

Suitability of the WHO 25 x 25 chronic disease targets & indicators for Australia



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About the Australian Health Policy Collaboration

The Australian Health Policy Collaboration was established at Victoria University in 2015 to build from the work of the health program at the Mitchell Institute over the previous two years. The Collaboration is an independent think tank that aims to attract much required attention to the critical need for substantial and urgent health policy reform focused on addressing chronic disease on a national scale.

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Table of Contents

Table of Contents.....	i
List of Figures.....	ii
List of Tables.....	iii
List of Acronyms	iv
1. Introduction	1
2. Chronic Disease Initiatives and Targets in Australia	3
3. WHO 25 x 25 Targets and Indicators	5
4. Mortality and morbidity	8
Premature mortality from NCDs.....	8
Additional indicators.....	9
5. Behavioural risk factors	11
Harmful use of alcohol.....	11
Physical inactivity.....	12
Salt/sodium intake.....	13
Tobacco use	14
6. Biological risk factors.....	16
Raised blood pressure.....	16
Diabetes and obesity.....	17
Additional indicators.....	18
7. National systems response	20
Drug therapy to prevent heart attacks and strokes.....	20
Essential NCD medicines and basic technologies to treat major NCDs	20
Additional indicators.....	21
8. Inclusion of additional targets and indicators	25
9. Conclusion	31
10. References.....	33

List of Figures

Figure 1: Voluntary global targets for prevention and control of NCDs to be attained by 2025	5
Figure 2: Age-specific mortality rates (per 100,000 population) from cancer (ICD-10 C00-D48), cardiovascular disease (ICD-10 I00-I99), endocrine, nutritional and metabolic diseases (ICD-10 E00-E90), and respiratory system diseases (ICD-10 J00-J99) in Australia, 1980-2012 for persons aged 30-70 years old.....	9
Figure 3: Age-standardised (Australian 2001 standard population) cancer incidence, by type of cancer, per 100,000 population, 5 most common cancers	10
Figure 4: Alcohol per capita consumption for persons aged 15+ in Australia	11
Figure 5: Prevalence of heavy episodic drinking and long-term risky drinking in Australia	12
Figure 6: Prevalence of current tobacco smoking among adolescents and adults in Australia	14
Figure 7: Prevalence of hypertensive disease and diabetes mellitus in Australia for persons aged 18+ years.....	16
Figure 8: Prevalence of overweight/obesity in adolescents and adults (age-standardised, Australian 2001 standard population) in Australia	18
Figure 9: Mean proportion of total energy intake from saturated fat and prevalence of inadequate fruit or vegetable consumption among adults in Australia	19
Figure 10: Consumption of morphine-equivalent strong opioid analgesics, excluding methadone, per death from cancer in Australia	22
Figure 11: Vaccination coverage against Hepatitis B Virus monitored by the proportion of infants in Australia administered three doses	23
Figure 12: Cervical cancer immunisation and screening in Australia monitored by the proportion of females age 15 administered three doses of the Human Papillomavirus vaccine and the proportion of females aged 20-69 (age-standardised, Australian 2001 standard population) who were screened for cervical cancer over a 2-year period.....	23
Figure 13: Prevalence of current tobacco smoking in Australia for persons aged 14 years and older, 2007 to 2013, by socioeconomic status.....	25
Figure 14: Prevalence of insufficiently physically active persons in Australia aged 18 years or older by selected characteristics.....	26
Figure 15: Prevalence of current smokers in Australia for persons aged 14 years or older by selected characteristics	26
Figure 16: Prevalence of long-term risky drinking in Australia for persons aged 14 years or older by selected characteristics.....	27
Figure 17: Prevalence of heavy episodic drinking in Australia for persons aged 14 years or older by selected characteristics.....	27

