Healthy Ageing for Aboriginal and Torres Strait Islander Peoples: Addressing risk factors for dementia

Dementia Inclusive Ballina Symposium

25th October 2024

Dr Sarah Russell, Clinical Neuropsychologist

Associate Professor, James Cook University

Acknowledgement of Country

Healthy Ageing Research Team (HART)

Our team is based at James Cook University, Nguma-bada Campus in Cairns, Far North Queensland, Australia. The team includes academics, clinicians, and researchers, all with an interest in gerontology and integrated service delivery models. Our research priorities are driven by community identified priorities and clinical needs.

Our Mission

Clinically informed research and practice that promotes cultural safety to improve health and health equity for older adults living in Far North Queensland, with a focus on Aboriginal and Torres Strait Islander peoples.

Chenoa Wapau

Betty Sagigi

Sarah Russell

Rachel Quigley

Eddy Strivens

Rhiann Sue See

Melissa Kilburn

Gavin Miller

Many examples of ageing well

Aboriginal life-span has been increasing: Particularly young-old (45-64 years)

Proportion of Indigenous >65 yrs projected to increase from 3.4% in 2011 to 6.4% in 2026.

Mortality 75^{+} is reaching that of rest of population.

Increased dementia risk identified in Aboriginal communities

- Kimberley Prevalence Study (Smith et al., 2008)

  5.2x higher (45 years$^+$) **12.4% vs.2.4%**

- The Koori Growing Old Well Study (Radford et al., 2014)

  3x higher (60 years$^+$) urban Sydney & regional NSW

Alzheimer's disease most common diagnosis

Risk factors for Aboriginal and Torres Strait Islander Peoples

Kimberley, remote WA (Smith et al., 2010)

- Age, male gender, absence of formal education, current smoking, stroke, epilepsy, head injury, higher systolic BP

Urban/regional NSW (Radford et al., 2019)

- Age, head injury and stroke, unskilled work and childhood trauma

Torres Strait - Zenadth Kes

Situated between PNG and top of Cape York

18 Island and 5 mainland communities in Northern Peninsula Area (NPA)

Five Nation groups

3 traditional dialects (with sub dialects)

- Kala Kawa Ya (Top Western and Western)
- Kala Lagau Ya (Central)
- Meriam (Eastern)

Plus Torres Strait Creole

https://www.gabtitui.gov.au/torres-strait

What about the Torres Strait?

- Similar health disparities and lack of access to services
- High rates of chronic disease and presence of dementia risk factors
- But there may be differences due to diversity in culture, lifestyles, geography, history, and other social and health factors……..?

Dementia Prevalence

- N=274, mean age 65.1 (*SD*10.8, range 45-93)
- 34.3% male
- All had some formal education (32.5% primary only)
- Torres Strait Creole most common language but 95% spoke English

- Dementia prevalence = **14.2% (2.87x higher)**
- Cognitive Impairment No Dementia=**22%**
- Age specific ratio
    - **>4** times higher 60-69 years
    - **>2** times higher in 80+ years
- Dementia NOS (38.5%), Alzheimer's Disease (30.7%)

	Normal Cognition n=175	CIND n=60	Dementia n=39	% Total Sample n=274
1+ Vascular Risk Factor	95%	97%	97%	96%
Hypertension	61%	72%	72%	65%
Diabetes	59%	63%	77%	62%
Dyslipidaemia	38%	47%	59%	43%
Renal Disease	13%	30%	38%	20%
Heart Disease	14%	25%	26%	18%
Polypharmacy	40%	63%	63%	50%

Other Common Problems of Ageing

	% within sample (N=274)
Poor hearing	13%
Pain	44%
Falls risk	19%
Incontinence	26%
Depression	13%
Anxiety	10%

Significant RF's and Associations Torres Strait prevalence study

Strongest risks

- Age
- Cerebrovascular disease
- Chronic Kidney Disease

- Lower education
- Problems with mobility
- Incontinence

Associations with dementia

- Hearing impairment
- Number of vascular risk factors
- Polypharmacy
- Dyslipidaemia & diabetes
- Poor mobility, falls risk

NO INCREASED RISK

Head injury
Late life depression

Russell et al. (2021)

HART
Healthy Ageing Research Team

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RESEARCH ARTICLE

Australasian Journal on Ageing WILEY

Prevalence of dementia in the Torres Strait

Sarah G. Russell[1,2] | Rachel Quigley[1,2] | Fintan Thompson[3] | Betty Sagigi[4] | Dina LoGiudice[5] | Kate Smith[6] | Nancy Pachana[7] | Gavin Miller[2] | Edward Strivens[1,2]

RESEARCH ARTICLE

Australasian Journal on Ageing WILEY

Factors associated with the increased risk of dementia found in the Torres Strait

Sarah G. Russell[1,2,3] | Rachel Quigley[1,2,3] | Fintan Thompson[3] | Betty Sagigi[4] | Gavin Miller[2] | Dina LoGiudice[5] | Kate Smith[6] | Nancy A. Pachana[7] | Edward Strivens[1,2,3]

