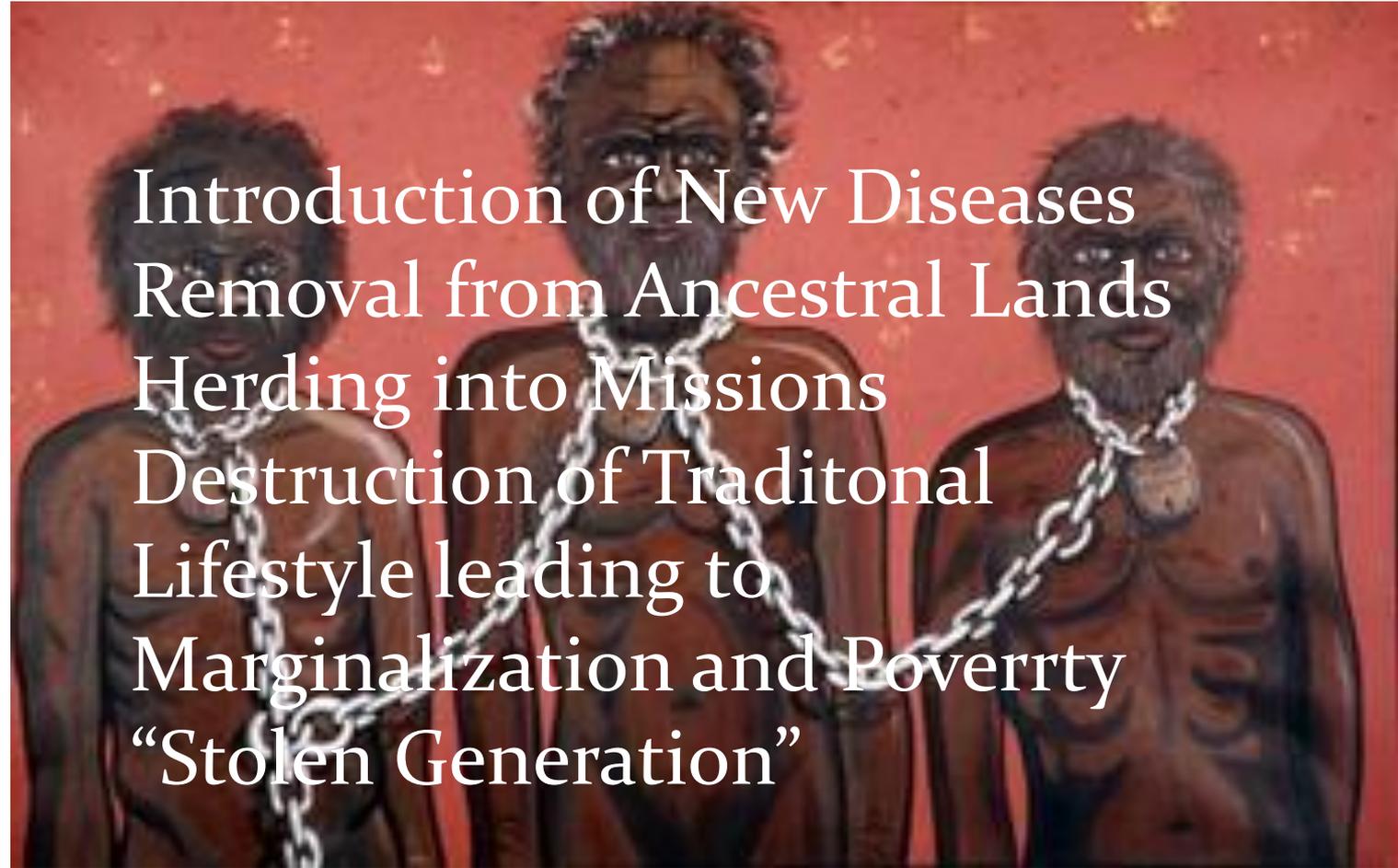


# Aboriginal Australia





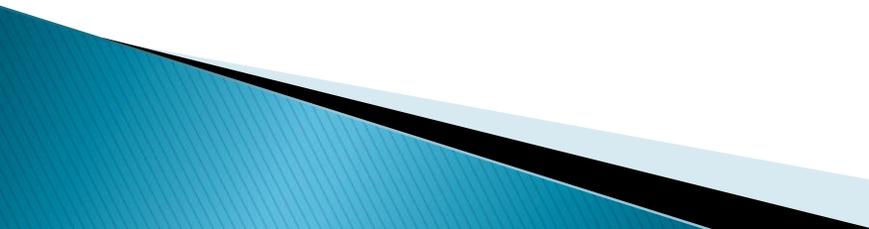
# Destruction of Aboriginal Culture post 1788



