

Aboriginal & Torres Strait Islander diabetes and coronary heart disease
BRIDGING THE GAP

Year	Ischaemic heart disease (Indigenous)	Ischaemic heart disease (All Australians)	Diabetes mellitus (Indigenous)	Diabetes mellitus (All Australians)
1997	~80	~60	~10	~5
1998	~85	~55	~15	~5
1999	~90	~50	~20	~5
2000	~95	~45	~25	~5
2001	~100	~40	~30	~5
2002	~105	~35	~35	~5
2003	~110	~30	~40	~5
2004	~115	~25	~45	~5
2005	~120	~20	~50	~5

Graeme Maguire
 Cairns Base Hospital
 James Cook University

JCU
 A CRA

Annual Scientific Meeting August 2007 - Hobart

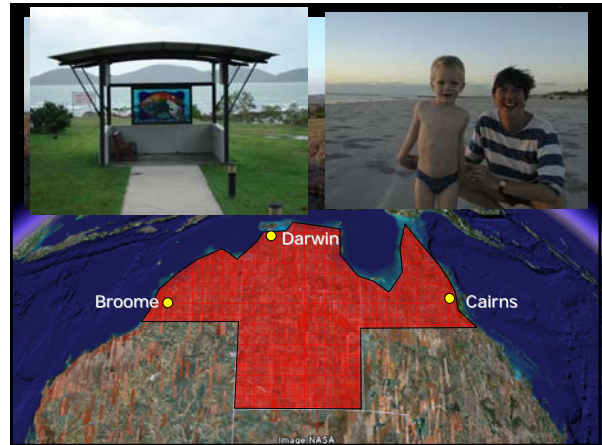
Aboriginal & Torres Strait Islander diabetes & CHD
BRIDGING THE GAP

Heart Foundation

Advocacy
 Research

Guidelines

- acute rheumatic fever/rheumatic heart disease
- chronic heart failure
- acute coronary syndrome
- lipid management



Aboriginal & Torres Strait Islander diabetes & CHD
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*Know your population
 How bad is it?
 Is it changing?
 Why the difference?
 The continuum of care*

BRIDGING THE GAP

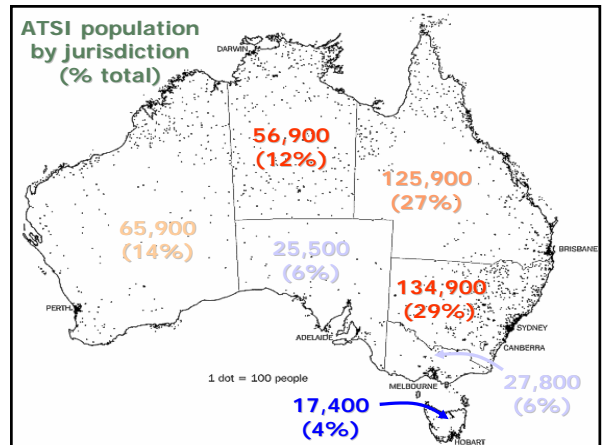


Aboriginal & Torres Strait Islander diabetes & CHD
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KNOW YOUR POPULATION

Indigenous Australians

- Aboriginal & Torres Strait Islander peoples
- 90% Aboriginal Australians, 6% Torres Strait Islander, 4% both
- 482 196 people
- 2.4% Australian population



Aboriginal & Torres Strait Islander diabetes & CHD
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KNOW YOUR POPULATION

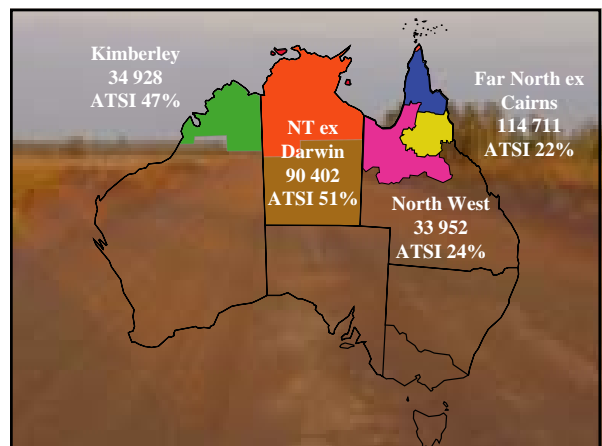
Proportion of population – NT 29%, rest < 4%