Figure 18: Prevalence of overweight/obesity in Australia for children aged 2 to 17 years old by selected characteristics.....	28
Figure 19: Prevalence of overweight/obesity in Australia for persons aged 18 years or older by selected characteristics.....	28
Figure 20: Prevalence of diabetes mellitus in Australia for persons aged 18 years or older. ATSI/Non-ATSI data are for persons aged 2 years or older.....	29
Figure 21: Prevalence of hypertensive disease in Australia for persons aged 18 years or older. ATSI/Non-ATSI data are for persons aged 2 years or older	29
Figure 22: Prevalence of abnormal total cholesterol (defined as blood total cholesterol concentration ≥ 5.5 mmol/L) in Australia for persons aged 18 years or older	30
Figure 23: Prevalence of diabetes mellitus (defined as fasting plasma glucose concentration ≥ 7.0 mmol/L or on medication for raised blood glucose) in Australia for persons aged 18 years or older .	30

List of Tables

Table 1: Prevalence of insufficiently physically active persons in Australia.	13
Table 2: Prevalence of raised blood pressure and raised blood glucose/diabetes among adults aged 18 years or more in Australia.....	17
Table 3: Prevalence of raised total cholesterol among adults aged 18 years or more in Australia.	19
Table 4: Mean daily intake of saturated fat, trans fatty acids, total sugars and sodium among children and adults in Australia.	22

List of Acronyms

ABS	Australian Bureau of Statistics
ACIM	Australian Cancer Incidence and Mortality
ACIR	Australian Childhood Immunisation Register
AIHW	Australian Institute of Health and Welfare
ANPHA	Australian National Preventive Health Agency
APC	Alcohol Per capita Consumption
AusDiab	Australian Diabetes, Obesity and Lifestyle Study
COAG	Council of Australian Government
dL	decilitre(s)
DoH	Department of Health
DPMC	Department of Prime Minister and Cabinet
FARE	Foundation for Alcohol Research and Education
FMRC	Family Medicine Research Centre
g	gram(s)
GRIM	General Record of Incidence of Mortality
HBV	Hepatitis B Virus
HepB3	Hepatitis B virus vaccine third dose
Hg	Mercury
HPV	Human Papillomavirus
IAHPC	International Association for Hospice and Palliative Care
ICD	International Classification of Diseases
INCB	International Narcotics Control Board
Kg	Kilogram(s)
L	Litre(s)
m	metre(s)

mg	milligram(s)
mm	millimetre(s)
mmol	millimole(s)
NCD	Non-Communicable Diseases
NCIRS	National Centre for Immunisation Research and Surveillance
NCSCH	National Cancer Statistics Clearing House
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NNPAS	National Nutrition and Physical Activity Survey
NPHT	National Preventative Health Taskforce
NVDPA	National Vascular Disease Prevention Alliance
PHVOs	Partially Hydrogenated Vegetable Oils
PPSG	Pain and Policy Studies Group
UN	United Nations
WHO	World Health Organization

1. Introduction

Chronic diseases are a large and increasing burden on Australia's healthcare system and economy that now threaten to overwhelm the health budget, health services, and the health workforce. Much of this burden is preventable through effective, evidence-based changes to policies that enable the better prevention and management of chronic diseases (Willcox, 2014).

In October 2014, the Australian Health Policy Collaboration (formerly the Health Program at the Mitchell Institute) published the policy paper *Chronic diseases in Australia: The case for changing course* by Dr Sharon Willcox. The paper explores the factors contributing to the prevalence of chronic diseases in Australia, proposing recommendations for change (Willcox, 2014).

A policy forum was hosted to consider the evidence outlined in the report, and to discuss the barriers and opportunities to influencing policy change. One of the key themes from the forum was the need for a set of targets and indicators to measure and track the prevention and management of chronic diseases in Australia (Tolhurst, 2014).

A second report by Dr Willcox, *Chronic diseases in Australia: Blueprint for preventive action*, was published in June 2015, calling for work on three strategic priorities: driving healthy behaviours and healthy environments; creating accountability for action and monitoring progress; and generating community support and action on prevention (Willcox, 2015). These strategic priorities received support from more than forty organisations across Australia who co-signed a Statement of Commitment for national action (Tolhurst, 2015). The development of chronic disease targets and indicators were viewed as particularly important elements of accountability for prevention.