## Most Common Stressors experienced by Indigenous people 15 years and older, 2012–2013 (AIHW 2014)

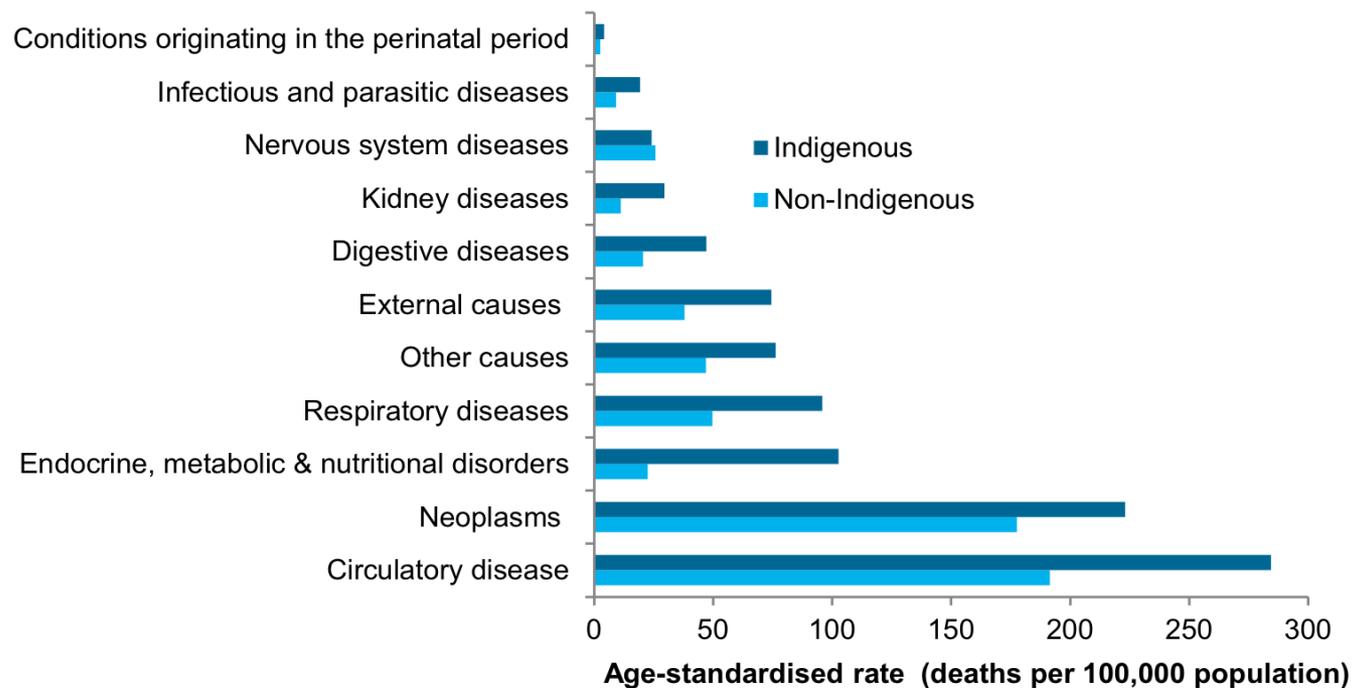
Stressor	Count	%	Rate Ratio to Non Indigenous
Death of family Member Close Friend	140,400	36.5	1.8
Serious Illness	93,500	22.9	1.4
Inability to get a job	93,100	22.8	2.6
Alcohol or drug related problems	75,000	18.4	3.6
Mental Illness	65,000	15.9	1.7
At least one stressor	200,200	73.0	1.4

# Generational Trauma and Aboriginal Communities (Atkinson 2010, 2014)

- ▶ Intergenerational transmission of trauma
  - ▶ First Generation: Conquered males (via death, imprisonment or enslavement) unable to provide for families
  - ▶ Second Generation: Overuse of alcohol or other drugs as a mechanism of coping with loss of cultural identity and diminished self worth
  - ▶ Third Generation: Breakdown of family units due to spousal abuse and other forms of violence. Removal of “children at risk”
  - ▶ Fourth and subsequent Generations Trauma re-enacted and redirected at spouse and child
- 

# Indigenous Life Expectancy (AIHW 2014)

	2005-2007			2010-2012		
	Indigenous	Non-Indigenous	Diff (Years)	Indigenous	Non-Indigenous	Diff (Years)
Males	67.5	78.9	11.4	69.1	79.7	10.6
Females	72.1	82.6	9.6	73.7	83.1	9.5



*Notes*

1. Rates are directly age-standardised using the 2001 Australian estimated resident population (based on the 2001 Census), by 5-year age group to 75+ (see Appendix B).
2. 2011 and 2012 data are revised and preliminary, respectively, and subject to revision by the ABS.
3. Data for this figure are shown in Appendix Table C4.4.

Source: AIHW National Mortality Database (last updated on 29 May 2014).