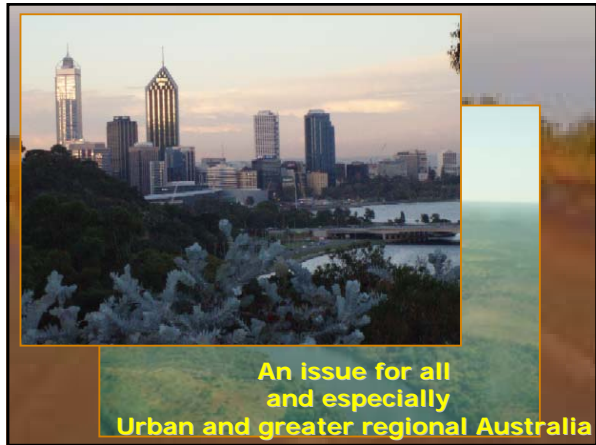
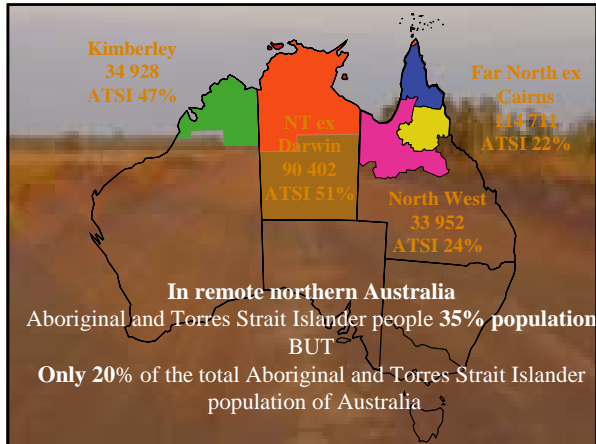
Major Cities 30% (overall 67%)

Inner Regional 20% (cw 21%)

Outer Regional 23% (cw 10%)

Remote or Very Remote areas 26% (cw 2%)





Aboriginal & Torres Strait Islander diabetes & CHD
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So what are we talking about

CHD and type II diabetes mellitus –
partners in crime

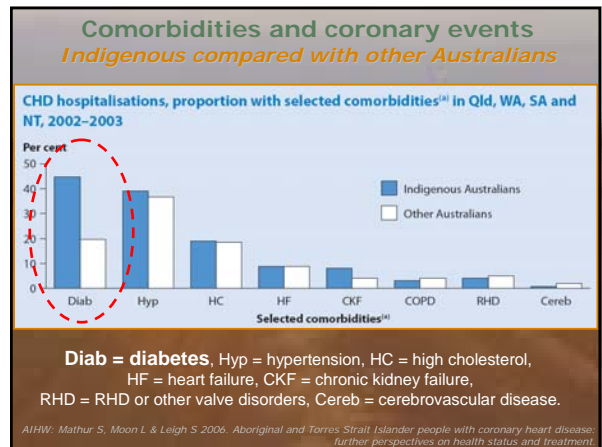
–CHD is 1 of the 3 major manifestations of macrovascular disease
–**type II diabetes mellitus** is a marker condition for a more general abnormality of endothelial dysfunction and increased macrovascular risk

Aboriginal & Torres Strait Islander diabetes & CHD
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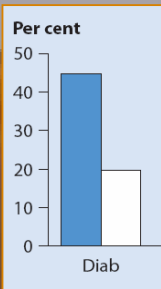
So what are we talking about

CHD and type II diabetes mellitus –
partners in crime

TII DM is thus a major driver of CHD in concert with a range of other factors including tobacco consumption
& THIS IS EVEN MORE SO FOR INDIGENOUS AUSTRALIANS



Comorbidities and coronary events Indigenous compared with other Australians



45% of Indigenous CHD hospitalisations had diabetes recorded

age-adjusted rate 2.5 times as high as for other Australians with CHD hospitalisation.