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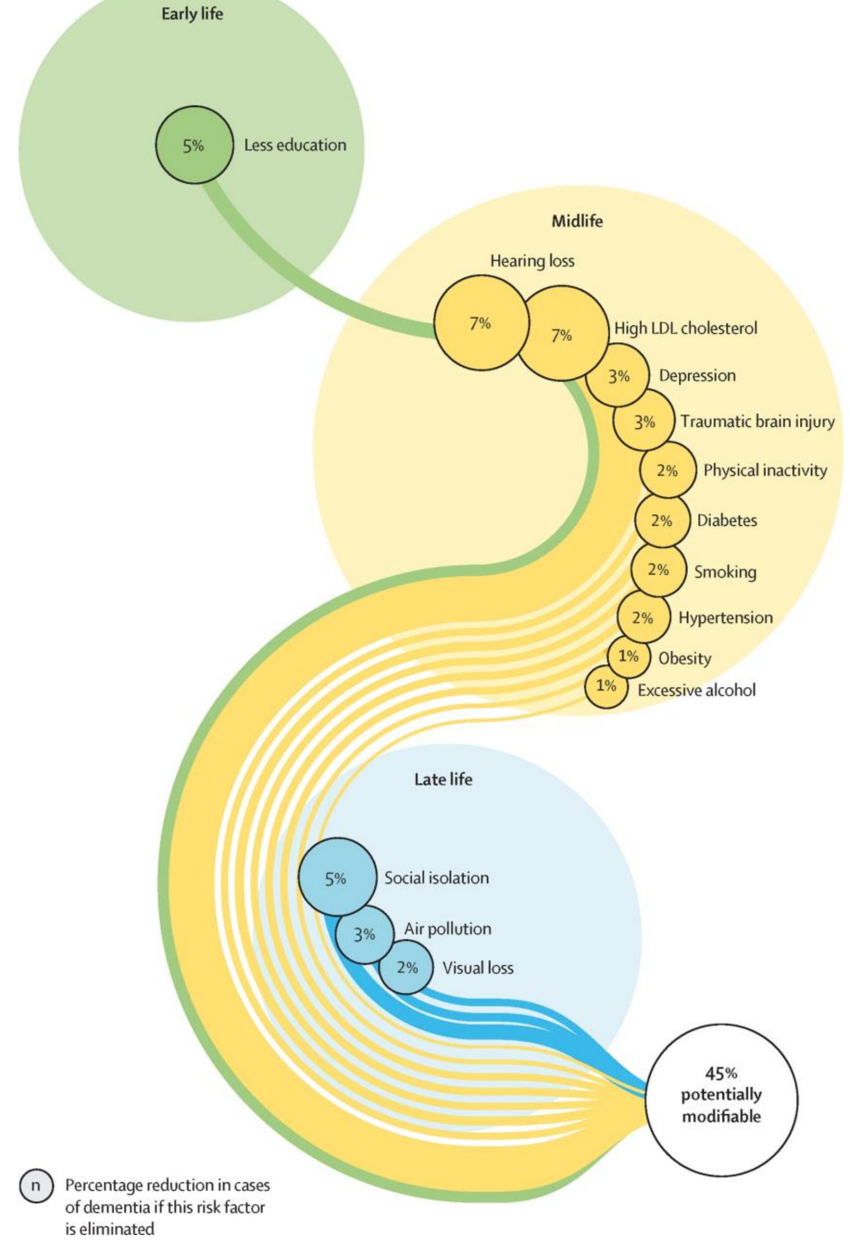
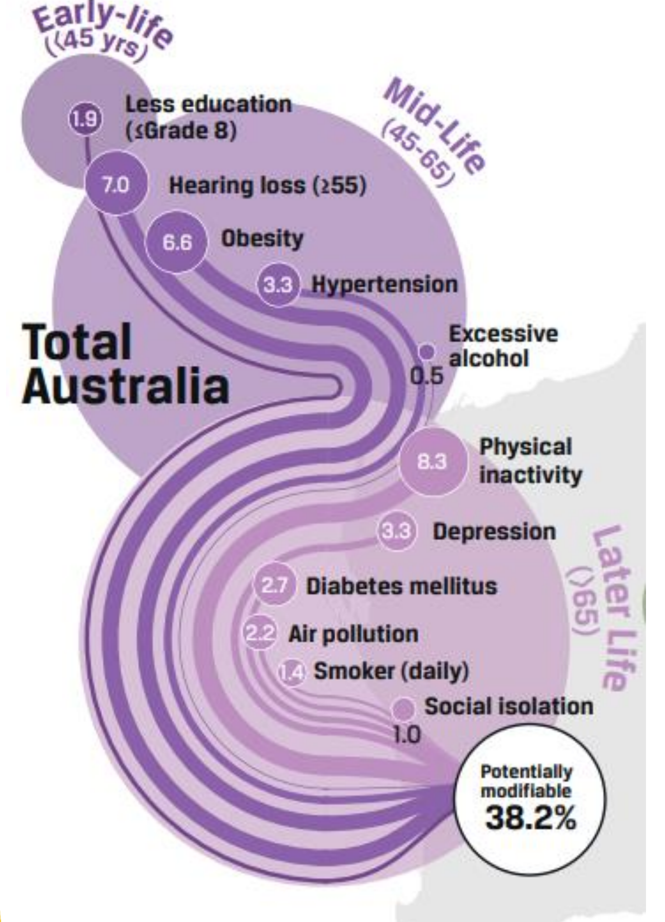
AUSTRALIA

