Australian Government
Australian Institute of Health and Welfare

Australian Burden of Disease Study:
Knowledge translation

1st European Workshop on Burden of Disease, Brussels, September 2025

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AIHW
Stronger evidence, better decisions, improved health and welfare

Australian Institute of Health and Welfare



Stronger evidence, better decisions, improved health and welfare

With more than 37 years' experience, AIHW is Australia's authoritative source of health and welfare data and analysis

https://www.aihw.gov.au/

Australian Burden of Disease Study

Stakeholder relationships

- AIHW trusted source of reliable, high-quality information
- Understanding the different needs of stakeholders (e.g. national versus state/territory and local are level) and what is policy-relevant
  - Provide support for prevention and health promotion activities
  - Assess inequalities in health
  - Identify at-risk groups for new policy proposals
  - Assess impacts of policy proposals through scenario modelling
  - Compare disease burden to disease expenditure
- Maintain strong and long-term relationships with data providers (AIHW-wide)
- BOD and disease-specific advisory groups
- Internal AIHW collaboration and relationships
  - Disease expenditure
  - Disease-specific units in AIHW
  - Statistical advisory, geography and communications units

Mandate for the Australian Burden of Disease Study

- In 2013, strong policy need for updated and more frequent burden of disease information in Australia
  - Previous study published in 2007 with 2003 data
- AIHW funded by Australian Government Department of Health to assess the best approach for Australia given recent Global study (GBD 2010)
  - Undertook detailed review of international methods
- ABDS 2011 agreed to be funded - using the global approach but adapted to Australian context and aligned with health reporting and monitoring requirements in Australia
- Project governance established
  - Project principles (transparency, consistency with global methods as far as possible)
  - Overarching Expert Advisory Groups
  - Disease-specific and risk factor expert panels

AIHW

ABDS system is a national data asset

- ABDS 2011 - rebuilt Australia's national capacity in BOD analysis
  - 2 dedicated Units in AIHW (for national study and First Nations study)
- Built infrastructure ('ABDS' system) to enable efficient and ongoing updates
  - includes conceptual models, computer programs and processes to construct input data, the resulting database (calculation of YLL, YLD etc)
- ABDS database approved as an ongoing de-identified data collection by the AIHW Ethics Committee
- Currently funded on 3 yearly cycles although strong push to get ongoing funding
  - BoD targets and indicators included in long-term health agreements and strategies

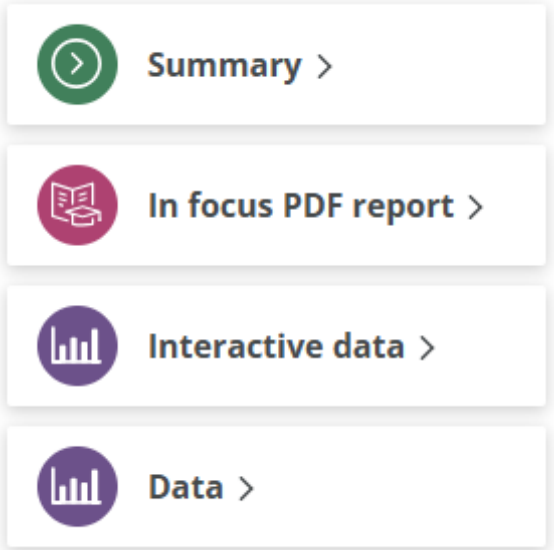
AIHW

Why was the AIHW chosen for undertaking the ABDS?

- Long history of developing burden of disease estimates
- Development and retention of burden of disease knowledge and experience within the AIHW
- Holds many of the national health data collections in Australia
- Trusted source of evidence
- Strong stakeholder engagement
- Established disease specific expert advisory groups
- Capability for doing more in-depth analyses and extension projects