AIHW: Mathur S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

Aboriginal & Torres Strait Islander diabetes & CHD **BRIDGING THE GAP**

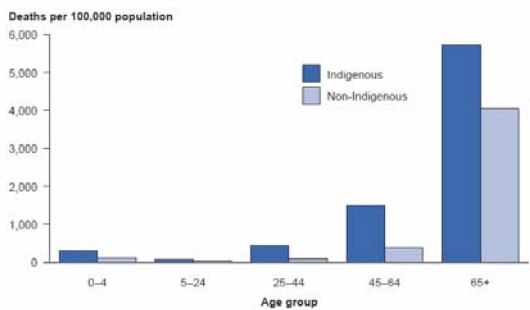
HOW BAD IS IT

Burden of disease

–Data collection and identification of ethnicity for Aboriginal and Torres Strait Islander people remains poor

–Most information therefore relies on QLD, SA, WA and NT

Age-specific mortality rates among Indigenous and non-Indigenous people, 2000–2004



Note: Data for Qld, WA, SA and NT combined. Based on year of registration of death. Source: AIHW National Mortality Database.

Compared with other Australians Aboriginal and Torres Strait Islander peoples have:

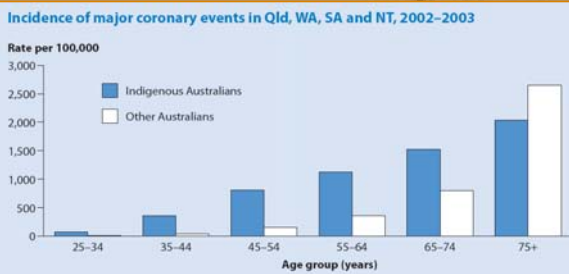
- 3 X the rate of major coronary events
- 1.4 X the out-of-hospital death rate from CHD

and when in hospital:

- > 2 X the in-hospital CHD death rate

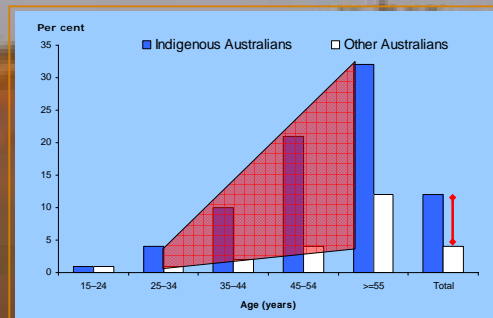
AIHW: Mathur S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