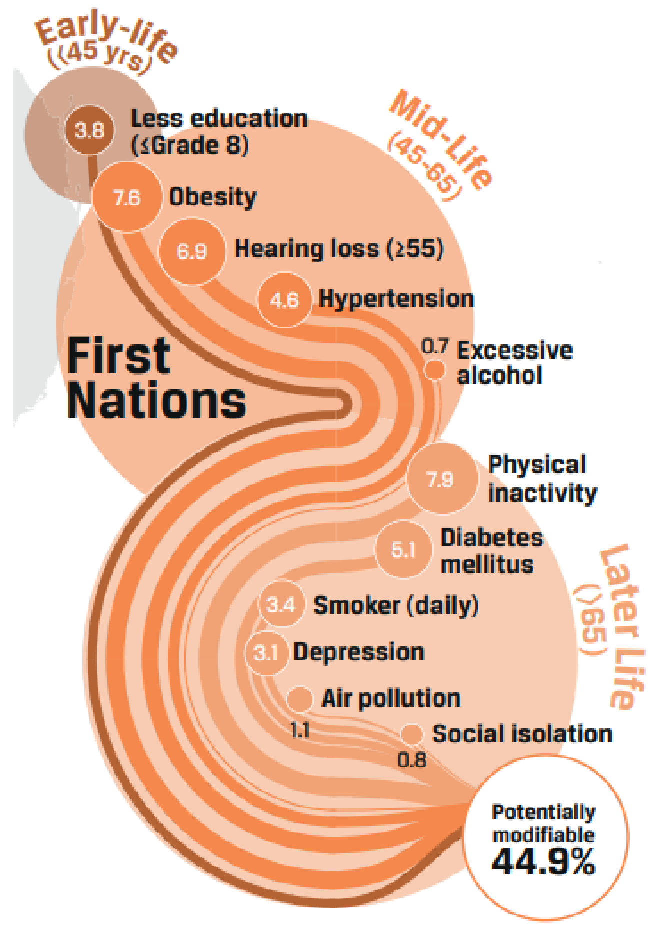
HART
Healthy Ageing Research Team

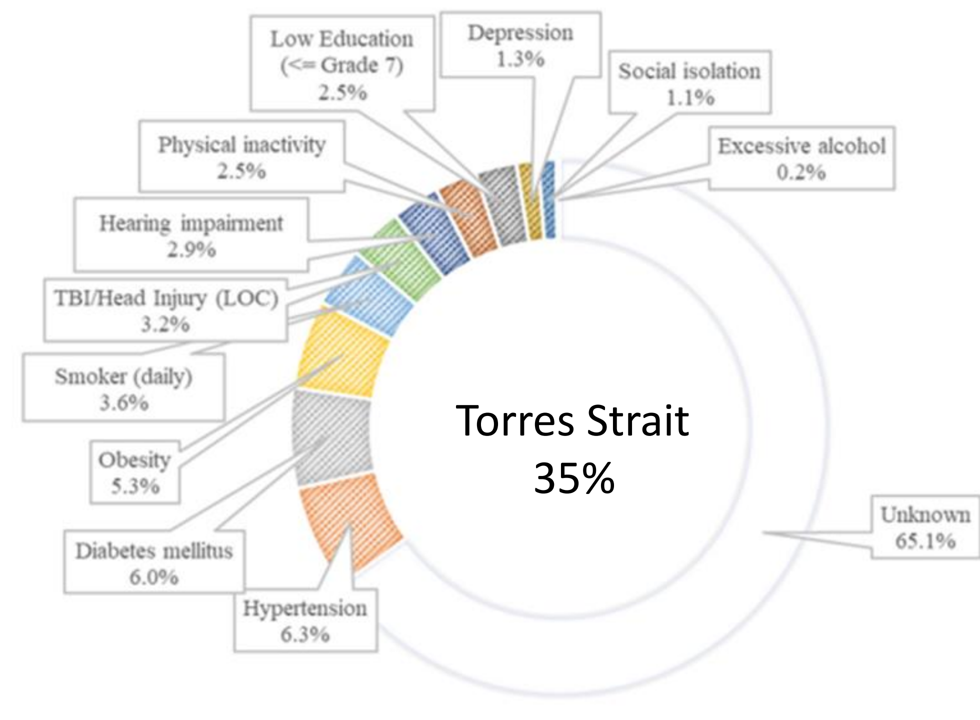
Lancet Commission:
14 modifiable risk factors

Livingstone et al, 2024





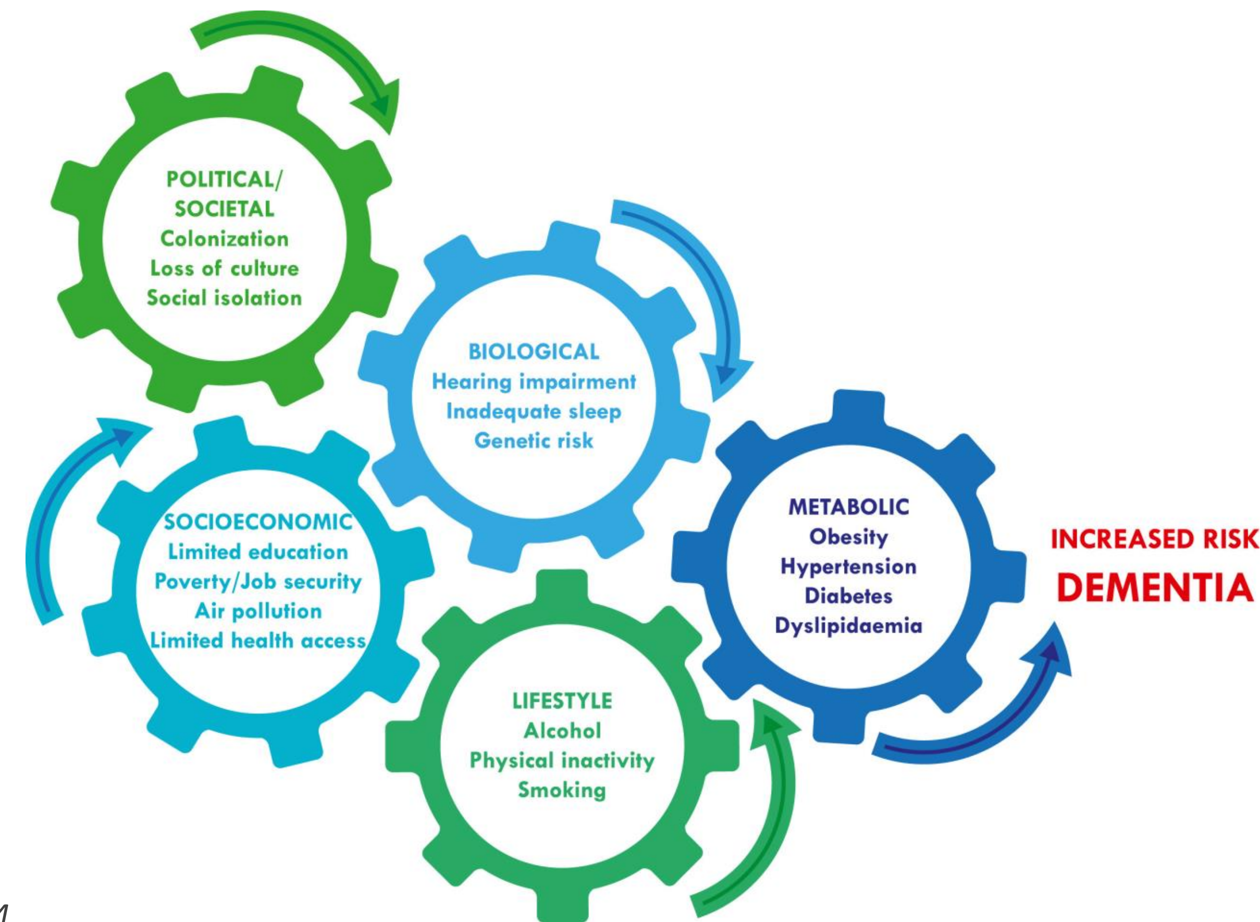




Sue See, R. et al. (2023)