**Figure 4.5: Age-standardised mortality rates, by leading causes of death and Indigenous status, NSW, Qld, WA, SA and NT combined, 2008–2012**

# Psychological Consequences of Trauma related to the “Stolen Generation”

- ▶ Members of the Stolen Generation were more likely to live in households where there was substance abuse and gambling They were less likely to have trusting relationships and more likely to be arrested for offences  
Children of members of the Stolen Generation had much higher rates of emotional/behavioral difficulties and high rates of substance abuse
- ▶ (De Maio et al 2005)

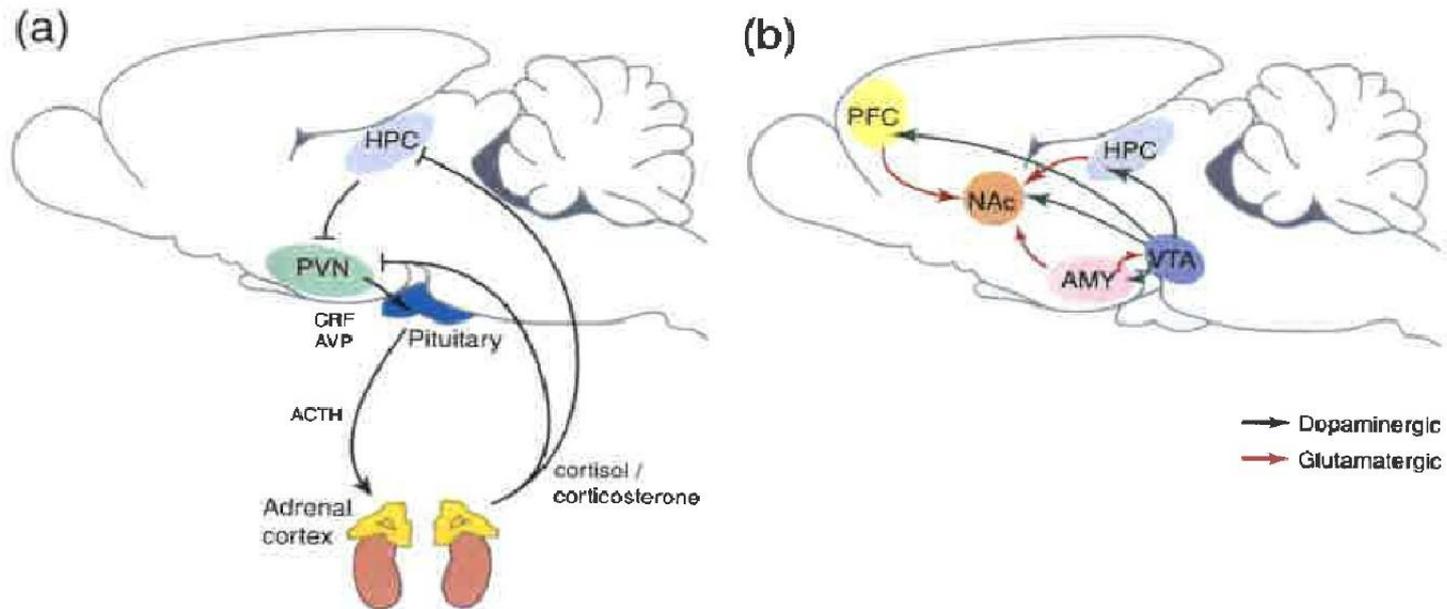
# Malignant Grief

- ▶ “Malignant grief is a process of irresolvable, collective and cumulative grief that affects Aboriginal individuals and communities. The grief causes individuals and communities to lose function and become progressively worse: ultimately it leads to death. The grief has invasive properties, spreading throughout the body and many Aboriginal people die of grief”
  - ▶ (Parker and Milroy 2014)
- 