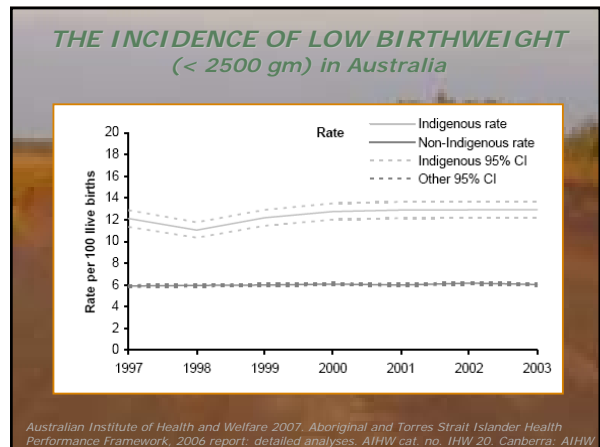
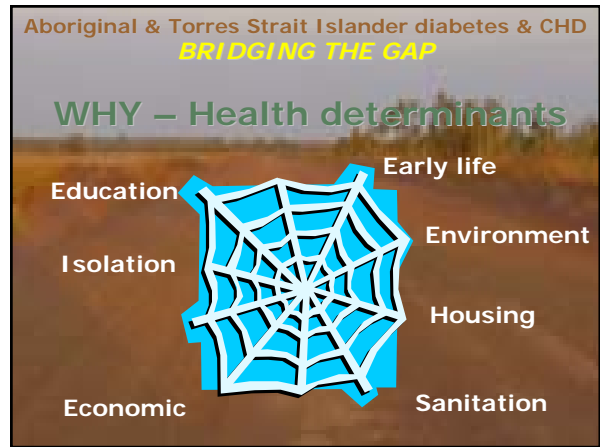
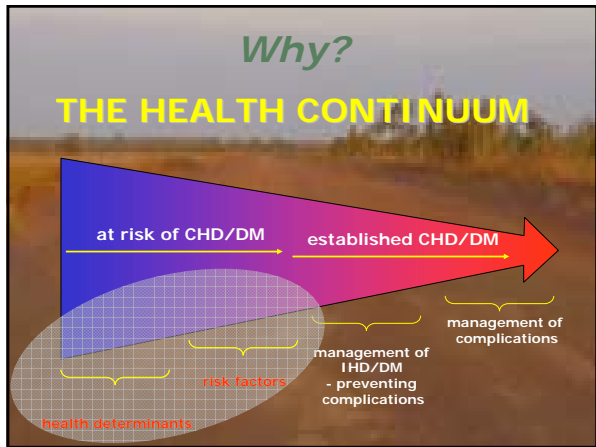
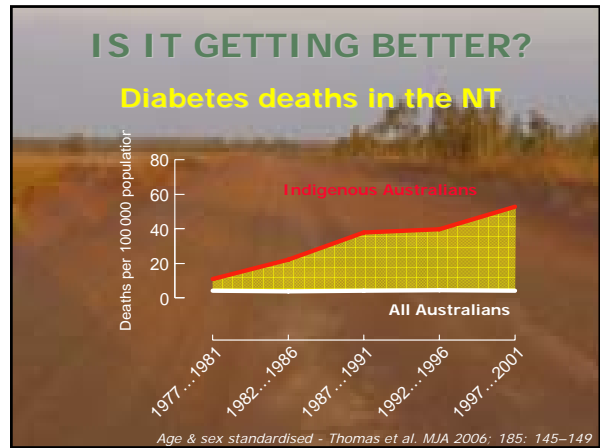
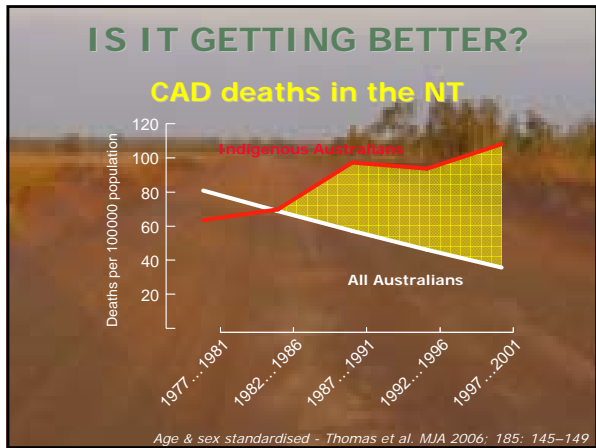
Incidence of major coronary events Indigenous compared with other Australians



AIHW: Mathur S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

Self report of diabetes or high blood sugar in primary health care attenders by Indigenous status and age group (2004–05)