The World Health Organization's (WHO) *Global Action Plan for the Prevention and Control of NCDs 2013-2020* aims to reduce the burden of non-communicable diseases (NCDs) by 2025, through action on nine targets measured by 25 indicators of performance (WHO, 2013a). While the WHO 25 x 25 targets were cited as a key set of measures for Australia to assess and improve the health of the population, they must be tailored to the Australian context (Tolhurst, 2014; 2015).

Aim

This paper reviews the nationally available data relevant to the WHO 25 x 25 targets and indicators, identifying any gaps that exist. Trends against these targets and indicators will be outlined where possible, which will help determine the feasibility in achieving and monitoring proposed targets.

The data presented in this report are not intended, nor should they be considered, as a final scorecard of Australia's progress in better preventing and managing chronic diseases. Neither should it be interpreted as advocating for any inclusion, exclusion, or methodology of targets and indicators. Instead, this paper should be seen as providing an overview of the type of data available and an example of how it may be used to monitor chronic diseases in Australia.

Rather than accessing data through payments or submissions to data custodians in Australia, this report utilises data that is readily available, while acknowledging the existence of more appropriate data that may exist. This is intended to stimulate the following questions when considering a suite of chronic disease targets and indicators for Australia:

- What elements (e.g. health system, health outcomes, risk factors) should be covered in such a framework?
- What other useful work, from Australia and elsewhere, should be considered in addition to the 25 x 25 approach?
- Are some of the WHO targets and/or indicators irrelevant to Australia?
- How should equity be included?
- What features would make for a useful report card?

This report will then be used to provoke discussion and inform the development of targets and indicators, based on the WHO model, but tailored to Australia's population health needs.

The process of developing these Australian chronic disease targets and indicators will be through a collaborative process involving a coalition of health organisations in Australia, beginning with (but not limited to) the more than forty co-signatories to the Statement of Commitment.

2. Chronic Disease Initiatives and Targets in Australia

The last 30 years has seen a number of chronic disease reports and initiatives in Australia, many of which have included national targets and indicators to track Australia's progress. The most recent of these was the 2009 National Preventative Health Taskforce (NPHT) report *Australia: The healthiest country by 2020* which proposed four key targets (in addition to interim targets and performance measures) to be achieved by the year 2020:

- Halt and reverse the rise in overweight and obesity.
- Reduce the prevalence of daily smoking among adult Australians aged 18 years or older from 17.4 per cent in 2007 to 10 per cent or lower.
- Reduce the proportion of Australians who drink at short-term risky/high-risk levels to 14 per cent, and the proportion of Australians who drink at long-term risky/high-risk levels to 7 per cent.
- Contribute to the 'Close the Gap' target for Indigenous people, reducing the life expectancy gap between Indigenous and non-Indigenous people.

The intervening 6 years has seen the closure of the Australian National Preventive Health Agency (ANPHA), and mixed progress against the four targets.

Target 1: Halt and reverse the rise in overweight and obesity by 2020

Based on the 2007-08 National Health Survey, 24.7 per cent of Australian children (aged 5 to 17 years old) were classified as overweight or obese while 61.3 per cent of Australian adults (aged 18 years or older) were classified as overweight or obese (ABS, 2009b). In order to meet the NPHT target of halting and reversing the rise in overweight and obesity by 2020, the proportion of Australian children and adults classified as overweight or obese must reduce from 24.7 per cent and 61.3 per cent, respectively. Rather discouragingly, the 2011-12 Australian Health Survey showed that the prevalence of overweight and obesity has continued to rise with 25.7 per cent of children and 62.8 per cent of adults classified as overweight or obese (ABS, 2013a).