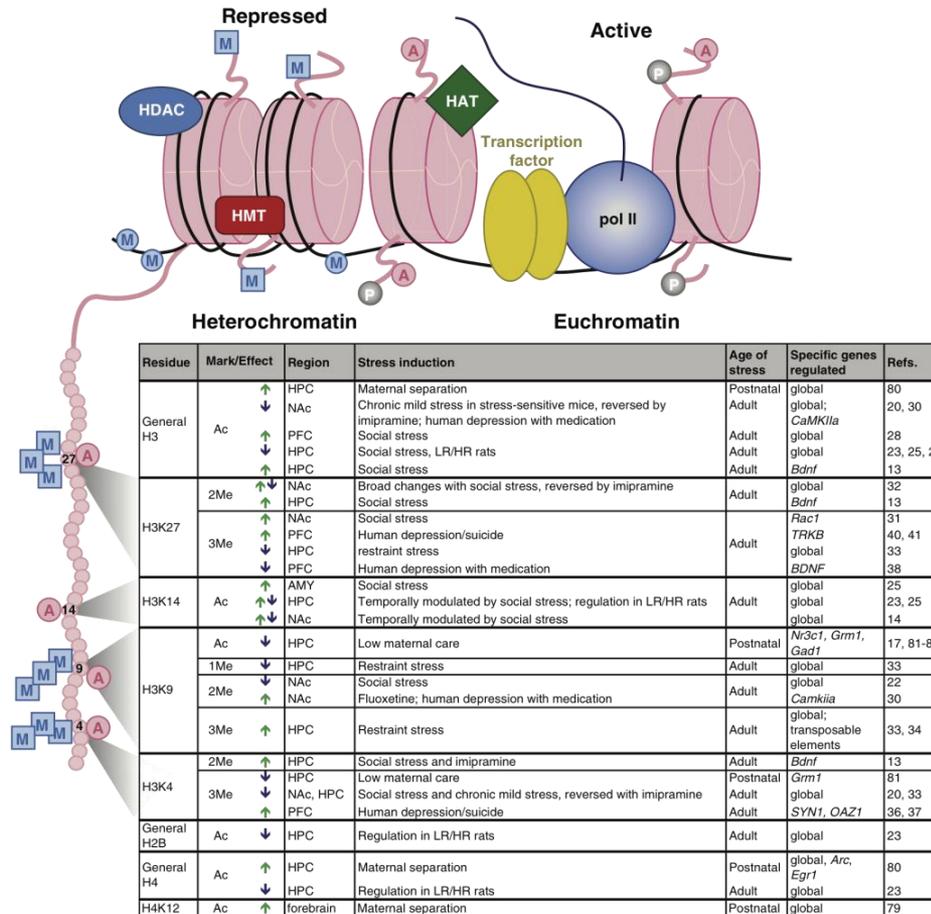
# Trauma at the Cellular Level

- ▶ Early Trauma and increase in amygdala volume (Weems et al 2015)
- ▶ Early Trauma and volume reduction in premotor cortex (Rocha-Rego et al 2002)
- ▶ Research in neuroscience, molecular biology and epigenetics in general populations (Weder et al 2014, Reul 2014, Teh et al 2014) and Native Americans (Brockie et al 2013) have demonstrated that repetitive stressful experiences in utero and early life can cause changes in gene expression that influences how the body copes with adversity and how well the brain develops in terms of emotional control, memory function and cognition

HPA (a) and Reward circuitry (b) in the rodent brain. Epigenetic changes in (a) resulting from childhood trauma and (b) resulting from adult trauma may be linked to the later development of mental illness (Pena et al 2014)



# Examples of chromatin modifications regulated by stress or antidepressant treatment (Pena et al 2014) (Vialou et al 2013)



# Childhood Adversity and Epigenetic changes in Native Americans (Brockie et al 2013)

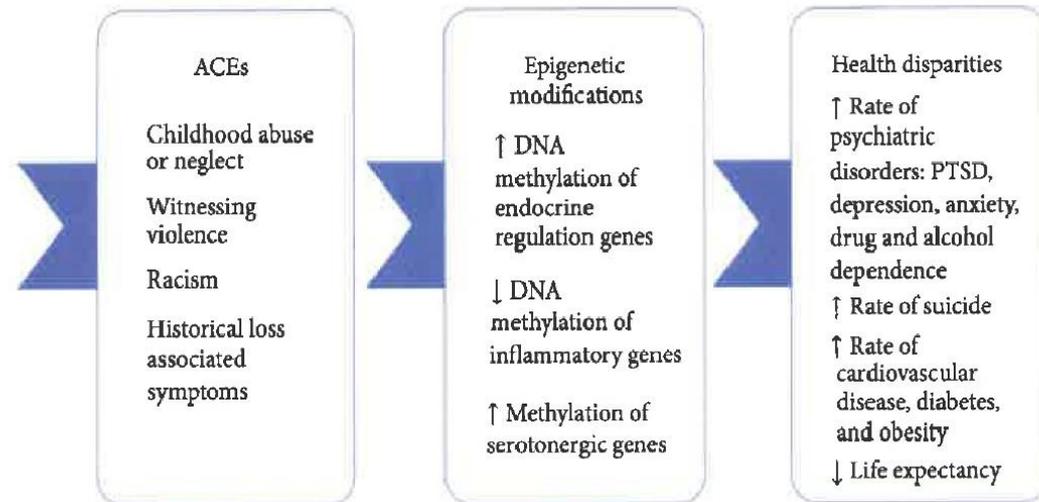
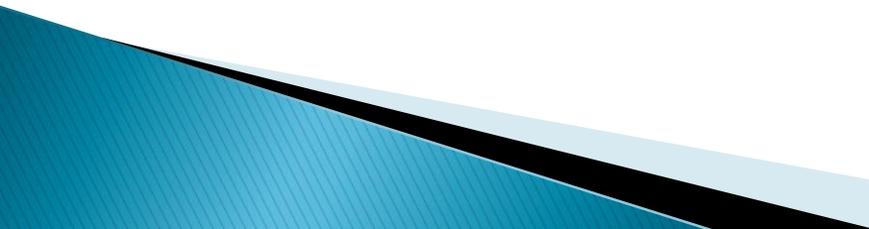


FIGURE 1: The mediating relationship of epigenetics on the risk for health disparities in Native Americans with childhood adversity.