Thompson, F. et al. (2022)

Interaction of population and individual level risk factors across the life course



Clarke et al, 2024

Cascade of risk factors for Alzheimer's

Childhood Risks+ Early Adult Life Risks+ Later-life Risks

Birth weight; parenting; removal; childhood trauma; education; epigenetics

Employment; further education; discrimination; head injury; AD risk genes

Age; alcohol; cigs mental illness; mental & physical inactivity; obesity; BP; heart disease; small strokes

?

Hypothesis: Over a lifespan these cumulative risks create an Amyloid Cascade in the brain

Co-morbid pathologies tau, α- synuclein

Amnestic MCI - Alzheimer's Disease - AD+

www.neura.edu.au/aboriginal-ageing

Lifespan approach to targeting risk factors

Risk factors for dementia – damaging, reducing or limiting brain health

Childhood and adolescence:

- Childhood trauma and early life adversity
- Middle ear disease and hearing impairment
- Low level education

Middle life:

- Hearing impairment
- Hypertension
- Other cardiovascular risk factors including atrial fibrillation
- Psychosocial stressors
- Chronic kidney disease

Later life:

- Stroke
- Epilepsy
- Delirium
- History of depression/chronic grief
- Social isolation/loneliness
- Polypharmacy and anticholinergic medications

Throughout all stages of life:

Excessive alcohol intake

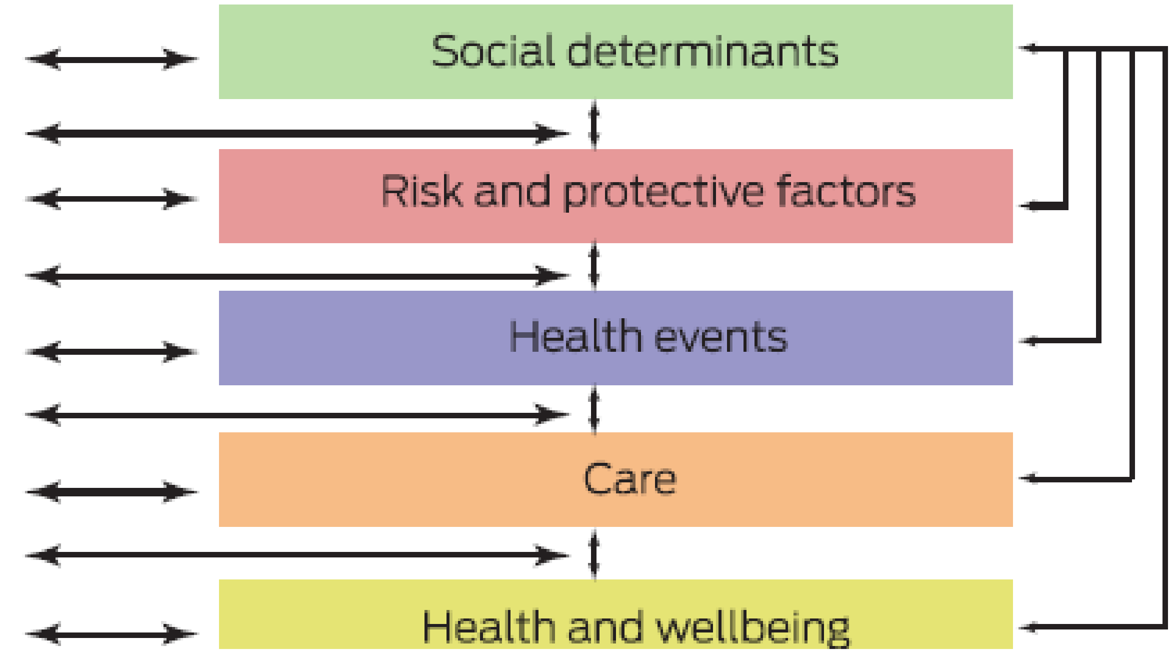
Obesity

Diabetes

Smoking

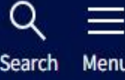
Head injury

Mayi Kuwayu Study: Conceptual model of Aboriginal and Torres Strait Islander cultural determinants of health



Findlay et al. 2021

Melbourne Medical School > Our Departments > Medicine > Research > Let's CHAT Dementia



Overview | Publications & Newsletters | Resources | Connect with Us | Upcoming Events

Community Resources

Information about dementia and brain health for the community

Clinical Resources

Resources developed as part of the Let's CHAT Dementia project. These

KICA tools

Kimberley Indigenous Cognitive Assessment tools for healthcare

Webinars

In collaboration with Dementia Training Australia, the Let's CHAT

https://medicine.unimelb.edu.au/school-structure/medicine/research/lets-chat-dementia

https://www.racgp.org.au/FSDEDEV/media/documents/Clinical%20Resources/Guidelines/Best-practice-guide.pdf

CHRONIC DISEASE MANAGEMENT - Optimising brain health *and* preventing cognitive impairment: Recommended elements for a GP Management Plan

These plans can commence at age 50, or earlier for those at higher risk.

Recommended screening questions for 715:
a) Do you have any worries about your memory or thinking?
b) Does anyone in your family have any worries about your memory or thinking?
If any concerns are raised and/or high risk for cognitive impairment identified offer further cognitive screening (eg KICA-Cog, MMSE, clock test, GPCOG).