Target 2: Reduce the prevalence of daily smoking among adult Australians aged 18 years and older from 17.4 per cent in 2007 to 10 per cent or lower by 2020

According to the National Drug Strategy Household Survey (NDSHS), 17.5 per cent of Australian adults (aged 18 years or older) were daily smokers in 2007 (AIHW, 2014a). This reduced to 15.9 per cent in 2010 and 13.3 per cent by 2013 (AIHW, 2014a). This reflects a long-term trend, with the number of daily smokers aged 18 years or older having halved (26.1 per cent to 13.3 per cent) between 1993 and 2013 (AIHW, 2014a).

Target 3: Reduce the proportion of Australians who drink at short-term risky/high-risk levels to 14 per cent, and the proportion of Australians who drink at long-term risky/high-risk levels to 7 per cent by 2020

In 2009, the National Health and Medical Research Council updated the guidelines on recommended alcohol intake (NHMRC, 2009). Australians are advised to drink no more than four standard drinks on a single occasion in order to avoid short-term risk/high-risk of harm caused by alcohol (NHMRC, 2009). Australians are also advised to drink no more than two standard drinks per day average in order to avoid long-term risk of harm caused by alcohol (NHMRC, 2009).

According to the National Drug Strategy Household Survey (NDSHS), 29.6 per cent of adult Australians (aged 18 years or older) drank at short-term risky/high-risk levels in 2007 (AIHW, 2014d). This remained at 29.6 per cent in 2010 before reducing to 27.3 per cent in 2013 (AIHW, 2014d). The proportion of Australian adults who drank at long-term risky/high-risk levels in 2007 was 21.6 percent, which reduced to 21.5 per cent in 2010 and 19.1 per cent in 2013 (AIHW, 2014d).

Target 4: Contribute to the 'Close the Gap' target for Indigenous people, reducing the life expectancy gap between Indigenous and non-Indigenous people

In 2008, the Council of Australian Government (COAG) agreed to a set of six 'Closing the Gap' targets to address the levels of disadvantage experienced by Indigenous Australians compared to their non-Indigenous counterparts (DPMC, 2015). Of these, two relate to health:

- Halve the gap in mortality rates for Indigenous children under five within a decade (by 2018); and
- Close the gap in life expectancy within a generation (by 2031).

There have been significant improvements in Indigenous child mortality in recent years with the rate having declined by 31 per cent between 1998 and 2013 (DPMC, 2015). This is a significant (35 per cent) narrowing of the gap in child mortality between non-Indigenous and Indigenous children over this period (DPMC, 2015). Changes in Indigenous child mortality since the 2008 baseline are currently within the range required to meet the target by 2018.

In 2010–12, Indigenous life expectancy was estimated to be 69.1 years for males and 73.7 years for females; a gap of 10.6 years for males and 9.5 years for females between Indigenous and non-Indigenous Australians (DPMC, 2015). Over the last five years, there has been a small reduction in the gap by 0.8 years for males and 0.1 years for females (DPMC, 2015). While this indicates progress, this closing of the gap will need to gather considerable pace if the target is to be met by 2031.

3. WHO 25 x 25 Targets and Indicators

In May 2013, UN Member States formally adopted the WHO global monitoring framework for the prevention and control of noncommunicable diseases (NCDs, defined by the WHO as non-infectious, non-transmissible medical conditions or diseases), including nine global targets and 25 indicators, as part of a comprehensive "Omnibus" Resolution at the 66th World Health Assembly (Figure 1).







Framework Element	Target	Indicator
MORTALITY & MORBIDITY		
Premature mortality from noncommunicable disease	 1. A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	1. Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases
Additional indicator		2. Cancer incidence, by type of cancer, per 100 000 population
BEHAVIOURAL RISK FACTORS		
Harmful use of alcohol ¹	 2. At least 10% relative reduction in the harmful use of alcohol ¹ , as appropriate, within the national context	3. Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context 4. Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context 5. Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context
Physical inactivity	 3. A 10% relative reduction in prevalence of insufficient physical activity	6. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily 7. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Salt/sodium intake	 4. A 30% relative reduction in mean population intake of salt/sodium ²	8. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years
Tobacco use	 5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	9. Prevalence of current tobacco use among adolescents 10. Age-standardized prevalence of current tobacco use among persons aged 18+ years
BIOLOGICAL RISK FACTORS		
Raised blood pressure	 6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	11. Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure
Diabetes and obesity ⁴	 7. Halt the rise in diabetes & obesity	12. Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose) 13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex) 14. Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m ² for overweight and body mass index ≥ 30 kg/m ² for obesity)
Additional indicators		15. Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years ³ 16. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day 17. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl); and mean total cholesterol concentration

Figure 1: Voluntary global targets for prevention and control of NCDs to be attained by 2025.