# Current Mental Health Issues affecting Aboriginal and Torres Strait Islander People

- ▶ Aboriginal men were admitted to hospital with Mental disorders due to psychoactive substance abuse at 4.5 times the expected rate for their proportion of the Australian population
  - ▶ The same population had hospital admission for schizophrenia and related disorders at 2.7 times the expected rate
  - ▶ “external causes” (which included intentional self-harm) were the second most common form of mortality for Aboriginal people between 2001 and 2005 .
  - ▶ These deaths constituted 16% of all Aboriginal deaths compared with 6% of deaths in the non-indigenous population
- 

# Psychosis in the Australian Indigenous Population

- ▶ 40% rise in hospitalization rates for Indigenous Australians between 2004/5 and 2012/13
- ▶ *“Disorder use to psychoactive substance abuse”* responsible for 37% of mental health hospital admissions (3.7 times rate for non Indigenous)
- ▶ *“Schizophrenia”* responsible for 23% of mental health admissions (3.1 times rate for non Indigenous) (AIHW 2014)
- ▶ 40% of Indigenous individuals in North Queensland affected by psychosis also affected by intellectual disability (Hunter et al 2012)



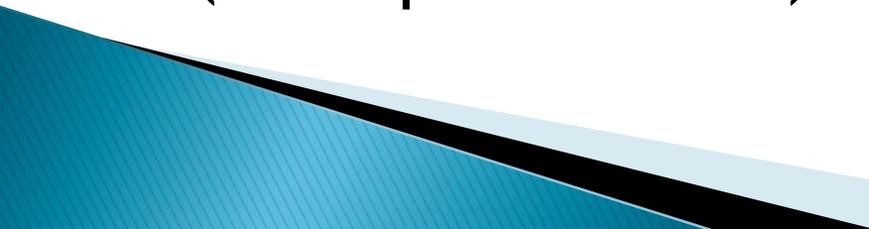
# Vulnerability Factors for the Epidemic of Psychosis in Indigenous Australians

- ▶ Cannabis abuse (23%) and Amphetamine Abuse (7%) by Indigenous Australians double that of non Indigenous (Wilkes et al 2014, AIHW 2014)
- ▶ 70% of men abusing cannabis in some remote NT communities (Lee et al 2013)
- ▶ 15% of any population may have genetic vulnerability to psychosis (Poulton et al 2000)
- ▶ Psychoactive substances such as cannabis and amphetamines “environmental factors” that may expose genetic vulnerability to psychosis (Paparelli et al 2011)
- ▶ “Schizophrenia” as a chronic destructive brain disease (Rais et al 2012, Andreasen et al 2013)
- ▶ Remoteness and limited social empowerment (Hunter et al 2011)

# Parker's (Hunter's) Psychosis Theorem for Indigenous Australians

- ▶ Genetic Vulnerability
- ▶ **plus** Enhanced Susceptibility (eg Poulton 2000)
- ▶ Psychological issues related to exposure to chronic trauma and malignant grief
- ▶ Physical issues that reduce capacity for education and community engagement (eg FASD, intellectual disability, malnutrition, chronic otitis media)
- ▶ Reduced levels of cerebral resilience and ability to problem solve (further exacerbated by chronic substance abuse and acquired head injury)
- ▶ High levels of continuing environmental stressors (AIHW 2014)
- ▶ Chronic Substance Abuse as a method of coping
- ▶ **Equals** high levels of psychotic disease
- ▶ **Exacerbated** by “Schizophrenia as a disease process” (eg Andreasen et al 2013) and continuing substance abuse, head injuries etc