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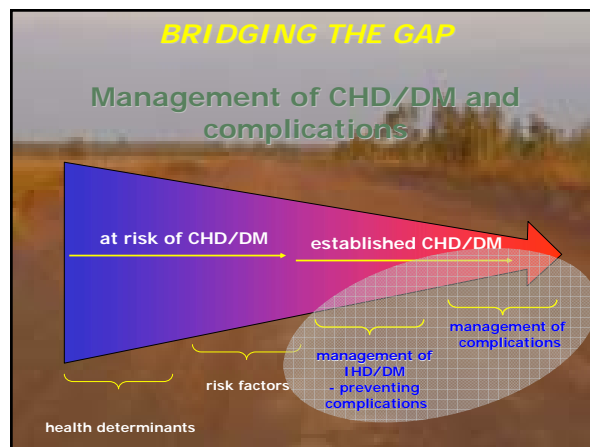
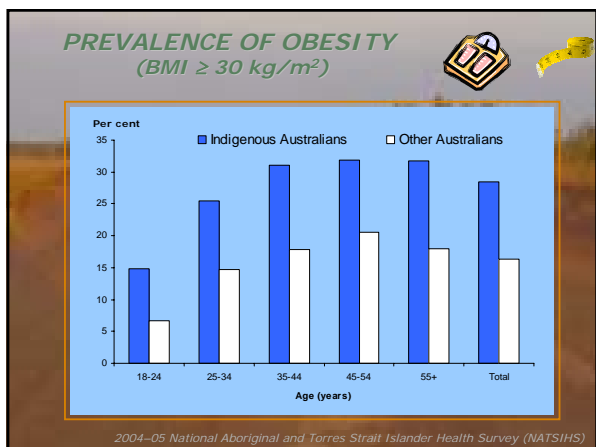
WHY – Risk factors

PREVALENCE OF CURRENT SMOKERS
(18 years and older)

46% of Indigenous Australians
21% of non-Indigenous Australians

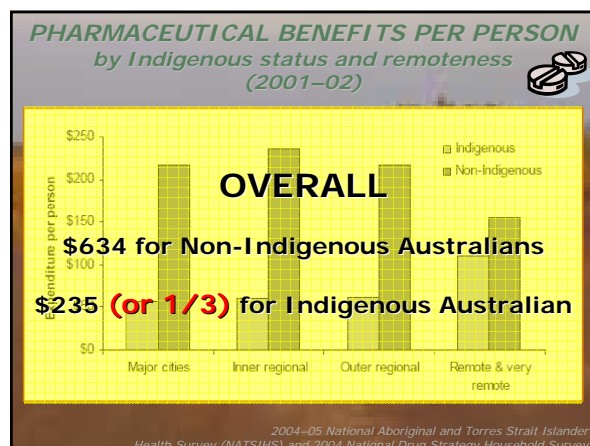
All states/jurisdictions
Urban – very remote
Men and women

2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and 2004 National Drug Strategy Household Survey



WHY – Management of CHD
Are we providing comparable care?

- Medication access
- Management of ACS
 - acute reperfusion
 - medical
- Outpatient cardiac rehabilitation
- Post-AMI management
 - Invasive percutaneous surgery



WHY – Management of CHD

Acute reperfusion

NT patients with STEMI /heart attack

Thrombolysis

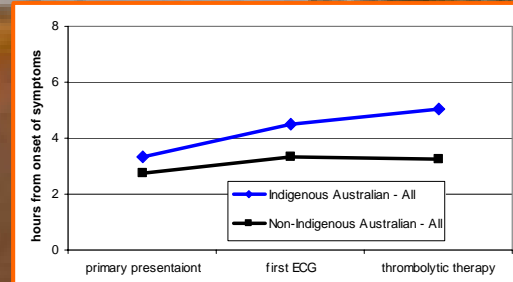
- 29% Indigenous Australians
- 47% Non-Indigenous Australians

Ong & Weeramanthri, MJA 200; 173: 201-204

WHY – Management of CHD

AMI management in NT

ORBAN



Ong & Weeramanthri, MJA 200; 173: 201-204

WHY – Management of CHD

Post-AMI medical management

	Indigenous Australian		Non-Indigenous Australians
aspirin	93%	✓	96%
Beta blocker	70%	✓	69%
ACEi	60%	✓	40%

Ong & Weeramanthri, MJA 200; 173: 201-204

WHY – Management of CHD

Outpatient cardiac rehabilitation



SUBOPTIMAL UPTAKE OVERALL

QLD - 29% referred & 59% attended
i.e. only **1 in 6** accessing OCR¹

&

FOR INDIGENOUS AUSTRALIANS

FNQ **1 in 16** (3/47)
Indigenous Australians accessing OCR²

¹ Scott et al. MJA 2003; 179: 341-345
² Shepherd et al. Aust N Z J Public Health 2003; 27: 632-6