Source: Global action plan for the prevention and control of NCDs 2013-2020 (WHO, 2013a).

Framework Element	Target	Indicator
NATIONAL SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes	 8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	18. Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk $\geq 30\%$, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases	 9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities	19. Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities
Additional indicators		20. Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer 21. Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programmes 22. Availability, as appropriate, of cost-effective and affordable, of vaccines against human papillomavirus, according to national programmes and policies 23. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt 24. Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants 25. Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies

Figure 1 (cont.): Voluntary global targets for prevention and control of NCDs to be attained by 2025.

Source: Global action plan for the prevention and control of NCDs 2013-2020 (WHO, 2013a).

The WHO framework requires all countries to set national NCD targets to be achieved by 2025, using 2010 data as a baseline; develop and implement policies to attain them; and establish a monitoring framework to track progress. A recent progress report notes that while some countries are making progress, the majority are off course to meet the global NCD targets (WHO, 2014).

The *Global status report on NCDs 2014* provides some insights as to how Australia is progressing (WHO, 2014). The report shows that:

- In 2010 (baseline) the probability of dying between the ages of 30 and 70 from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases was estimated to be 9.9 per cent. By 2012 this had reduced slightly to 9.4 per cent.
- In the calendar year 2010 (baseline), Australians were estimated to have consumed 12.2 litres of pure alcohol per person aged 15 years or older. By 2012, this was estimated to have reduced to 11.9 litres of pure alcohol per capita.
- The age-standardised prevalence of tobacco use amongst adults aged 18 years or older was estimated to be 17.7 per cent in 2010, which decreased to 16.5 per cent in 2012.
- The age-standardised prevalence of raised blood pressure (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) amongst adults aged 18

years or older was estimated to be 17.5 per cent in 2010 and increased to 19.0 per cent in 2014.

- The age-standardised prevalence of raised blood glucose (defined as fasting plasma glucose concentration ≥ 7.0 mmol/L or on medication for raised blood glucose) amongst adults aged 18 years or older was estimated to be 6.3 per cent in 2010 and increased to 6.6 per cent in 2014.
- The age-standardised prevalence of overweight (defined as body mass index ≥ 25 Kg/m²) amongst adults aged 18 years or older was estimated to be 61.6 per cent in 2010 and increased to 64.0 per cent in 2014.
- The age-standardised prevalence of obesity (defined as body mass index ≥ 30 Kg/m²) amongst adults aged 18 years or older was estimated to be 26.0 per cent in 2010 and increased to 28.6 per cent in 2014.

The Australian data available from the *Global status report on NCDs 2014* suggests there is little or no progress being made in preventing and controlling NCDs in Australia (with tobacco control being the exception). While the report demonstrates the need for effective policies and interventions to should Australia meet the 25 x 25 targets, equally important is the need for effective and regular surveillance and reporting of indicators in order to track progress. It is this aspect of targets and indicators that will be explored further in the following chapters. For the purposes of this report, the WHO 25 x 25 targets and indicators are separated into chapters by framework element.

4. Mortality and morbidity

Premature mortality from NCDs

Target: 25 per cent relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases (WHO, 2013a).

Indicator: Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.

Data: The WHO indicator for premature mortality from NCDs is estimated using age- and sex-specific all-cause mortality rates from life tables and cause of death records to calculate the unconditional probability (independent of other causes of death) of dying between the ages of 30 and 70 in 5-year age groups amongst the total population in these age groups (WHO, 2014). In Australia, mortality data are collected as part of cause of death records by Births, Deaths and Marriage Registries in each state and territory. These are then aggregated and collected nationally with data residing with the National Coronial Information System, Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW).