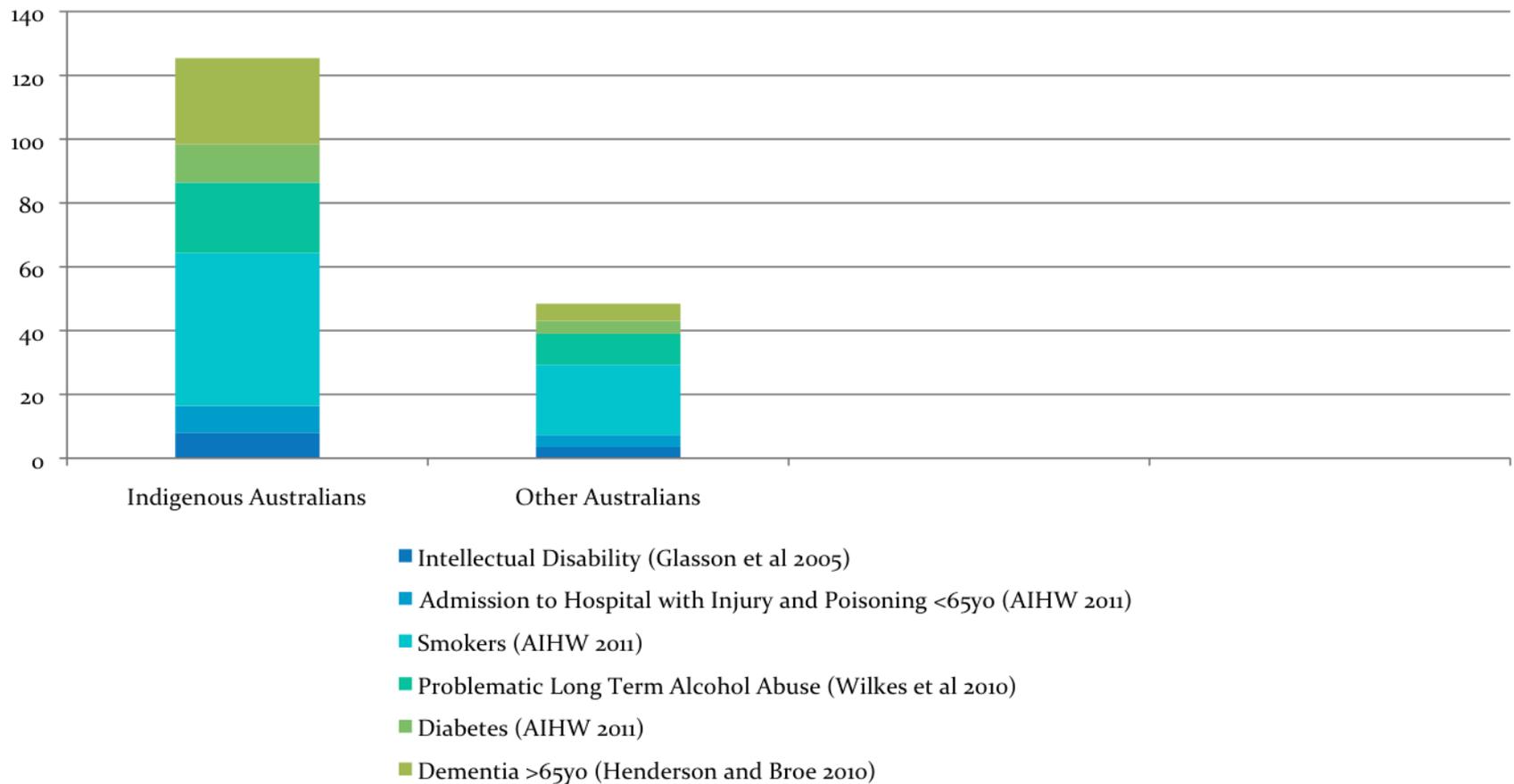
# Dementia in Indigenous Australians

- ▶ Kimberley Region, North West Western Australia
  - ▶ Prevalence of Dementia in Indigenous population was three times that of Non Indigenous Population
  - ▶ Dementia occurred at an earlier age
  - ▶ (Smith et al 2008)
  - ▶ New South Wales
  - ▶ “Koori Growing Old” Study
  - ▶ Three times the prevalence of dementia in Indigenous population
  - ▶ (Broe pers comm)
- 

# Dementia in the NT 2008–2011 (Li et al 2014)

	NT Indigenous	NT Non Indigenous
Prevalence/100 >45yo	3.7	1.1
Age Adjusted Prevalence /100	6.5	2.6
Age Adjusted Incidence (>45 yo ) /1000 person years	27.3	10.7

# Some factors that may affect increased rates of dementia in Aboriginal people compared to other Australians



## Substance Abuse in Indigenous Australians >14 years(NDSHS Survey 13,544 respondents) (Wilkes et al 2014)

	Australian Indigenous	Australian Non Indigenous
Short Term High Risk Alcohol Consumption	52.0%	35.5%
Long Term High Risk Alcohol Consumption	22.7%	9.7%
% Changes in Prevalence of Alcohol Consumption 1994-2004	15	-14
Tobacco Use	52.0%	22.5%
% Changes in Prevalence of Tobacco Use 1994-2004	-4	-12

# Alcohol Consumption by Aboriginal and Torres Strait Islander Women

- ▶ The ANCD Report (ANCD 2012) notes that 11 % of women surveyed had consumed more than two standard drinks per occasion and more than six standard drinks per week during their pregnancy.
- ▶ Fourteen percent of the women surveyed admitted to drinking five or more standard drinks per session during the three months prior to pregnancy and that half the pregnancies were unplanned (ibid).
- ▶ It is estimated that at least 42% of Aboriginal and Torres Strait Islander women will have used alcohol whilst pregnant

# FASD Prevalence Rates (/1000)

	Indigenous	Non Indigenous
WA (Bower et al 2000)	2.78	0.02
NT (Top End) (Harris and Bucens 2003)	1.87	0.68

## Assaults and the young Aboriginal and Torres Strait Islander Population (AIHW 2016)

- ▶ “Assault was the leading cause of hospitalisation for Indigenous people aged 15–17 and 18–24 years” (rate/100,000) (AIHW 2016)

Indigenous children and young people 457 (6 times)	Australian children and young people 79
Indigenous Boys and Young Men 428 (4 times)	Australian boys and young men 118
Indigenous Girls and Young Women 486 (17 times) 15-17 (12 times) 18-24 (22 times)	Australian girls and young women 28
Indigenous infants <12 months (8 times)	

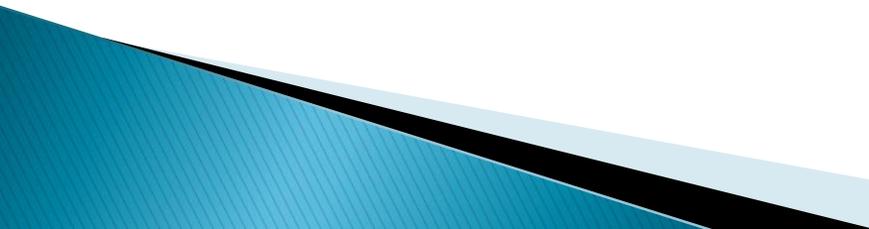
# Head Injury in the Aboriginal population (Jamieson et al 2008)