WHY – Management of CHD

Post-AMI procedural management

40% lower rate of being investigated by angiography

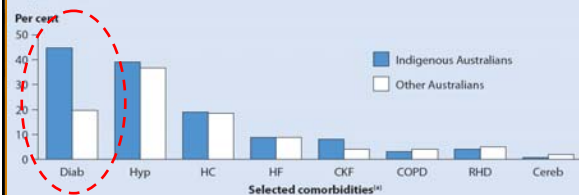
40% lower rate of coronary angioplasty or stent procedures

20% lower rate of coronary bypass surgery

AIHW: Mather S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

Could it be explained by - comorbidities

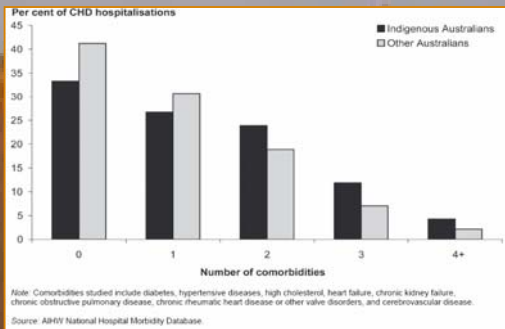
CHD hospitalisations, proportion with selected comorbidities^{AI} in Qld, WA, SA and NT, 2002-2003



Diab = diabetes, Hyp = hypertension, HC = high cholesterol, HF = heart failure, CKF = chronic kidney failure, RHD = RHD or other valve disorders, Cereb = cerebrovascular disease.

AIHW: Mather S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

Does case complexity explain poorer outcome?
Number of comorbidities
Indigenous compared with other Australians

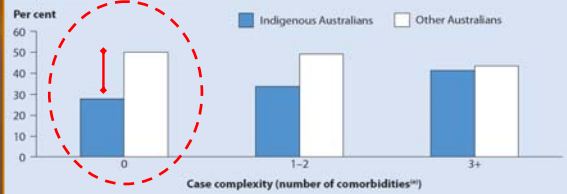


AIHW: Mather S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

Does case complexity explain poorer outcome?
PROBABLY NOT!

Stratified case complexity/# comorbidities
Proportion undergoing coronary procedures
Indigenous compared with other Australians

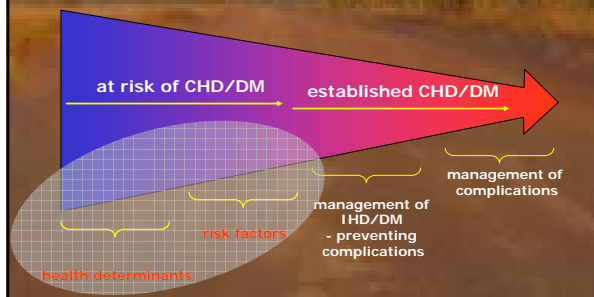
CHD hospitalisations with coronary procedures by number of comorbidities in Qld, WA, SA and NT, 2002-2003



AIHW: Mather S, Moon L & Leigh S 2006. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment.

BRIDGING THE GAP

Health Determinants and Risk Factors



BRIDGING THE GAP

Health Determinants and Risk Factors

Are we getting there?

- Birth weight ✓ ✗
- Smoking ✓ ✗
- Obesity ✗

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Health Determinants and Risk Factors

Is there a problem?

Is there the will?

Any idea of what needs to be done?

IMPLEMENTATION!!!!