Underlying cause of death analyses (selected causes by age at death, numbers and age-specific rates) are made available annually through the ABS' *Causes of Death, Australia* series with an 18 month lag period (e.g. the most recent release in April 2015 was for the calendar year 2013). The selected causes of death reported include the relevant International Classification of Diseases (ICD) codes: I00-I99, cardiovascular diseases; C00-C97, cancer; E10-E14, diabetes; and J30-J98, chronic respiratory diseases (WHO, 2010; ABS, 2015b). However, the data released through this series is presented as death rates for 10-year age groups. Alternatively, mortality data can be accessed through the *General Record of Incidence of Mortality (GRIM) Books*, also with an 18 month lag period. Causes of death and rates can be determined for custom age groups using the GRIM Books built-in macros (Figure 2), but the ICD-10 codes are only available in broad disease categories (I00-I99, cardiovascular diseases; C00-D48, neoplasms; E00-E90, all endocrine, nutritional and metabolic diseases; and J00-J99, all diseases of the respiratory system) (<http://www.aihw.gov.au/deaths/grim-books>). Therefore, access to crude data will be required at a likely cost.

Feasibility: An Australian Government Department of Health submission to the WHO warned there “may be difficulties in gathering accurate and timely data on cause of death that is specific enough to support measurement” (DoH, 2012). Besides the 18 month lag time for the release of cause of death data, there may also be issues regarding the accuracy of determining underlying cause of death, especially when complex multi-morbidities are present. The Department of Health’s submission stated a belief that achieving the targeted 25 per cent relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases was “possible, but very challenging due to progress already achieved” (DoH, 2012).

Another potential consideration is the choice of overall premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases as an indicator. It may be possible that reduction in premature mortality cause by one disease classification is compensated by an increase for another. Whether this composite indicator is in fact appropriate, or whether premature mortality rates for the four ICD groups should form individual indicators may be a matter for review.