- ▶ Data from Qld, SA, WA, NT (1999–2005)
- ▶ Overall rate of head injury due to assault was 60.4/100,000
- ▶ The rate among the Indigenous population was 854.8/100,000 (21 times that of the general population)
- ▶ Most Indigenous (88%) and non Indigenous (83%) victims of assault were aged between 15 and 44
- ▶ Indigenous females experienced 69 times the rate of non Indigenous females

# Chronic Traumatic Encephalopathy

- ▶ “A neurodegenerative disease thought to be caused in part by repetitive brain trauma, including concussive and sub-concussive injuries. It is thought to result in executive dysfunction, memory impairment, depression, suicidality, apathy, poor impulse control and eventually dementia”.
  - ▶ (Baugh et al 2012)
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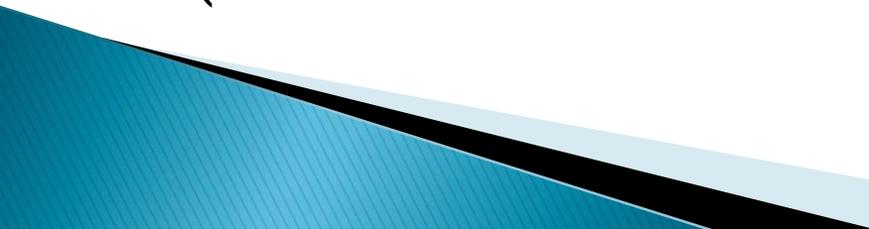
# Chronic Traumatic Encephalopathy

- ▶ CTE is neuropathologically characterized by aggregation and accumulation of hyperphosphorylated tau and TAR DNA-Binding Protein 43
  - ▶ Recent post-mortem findings may affect a broader population than originally conceptualized, particularly contact sport athletes and those with a history of military combat.
  - ▶ (Baugh et al 2012)
- 

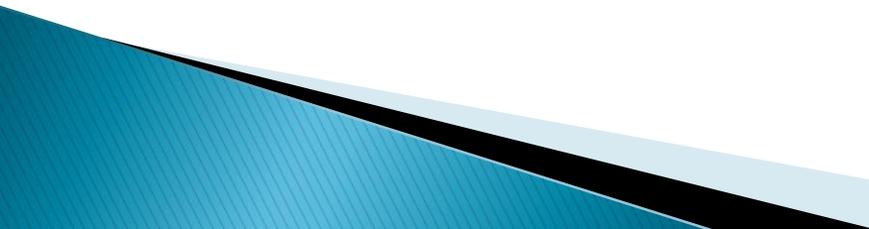
# Diabetes and Dementia (Exalto et al 2012)

- ▶ Neuropathological studies link vascular lesions resulting from diabetes to the development of dementia
  - ▶ Longer onset of diabetes linked to dementia
  - ▶ Poor glycaemic control
- 

# Pathophysiology of NIDDM and Dementia

- ▶ Diabetics living longer
  - ▶ White Matter Ischemia and Infarcts
  - ▶ Insulin resistance and hyperinsulinaemia within the brain
  - ▶ Inflammation
  - ▶ Accumulation of advanced glycation and AGE products
  - ▶ Brain Imaging in people affected by NIDDM has demonstrated atrophy in cortical and hippocampal regions, white matter disease and lacunar infarcts
  - ▶ (L Greenbaum Pers Comm)
- 

# Improved Rating Scales in an atmosphere of Cultural Security

- ▶ Kimberley Indigenous Cognitive Assessment (KICA) (LoGiudice et al 2006)
  - ▶ Rowland Universal Dementia Assessment Scale (RUDAS)
  - ▶ The Westmead Post Traumatic Amnesia Test (Shores et al 2008)
  - ▶ Cognistat (Kieman et al 1987)
  - ▶ Cogstate (Maruff et al 2009).
- 

**The Aboriginal concept of health is holistic, encompassing mental health and physical, cultural and spiritual health. This holistic concept does not just refer to the whole body but is in fact steeped in harmonized inter relations which constitute cultural well being.**

**These inter relating factors can be categorized largely into spiritual, environmental, ideological, political, social, economic, mental and physical.**

**Crucially, it must be understood that when the harmony of these inter relations is disrupted, Aboriginal ill health will persist.**

**(Swan and Raphael 1996)**



# WHO Ottawa Charter for Health Promotion 1986

- ▶ The fundamental conditions and resources for health are:
    - ▶ Peace
    - ▶ Shelter
    - ▶ Education
    - ▶ Food
    - ▶ Income
    - ▶ A sustainable eco-system
    - ▶ Sustainable resources
    - ▶ Social Justice and Equity
- 