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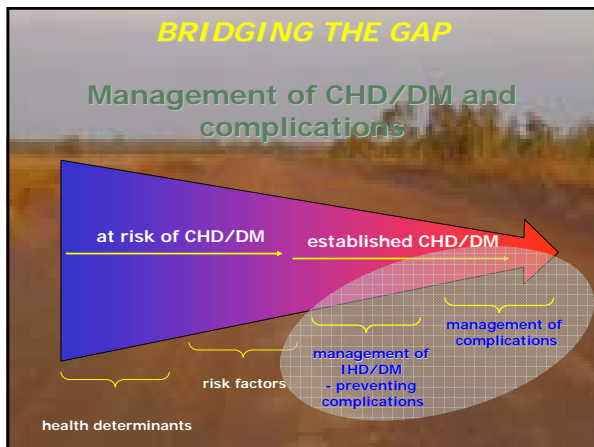
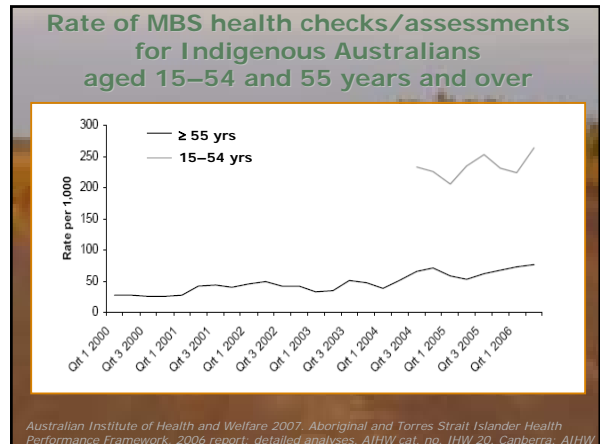
Health Determinants and Risk Factors

IMPLEMENTATION!!!!

Separating

POLITICS from **OWNERSHIP**

OWNERSHIP from **ABSOLUTE RESPONSIBILITY**



BRIDGING THE GAP

Management of CHD/DM

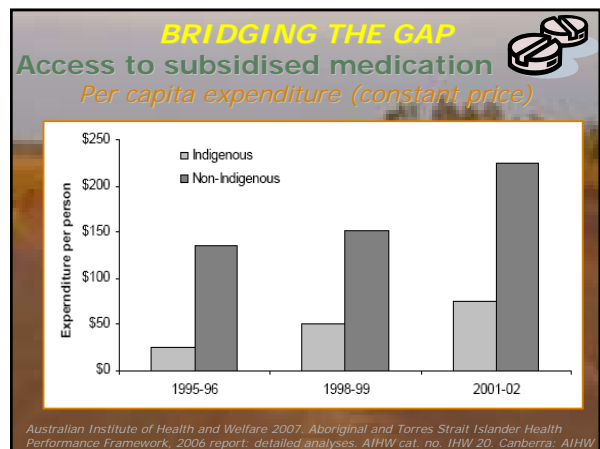
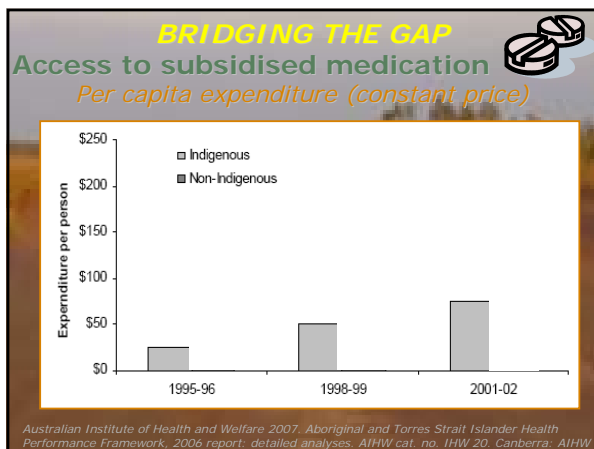
Information systems inadequate

System markers ✓ ✗

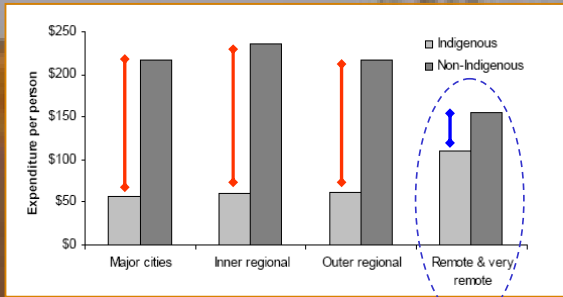
↓

Lead time

Outcome markers ✗



PHARMACEUTICAL BENEFITS PER PERSON
by Indigenous status and remoteness
(2001-02)