Importance of a good communications strategy

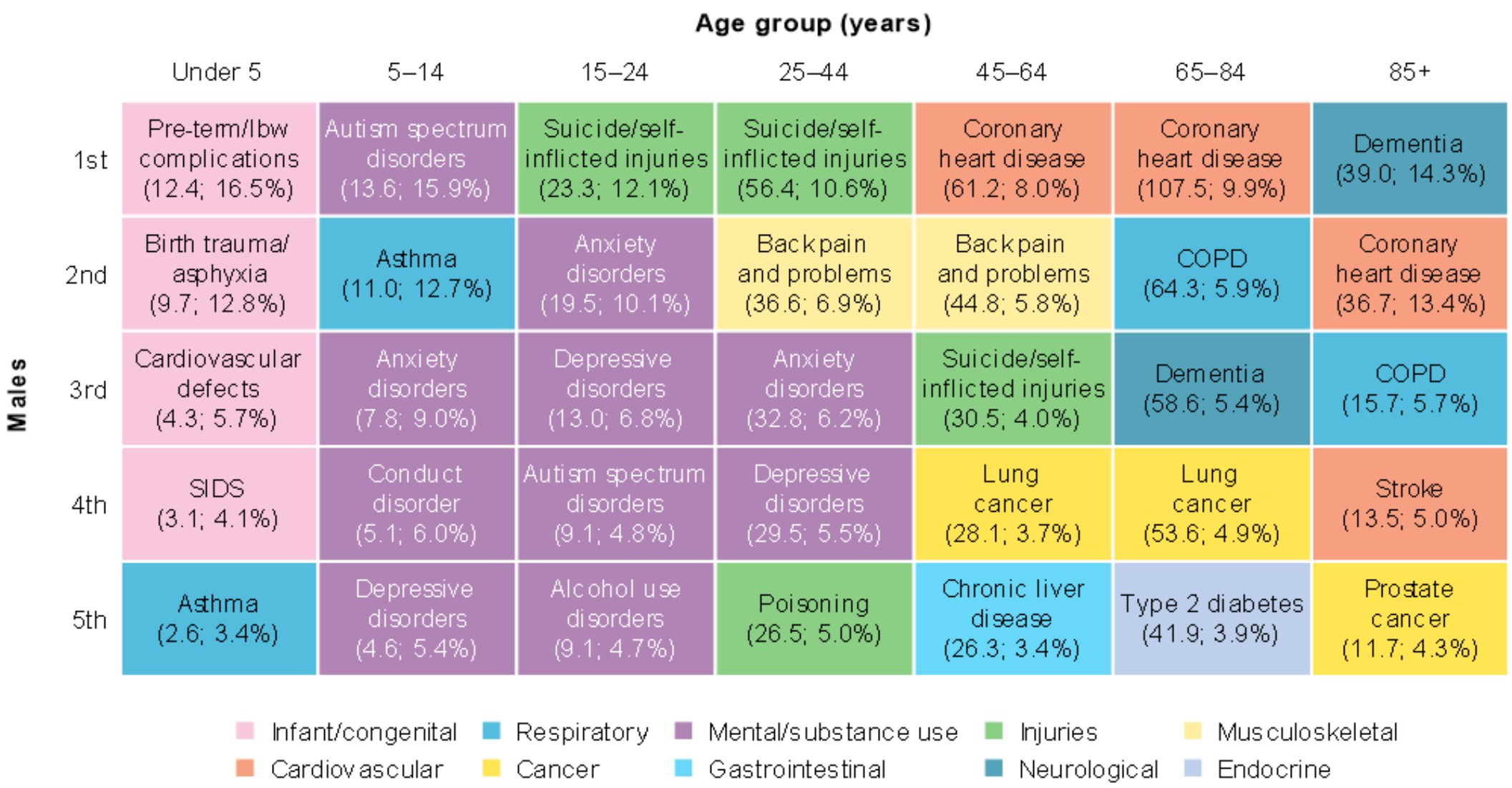
A challenge in ensuring ABDS data is used to inform policy is getting the data out to the right people



- Summary web report
- In focus PDF report
- Interactive data visualisations
- Excel data tables
- Webinars on key findings to national and state health policy departments
- Media release

  Notification of release sent to health ministers office with policy brief
- Social media
  - Twitter infographics, LinkedIn articles
  - Infographics for disease awareness days/weeks
- Presentations as part of training for senior executives on how to use evidence for policy formulation

Example of well received visual presentation of results



Presenting the quality using a star rating

ABDS 2018: Quality information for YLD estimates

Select the disease group and disease to see the quality scoring & information:

Disease group: Endocrine disorders

Disease: Type 2 diabetes mellitus

Type 2 diabetes mellitus - estimates for national population

Data score: ★★★ Method score: ★★★

Description of data and methods used:

National prevalence estimates were obtained from the NHS 2017–18. Moderate transformations were required to overcom variability in the data source caused by small numbers. For some sequelae, prevalence estimates were obtained from the Fremantle Diabetes Study; therefore, moderate transformations were required to produce national prevalence estimates. F other sequelae (amputation due to diabetes), prevalence estimates were obtained from the NHMD with a high likelihood of hospitalisation. Ratios from the linked hospitals and deaths data from the NIHSI AA v0.5 were used to transform estimates from unlinked hospitalisation data into prevalence.