Health issues / care needs / relevant conditions	**How often**	**Treatment and services, including actions to be taken by the patient**	**Arrangements for providing treatment/services (eg. who, contact details, etc)**
Healthy lifestyle advice: • physical activity • healthy diet • healthy weight • smoking cessation • safe alcohol • cognitive activity	Opportunistic	Provide advice including patient information resources for prevention of cognitive impairment/dementia, such as diet, exercise, cognitive activities, social activities, support groups, advocacy.	GP/Nurse/AHW
SEWB including quality of life, anxiety and depression	6-12 months	Questions about depression/ anxiety Consider K10 measurement/GDS/ PHQ or equivalent	GP/Nurse/AHW Mental health Geriatrician/ Psychiatrist
Medication review	6-12 months	Identify anticholinergic load, including antipsychotics, antidepressants, anticonvulsants, hypnotics.	GP Pharmacist
Vision	Annual	Eye check	GP/Nurse/AHW Optometrist
Hearing	Annual	Hearing check Refer to audiology annually if hearing impairment identified. Otherwise, 5-yearly.	GP/Nurse/AHW Audiologist
Planning	6-12 months	Clarify who is involved in decision-making, formalise medical decision-making process, consider need for power of attorney for financial and other affairs, consider advanced care plan.	Consider case conference Consider family meeting
Social factors	6-12 months	Social isolation, housing, supports	GP/Nurse/AHW Social worker

Kimberley Clinical Protocols

Cognitive Impairment and Dementia

Case Definitions

Cognitive Impairment

May be due to **reversible causes** (e.g. delirium, medications, depression) or indicate **dementia**.

Mild Cognitive Impairment (MCI)

- Objectively assessed cognitive impairment
- Modest cognitive deficits that **generally do not impact on a person's capacity to function in daily life**
- Conditions such as Alzheimer's and cerebrovascular disease, pain, depression, polypharmacy or delirium can lead to MCI.
- Not static- can improve or decline with time.

Note that MCI overlaps with the DSM-5 classification ***Mild Neurocognitive Disorder***.

Dementia

Dementia can occur in Aboriginal populations at 3 – 5 times the rate of other populations

- Progressive, non-reversible condition
- Encompasses disordered thinking, executive function and memory
- **Severe enough to interfere with a person's life** that is a change from previous levels
- Diagnosis should only be made after depression and delirium as causes for symptoms are excluded, although both commonly co-exist with dementia
- Most common causes are Alzheimer's disease and vascular dementia, although a mixture of varying pathologies are often present.

The DSM-5 term for this condition is ***Major Neurocognitive Disorder***.

Risk Factors

Risk factors for cognitive impairment and dementia include;

- Impaired hearing
- Lower education levels
- Family history of dementia
- Smoking
- Depression
- Social isolation
- Traumatic brain injury
- Hypertension, ischaemic heart disease, atrial fibrillation
- Childhood trauma
- Physical inactivity
- Air pollution
- Diabetes
- Obesity
- Heavy alcohol consumption
- Cerebrovascular disease
- Epilepsy
- Psychosocial stressors
- Polypharmacy

A life-course approach is recommended to prevent or delay cognitive impairment or dementia.

Refer to *Healthy Lifestyle Protocol* and *Chronic Disease Protocols* (*Type II Diabetes*, *Hypertension*, etc.).

In addition, regular review of vision, hearing, social and emotional well-being (SEWB) and medications with potential cognitive side effects is recommended.

Case Finding

A case finding approach to detecting MCI and dementia is recommended in **Aboriginal and Torres Strait Islander patients 50 years and over.**

Case finding may be facilitated by:

- Assessing risk factors for dementia (see above)
- Asking questions about memory or thinking problems (e.g. do you have any worries about your memory? Does anyone in your family have any concerns about your memory or thinking?)
- Staff raising concerns (e.g. due to missed appointments, patient appearing vague, etc)
- Family or other community (members) raising concerns.

Always consider using an interpreter, and/or involving an Aboriginal Health Practitioner

Note, that especially in those under 50 years, other causes may need to be considered (e.g. brain injury).