AHWH 2005
Australian Institute of Health and Welfare 2007. Aboriginal and Torres Strait Islander Health Performance Framework, 2006 report: detailed analyses. AIHW cat. no. IHW 20. Canberra: AIHW

BRIDGING THE GAP
Access to medical services with the
last 2 weeks

	Indigenous Australian	Non-Indigenous Australians
Specialist (non-rural)	5.2%	5.3%
Specialist/GP	25%	23%

Australian Institute of Health and Welfare 2007. Aboriginal and Torres Strait Islander Health Performance Framework, 2006 report: detailed analyses. AIHW cat. no. IHW 20. Canberra: AIHW

BRIDGING THE GAP
Improving access and quality of care
Leaving on the 'right meds'
but can it be maintained

ACCESSIBLE, ACCEPTABLE & AFFORDABLE

PRIMARY HEALTH CARE

Supported by allied & specialist healthcare

Aboriginal community-controlled health services

Funding specifically targeting Indigenous

Australians & **CHRONIC DISEASE**



BRIDGING THE GAP
Cardiac rehabilitation



Hayman et al. MJA 184(10):485-6
NHMRC. Strengthening cardiac rehabilitation and secondary prevention for Aboriginal and Torres Strait Islander peoples: a guide for health professionals. Canberra: NHMRC, 2005.

BRIDGING THE GAP
Cardiac
rehabilitation

BARRIERS

Communication

Coordination

Cultural Safety

Workforce



Hayman et al. MJA 184(10):485-6
NHMRC. Strengthening cardiac rehabilitation and secondary prevention for Aboriginal and Torres Strait Islander peoples: a guide for health professionals. Canberra: NHMRC, 2005.

BRIDGING THE GAP
Cardiac rehabilitation

"Not enough black faces"

Communication and understanding

Continuity of care

Taking the message back home

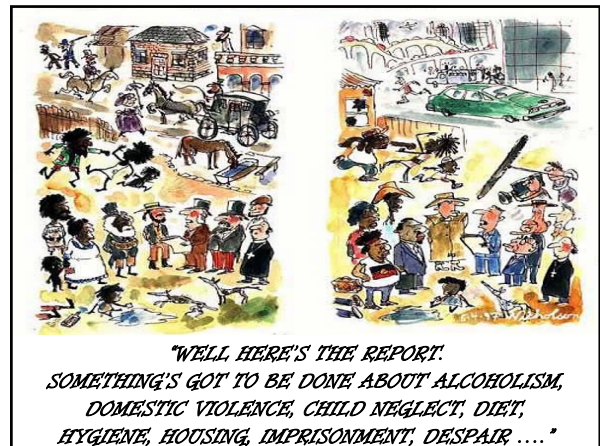
Self-determination and control

BRIDGING THE GAP
Cardiac rehabilitation

Cardiac Rehabilitation for Indigenous Communities (CRIC)
Kathy Broad - Cairns & Hinterland Health District

New horizons: An Aboriginal health worker in cardiology at last
Julie Smith, Royal Perth Hospital and NHF-WA

A new Indigenous cardiac resource
Chrissie Inglis, NT Department of Health



Aboriginal & Torres Strait Islander diabetes and coronary heart disease
BRIDGING THE GAP Graeme Maguire

Comprehensive management
Acute
(access)
The increasing burden
of heart disease &
diabetes in Aboriginal
& Torres Strait Islander
communities cannot be ignored
health is not just a problem of
primary health care
including
outpatient cardiac rehabilitation

Annual Scientific Meeting August 2007
Hobart



**Australian Cardiovascular Health and Rehabilitation Association
Annual Scientific Meeting**

22 – 24 August 2007
Hotel Grand Chancellor
Hobart, Tasmania

**How do population and behavioural views of the
CR landscape help shape the path ahead for those
highly skilled and dedicated practitioners delivering
an excellent service to their patients in a resource
poor environment**

Dr Amanda Nagle