Type 2 diabetes mellitus - estimates for Aboriginal and Torres Strait Islander population

Data score: ★★★ Method score: ★★★

Description of data and methods used:

Indigneous prevalence estimates were obtained from the NATSIHS 2018–19. Moderate transformations were required to overcome variability in the data source caused by small numbers. For some sequelae, prevalence estimates were obtained from the Fremantle Diabetes Study; therefore, moderate transformations and an assumption that these sequelae occurred a similar rate in the Indigenous and Australian populations were required to produce Indigenous prevalence estimates. For other sequelae (amputation due to diabetes), prevalence estimates were obtained from the NHMD with a high likelihood of hospitalisation. Ratios from the Western Australian linked hospitals and deaths data were used to transform estimates fro unlinked hospitalisation data into prevalence. Validated adjustment factors for the NHMD were used to adjust for Indigenou under-identification.

ABDS 2018: Quality information for risk factor exposure estimates

Select the risk factor to see the quality scoring & information:

Risk factor: Tobacco use

Tobacco use - estimates for national population

Data score: ★★★★ Method score: ★★★★

Description of data and methods used:

National exposure estimates were obtained from the National Drug Strategy Household Survey (NDSHS) 2019 and 2013 to include a 5-year lag. Lung cancer mortality rates were based on national cancer mortality data.