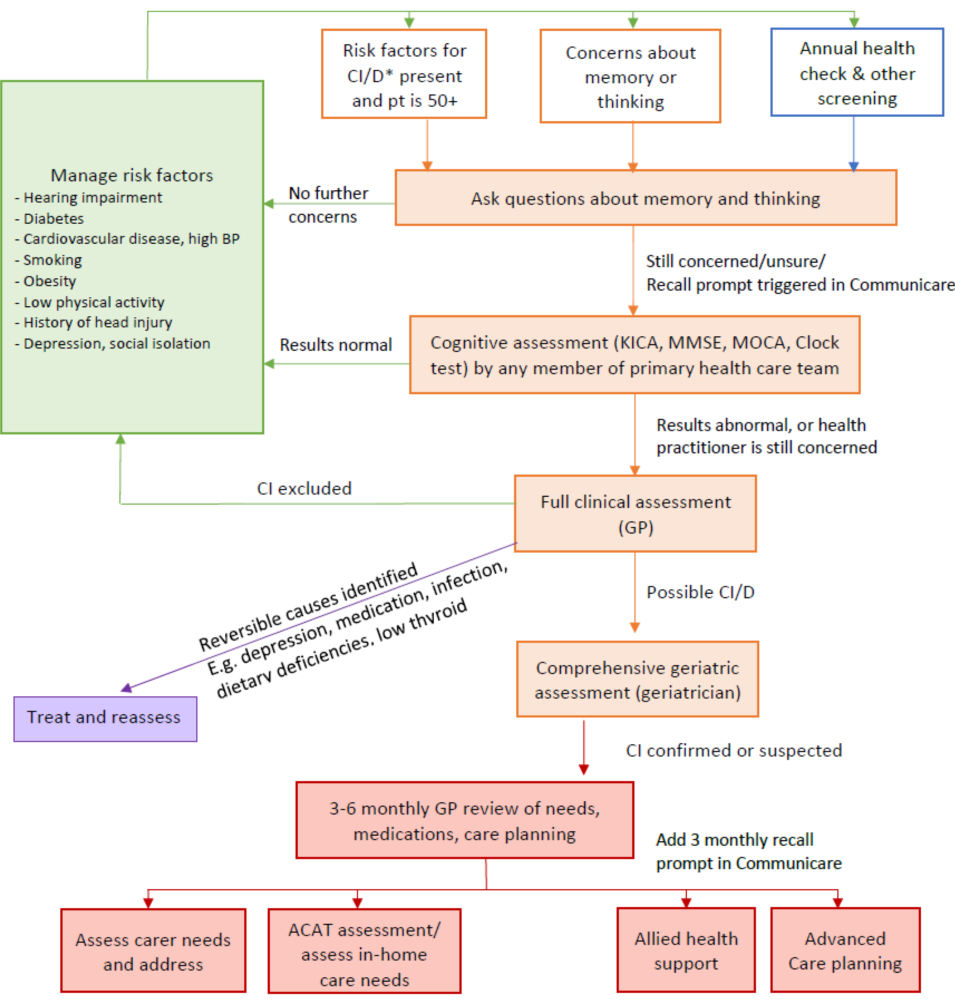
Initial Assessment

When cognitive impairment is identified or suspected:

1. Use **cognitive screen** e.g. KICA-Screen (< 21/25 indicates possible dementia) or KICA-Cog (< 34/39 indicates possible dementia)
2. Take **collaborative history** from patient and family including onset and progression of symptoms, medications, other illnesses and associated behavioural and psychological symptoms (BPSD). See KICA-Carer within full KICA (> 2/16 suggest further investigation)
3. **General examination** including cardiovascular, neurological and gait assessment
4. Differentiate from **depression or delirium** (see Box 1, Table 1)
5. Review **medication list** and adherence
6. Standard **pathology tests:**
   FBC, UEC, LFT, calcium, magnesium, HbA1c, B12, thyroid function and syphilis serology
7. Conduct **CT brain** where possible
8. When cognitive impairment is confirmed or highly suspected consider **referral to a geriatrician or physician** for further assessment and management of comorbidities.

Wuchopperen Health Service Ltd

Brain Health Screening Flowchart



Disclaimer- to be used in conjunction with the Clinical Dementia Protocol. The process of diagnosing CI/D can be non-linear, if there are concerns about memory manage risk factors and progress to comprehensive assessment. *CI/D = Cognitive impairment/dementia

Last reviewed: 16/05/2022- adapted from © KAHPF 2020 Kimberley Clinical Protocols

Brain health included in health checks for 50+ Aboriginal & Torres Strait Islander people: Information for health care teams

New and updated 715 health checks for older people that include brain health and questions about memory and thinking

Following a recent review by NACCHO and the RACGP, new, age-appropriate recommendations for Aboriginal and Torres Strait Islander annual health checks are available from the RACGP website, under *MBS Item 715 health check resources.*

The five new templates are culturally suitable and span the life course. They help clinicians and patients identify health priorities, consider common healthcare needs and support health promotion and disease prevention for Aboriginal and Torres Strait Islander people in primary care. The new templates have been developed in 5 age groups:

1. Birth - 5 years (infants and preschool)
2. 5-12 years (primary school age)
3. 12-24 years (adolescents and young people)
4. 25- 49 years (adults)
5. 50+ years (older people)

Health checks for older people (50+) updated with thinking & memory questions

The health check template for older Aboriginal and Torres Strait Islander people (50+) has been updated with questions and follow-up instructions about memory and thinking, intended to check brain health and screen for thinking and memory problems (cognitive impairment) and dementia.

As a research partner with the Let's CHAT Dementia project, your health service was instrumental in bringing about this change.

Questions about thinking and memory are an important addition to the template, as we know that memory and thinking problems and dementia are important problems in our community. Screening questions about memory and thinking include:

- Do you have any worries about your memory or thinking?
- Does anyone in your family have any worries about your memory or thinking?

If concerns are raised based on the answers to these questions, the health team can follow up with further memory and thinking tests and also suggest ways to improve brain function.

For more information, visit to the RACGP website: https://www.racgp.org.au/the-racgp/faculties/atsi/cultural-safety/resources/2019-mbs-item-715-health-check-templates.

Aboriginal and Torres Strait Islander health check – Older people (≥50 years)

A good health check:

Key:

About the health check	Yes	No	N/A	
Consent				

Patient details

5-Part Video Series: Yarning about memory and thinking problems and conducting a cognitive assessment

Part 1 - Memory and Thinking Problems and Our Mob

Dementia Risk Reduction Project

Inala Indigenous Health Service

- Urban health centre in Brisbane
- Education modules in orientation package
- QI activities with staff –dementia passport

Mulungu, Mamu, Gurriny Yealamucka Health services

- Rural FNQ
- Focus on education
  - Health worker training in dementia assessment
  - Community education sessions on dementia
    - Mums and Bubs
    - Deadly Elders
    - NAIDOC and other community events
  - Incorporating messages about dementia risk into existing chronic disease interventions

Flipping the paradigm to ageing well

- Dementia and issues of ageing are seen as community priority

- Community wishes for co-designed interventions using strength-based approach: Ageing well

Framework for Healthy Ageing in the Torres Strait 2019-2025

Project Logo
Jimi Thaiday
Erub Island

Phase One – Yarning Circles

- What does ageing well mean for people living in the Torres Strait?
- Environmental, cultural, spiritual and other priorities for ageing well

Phase Two - Audits

- Audit existing community and health services to identify gaps in care

Phase Three – Continuous Quality Improvement

- Synthesise Phases 1-2 to form community-driven quality improvement priorities
- Cycles of CQI interventions
- Develop final Framework for Healthy Ageing

Torres and Cape
Hospital and Health Service
HART
Healthy Ageing Research Team

What ageing well means to people living in the Torres Strait

Findings presented using a metaphor of the Wongai tree

Living a Torres Strait way of life: The ROOTS

- Connections to Island home, family, friends and the community
- Torres Strait Islander way of life fosters wellbeing and health for the participants