# NATIONAL INDIGENOUS REFORM AGREEMENT (CLOSING THE GAP)

Council of  
Australian  
Governments

An agreement between

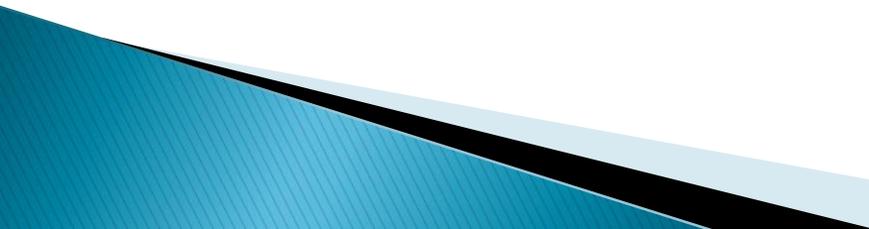
- the Commonwealth of Australia and
- the States and Territories, being:
  - ◆ the State of New South Wales;
  - ◆ the State of Victoria;
  - ◆ the State of Queensland;
  - ◆ the State of Western Australia;
  - ◆ the State of South Australia;
  - ◆ the State of Tasmania;
  - ◆ the Australian Capital Territory; and
  - ◆ the Northern Territory of Australia

This Agreement implements intergovernmental reforms to close the gap in Indigenous disadvantage.

# COAG NIRA 2008

- ▶ \$4.8 billion
  - ▶ Early Childhood
  - ▶ Schooling
  - ▶ Health
  - ▶ Economic Participation
  - ▶ Healthy Homes
  - ▶ Safe Communities
  - ▶ Governance and Leadership
- 

# CAAC Integrated Model for child and family services (Ah Chee et al 2016)

- ▶ Nurse Home Visitation through the Australian Nursing Family Partnership Program (ANFPP)
  - ▶ The Preschool Readiness Program
  - ▶ The Health Kids Clinic
  - ▶ Targeted Family Support, Intensive Family Support
  - ▶ Child Health Outreach Program
  - ▶ Child Care Centre at Congress
  - ▶ “Integration of Services under a single provider is the key to achieving this potentially transformative change”
- 

# CAAC Integrated Model for child and family services (Ah Chee et al 2016)

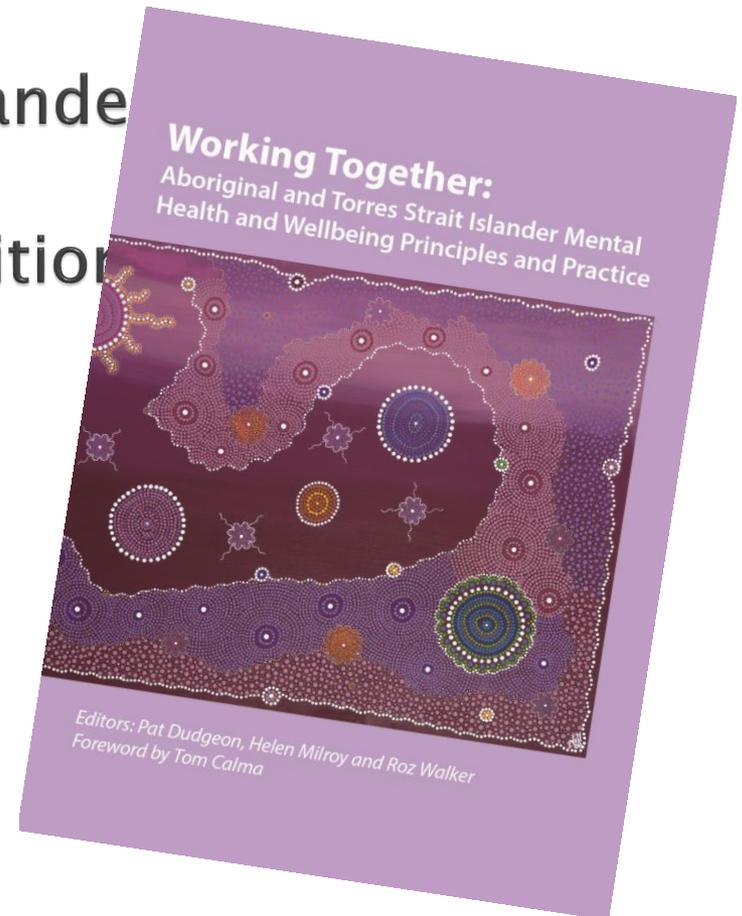
- ▶ ANFPP shows high level of client acceptance, largely due to the inclusion of Aboriginal community workers alongside nurses
- ▶ Good retention rates ( attrition rates for children <1yo is 44.1% compared with overseas rates of 49.5%)
- ▶ Infant mortality rate of 8.3/1000 live births for the 240 infants whose mothers have been on the Congress program compared to NT rate of 13.7/1000 live births
- ▶ Developmental gains in expressive language and social skills, higher preschool attendance rates and improvements in confidence and school readiness

# Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice – 2<sup>nd</sup> Edition

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# Kakadu:Ubirr