Tobacco use - estimates for Aboriginal and Torres Strait Islander population

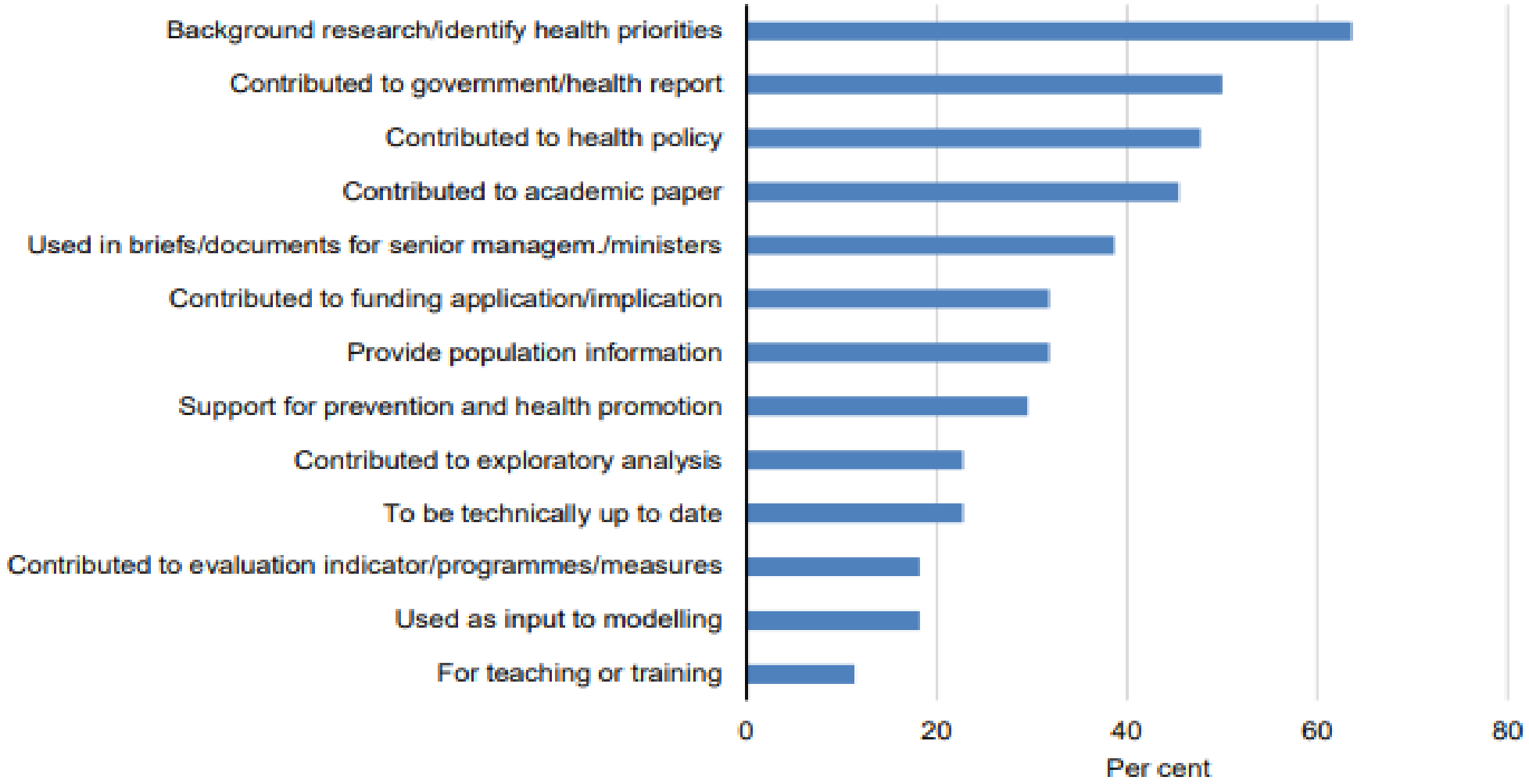
Data score: ★★★★ Method score: ★★★

Description of data and methods used:

National exposure estimates were obtained from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2002 and 2008 and AATSIHS 2012–13 to include a 5-year lag. Lung cancer mortality rates were based on Indigenous cancer mortality data. Exposure to second-hand smoke was estimated from the Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS) 2012–13 and NATSIHS 2018–19 for people living in households where member smoked indoors.

How is ABDS data being used by our stakeholders?

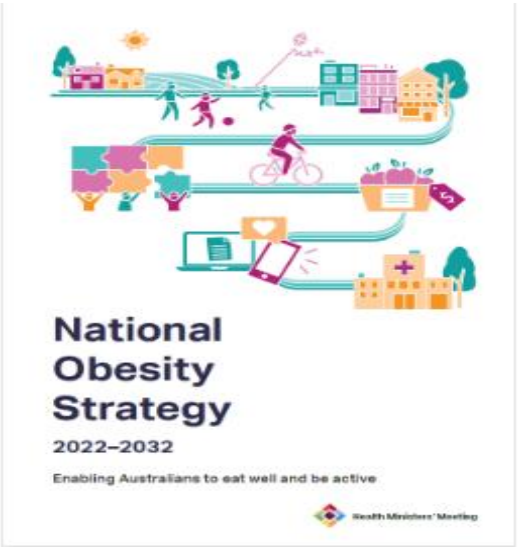
Figure 4: How ABDS data and reports are used by the survey respondents.



Examples of BoD data used in government reports

- Indicator in Measuring what matters report produced annually by The Treasury
- Australia, State of the Environment report by the Department of Environment and Energy
- 6 targets in the National Preventive Health Strategy 2021–2030, a major national policy aiming to improve the health of all Australians
- Inform the National Tobacco Strategy 2023-2030 and National Obesity Strategy 2022–2032
- Chief Health Officer reports by State and territory health departments (ACT Health 2018, NSW Health 2014, QLD Health 2018)
- Australian Productivity Commission report on measuring productivity in healthcare.