Practicing Torres Strait Identity: The TRUNK

- Torres Strait Islander Identity –practising cultural activities and traditions
- Stronger health in the olden days – a more traditional lifestyle

Living a healthy lifestyle: The BRANCHES

- Holistic approach – physical, mental, cultural and spiritual
- SEWB, physical activity, diet

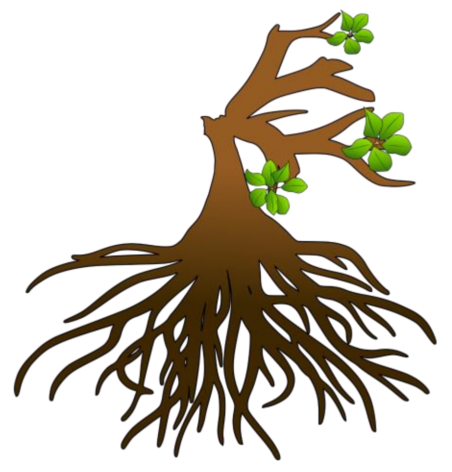
Displaying a strong leadership and role models: The LEAVES

- Provides sustenance to the community
- Sets a moral compass and provides structure
- Incorporates respect and other values

Passing on knowledge, tradition & cultural practices: The FRUIT

- The passing on of knowledge and culture is fundamental to the continuation of the Torres Strait Islander way of life and as such influenced the ageing trajectory

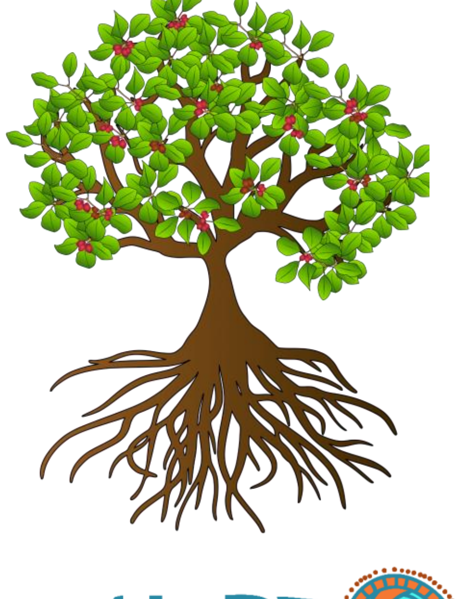
Experiencing adversity: DAMAGING EVENT e.g. CYCLONE



- Colonisation
- Influence of social media and technology
- Inequitable access to services
- Social determinants of health

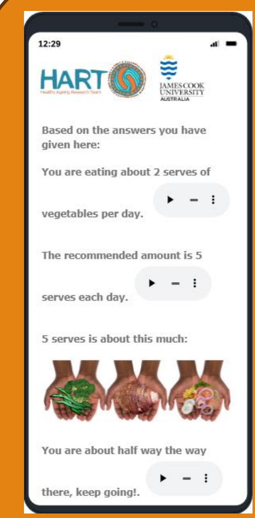
Demonstrating strong sustained life: REGROWTH

- Resilience
- Positive attitudes
- Personal motivation
- Taking responsibility for one's own health
- Cultural Determinants of Health



Quigley et al. under review

Strong Communities, Strong Health



Development and Validation of lifestyle assessment apps for the Torres Strait

- Locally and culturally relevant foods and activities
- Translated into Torres Strait Creole
- Individualised feedback based on Australian Dietary Guidelines

Community Asset Mapping

- Built and natural
- Cultural
- Socio-political

Yarning with community members re: community assets and health promotion

Health Program Co-design workshops
Bringing it all together
Commencing 2025

JAMES COOK UNIVERSITY AUSTRALIA

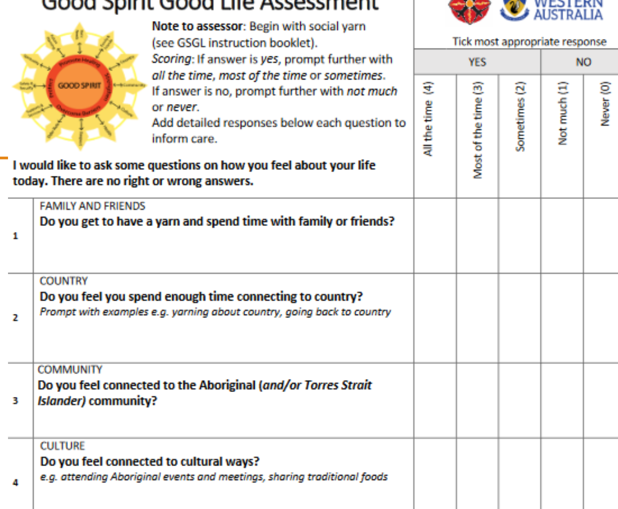
HART Healthy Ageing Research Team

Model of Care for Mild Cognitive Impairment

- 22% of Torres prevalence study sample diagnosed with MCI
- MCI Model of care to be co-designed with community
- Indigenous Health Worker led to ensure sustainability and engagement

Other Projects

- Guide for carer assessment
- Adaption of the QoL tool: *Good Spirit Good life*
- Revision of the KICA-cog
- Podcasts



Good Spirit Good Life Assessment

THE UNIVERSITY OF WESTERN AUSTRALIA

Note to assessor: Begin with social yarn (see GSGL instruction booklet).
Scoring: If answer is *yes*, prompt further with *all the time, most of the time* or *sometimes*.
If answer is no, prompt further with *not much* or *never*.
Add detailed responses below each question to inform care.

I would like to ask some questions on how you feel about your life today. There are no right or wrong answers.