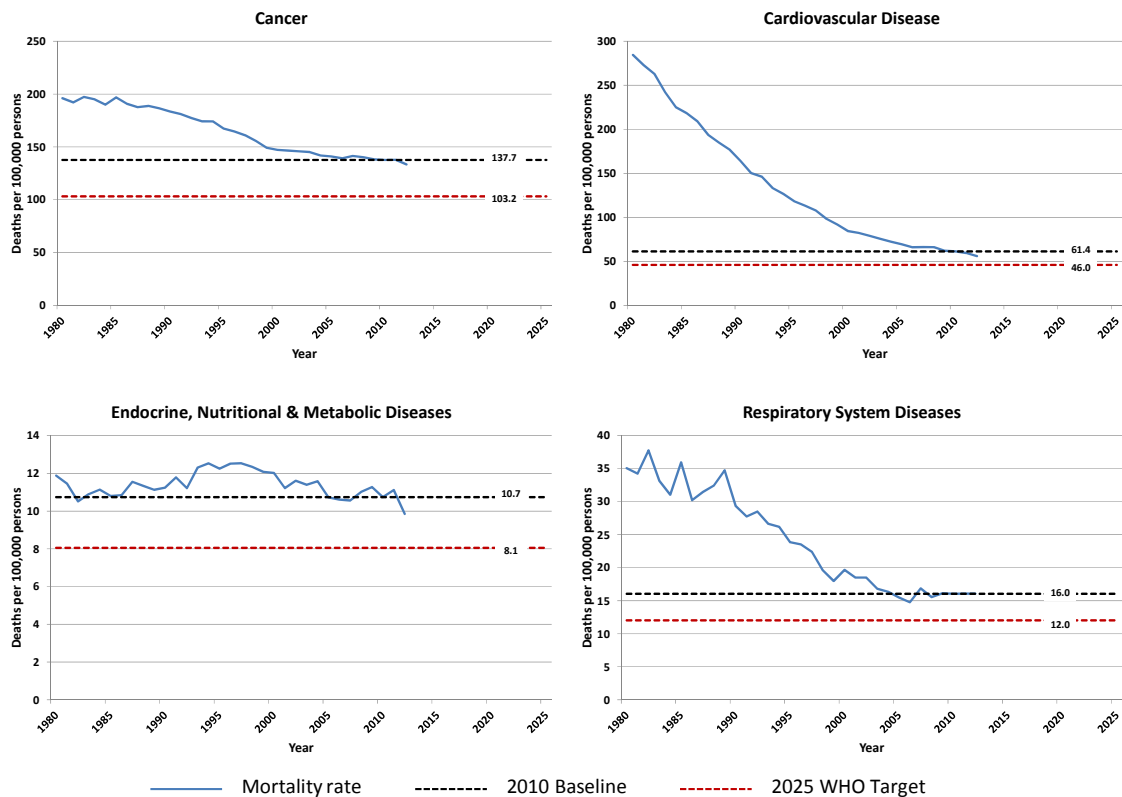


Figure 2: Age-specific mortality rates (per 100,000 population) from cancer (ICD-10 C00-D48), cardiovascular disease (ICD-10 I00-I99), endocrine, nutritional and metabolic diseases (ICD-10 E00-E90), and respiratory system diseases (ICD-10 J00-J99) in Australia, 1980-2012 for persons aged 30-70 years old.

Source: Compiled by the Australian Health Policy Collaboration using data from AIHW, 2012a-d.

Additional indicators

Target: There is no specific target relating to cancer incidence.

Indicator: Cancer incidence, by type of cancer, per 100,000 population.

Data: In Australia, the reporting of all cancers (other than basal and squamous cell carcinomas of the skin) has been made mandatory by the states and territories, enabling cancer registries to collect up-to-date data on all notifiable cases of incidence and mortality (<http://www.aihw.gov.au/cancer-registration-in-australia>). The National Cancer Statistics Clearing House (NCSCH) serves as a national repository of cancer incidence and mortality statistics from these registries, collating the data available from 1982 to date in the Australian Cancer Database (<http://www.aihw.gov.au/national-cancer-statistics-clearing-house>). These data are available publicly through regular AIHW reports, Australian Cancer Incidence and Mortality (ACIM) excel workbooks, and customised data requests (<http://www.aihw.gov.au/acim-books>). The ACIM excel workbooks appear to have a 4-year lag time (e.g. the most recent release in January 2015 contains data up to and including the calendar year 2011). The data are presented as:

- Number of cases per year by 5-year age groups and overall;
- Crude incidence rates by 5-year age groups, by year; and
- Age-standardised incidence rates by year.

Feasibility: While the ability for Australia to reduce cancer incidence rates for a given target by 2025 would depend on the outcome agreed upon, the comprehensive collection and accessibility of cancer incidence and mortality data make indicator measurement and reporting feasible (Figure 3). However, ACIM excel workbooks are available for all cancers combined and for 43 different cancer type classifications (<http://www.aihw.gov.au/acim-books>). Seeing as reporting cancer incidence for each type of cancer would be highly laborious, a selection of cancers to report on should be selected.