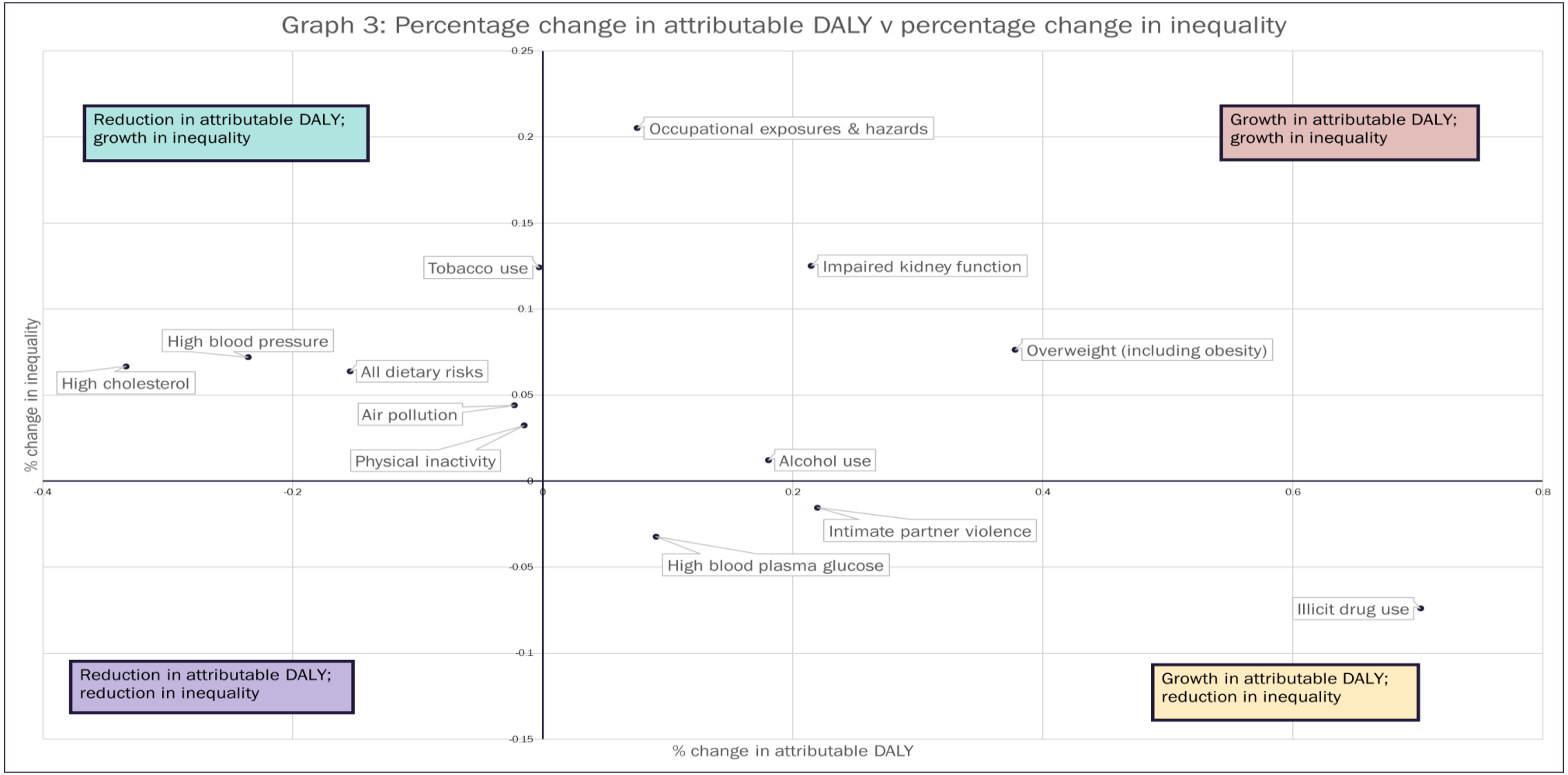
Targets in the National Preventive Health Strategy