Tick most appropriate response

		YES			NO	
		All the time (4)	Most of the time (3)	Sometimes (2)	Not much (1)	Never (0)
1	FAMILY AND FRIENDS **Do you get to have a yarn and spend time with family or friends?**					
2	COUNTRY **Do you feel you spend enough time connecting to country?** *Prompt with examples e.g. yarning about country, going back to country*					
3	COMMUNITY **Do you feel connected to the Aboriginal *(and/or Torres Strait Islander)* community?**					
4	CULTURE **Do you feel connected to cultural ways?** *e.g. attending Aboriginal events and meetings, sharing traditional foods*					

Kimberley Indigenous Cognitive Assessment

"Any worries yarn" development

- Screening tool
- Yarning approach
- Four domains
  - Community engagement and behaviour – sad worries
  - Stress worries
  - Risk
  - Feeling strong

Feeling strong

Taking a strengths-based approach to supporting strong SEWB was a feature of community yarns. Yarning about this area helps the client to recognise their strengths, discuss activities that they enjoy, identify what keeps them connected to family, community, and their Island/Country and what they can do to keep strong.
It is a good idea to finish the yarn by talking about what clients already do or could do to support their wellbeing.

Activities like:

- Connecting with culture through yarning, singing, dancing, cooking, and sharing food with the community, going to church, praying.
- Connecting with their Island/home/Country.
- Speaking with ancestors.

are all important to staying strong.

Suggested prompt questions
What cultural activities are you involved with and enjoy doing? Who do you do cultural activities with? What do you like to do when you feel low? How do these activities help you feel strong again?

What makes you feel strong? (family, culture, community, Island/home/Country)

DREAMT – Telehealth collaboration

https://coh.centre.uq.edu.au/project/dreamt

HOME ABOUT THE PROJECT LIVING WITH DEMENTIA RESEARCH AND OTHER RESOURCES TRAINING MODULES CONTACT US

Growing old well is something we all want for our communities. What we know, is that growing old well is influenced by many things that happen throughout our lives. Getting dementia can have an effect on our mind, body and spirit.

Staying Strong: Where to get support

Sometimes it can be hard knowing where to go to get support.

Research and other Resources

There is a lot of research about dementia, and some just about dementia in Aboriginal and Torres Strait Islander communities.

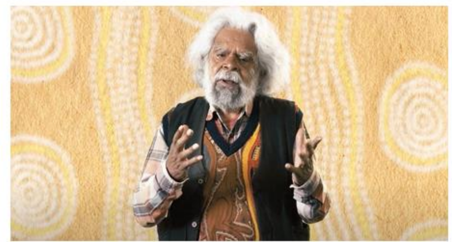
About Us

The Aboriginal Health and Ageing Program conducts research and works directly with Aboriginal and Torres Strait Islander communities.

https://caringforspirit.neura.edu.au/

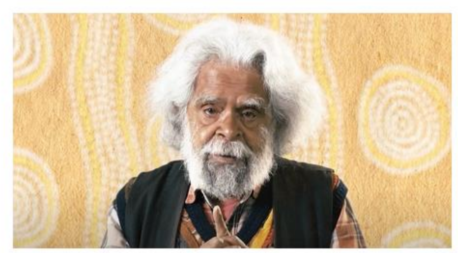
Let's CHAT Dementia in Aboriginal and Torres Strait Islander Communities

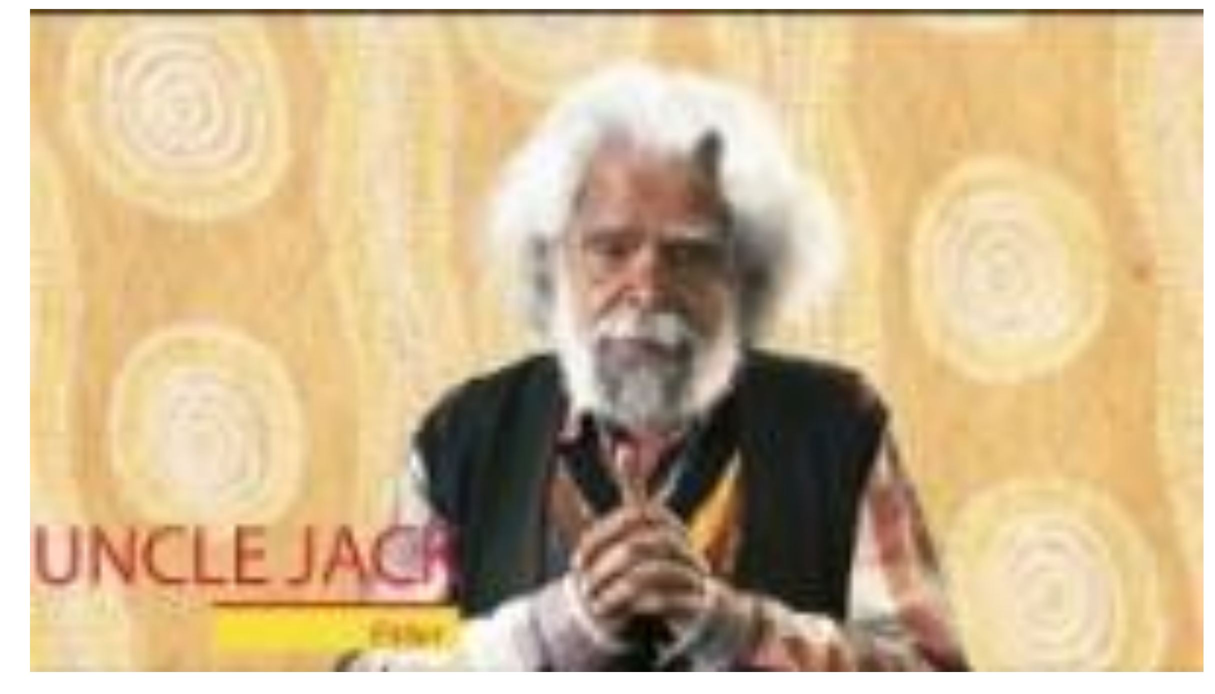
Dementia - It's not a shame job



Hear from Uncle Jack Charles as he describes what you can do if you're worried about your memory or thinking.

Let's Talk about Brain Health





https://medicine.unimelb.edu.au/school-structure/medicine/research/lets-chat-dementia/resources/Community-resources

Eso,

Thank you

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