Aim 2: All Australians live in good health and wellbeing for as long as possible

Table 1.2: Tracking progress against the target in Aim 2

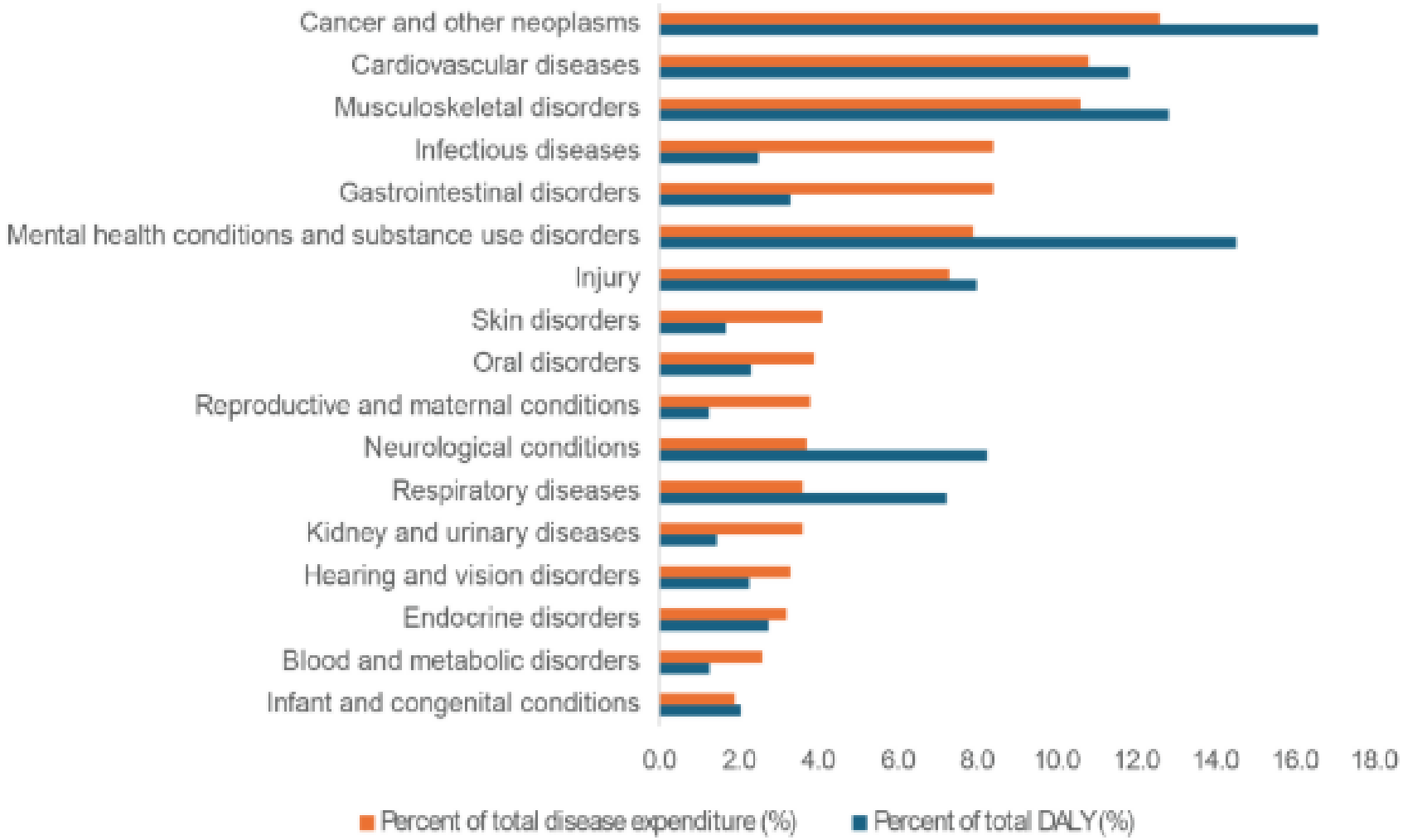
Target	Baseline value[1]	Latest value[2]	Tracking against target[3]	Comparison change
Target 1: Australians will have at least an additional two years of life lived in full health by 2030.	In 2018, HALE[5] at birth was **71.2** years for males (88.3% of life lived in full health) (AIHW 2024b).	In 2024, HALE[5] at birth was **71.7** years for males (87.8% of life lived in full health) (AIHW 2024b).	No change 	Males: 0.5 years † (increase)
Target 1: Australians will have at least an additional two years of life lived in full health by 2030.	In 2018, HALE[5] at birth was **73.6** years for females (86.7% of life lived in full health) (AIHW 2024b).	In 2024, HALE[5] at birth was **73.8** years for females (86.3% of life lived in full health) (AIHW 2024b).	No change 	Females: 0.2 years † (increase)

Prioritising risk factors for investment & intervention



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Comparisons to disease expenditure: advocating for funding



Notes: Disease expenditure in this chart excludes spending on well care, treatment of risk factors and examination and observation NEC.

Sources: AIHW Disease Expenditure database; AIHW 2023a.

Australian Burden of Disease Study

Challenges

- **Funding model**
  - 3-yearly cycles
  - Strong push for ongoing funding