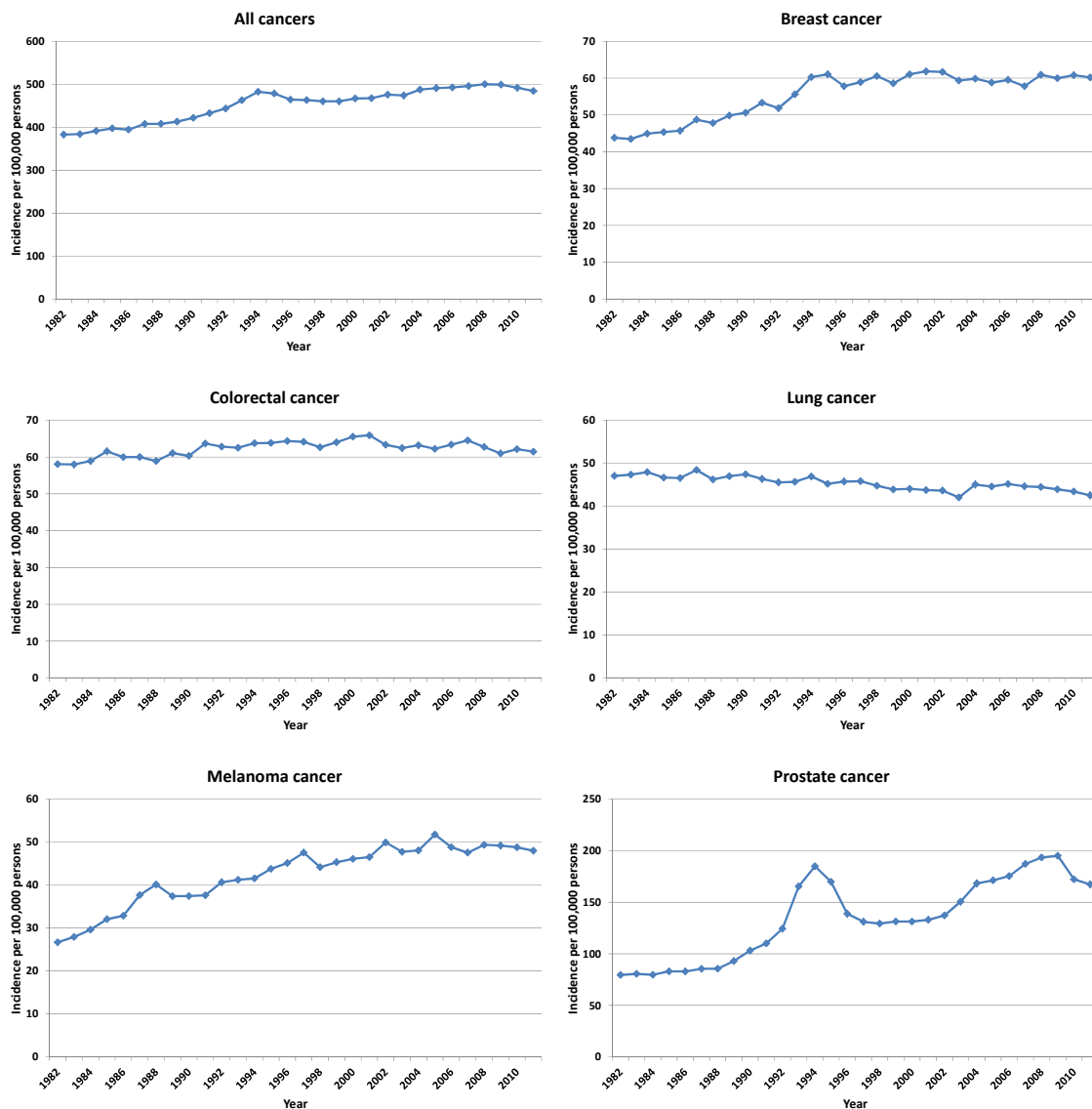


Figure 3: Age-standardised (Australian 2001 standard population) cancer incidence, by type of cancer, per 100,000 population, 5 most common cancers.

Source: Compiled by the Australian Health Policy Collaboration using data from AIHW, 2015a-g.

5. Behavioural risk factors

Harmful use of alcohol

Target: At least 10 per cent relative reduction in the harmful use of alcohol, as appropriate within the national context (WHO, 2013a).

Indicators:

- Total (recorded and unrecorded) alcohol per capita (aged 15 years and older) consumption (APC) within a calendar year in litres of pure alcohol, as appropriate, within the national context.
- Age-standardised prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context.
- Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context.

Data: The ABS has collected and publicly released data on APC for financial years beginning with 1960-61 as part of the *Apparent consumption of alcohol, Australia* series (ABS, 2015a), with the most recent data for 2013-14 having been released in April 2015 (i.e. a roughly 1-year lag time) (Figure 4).

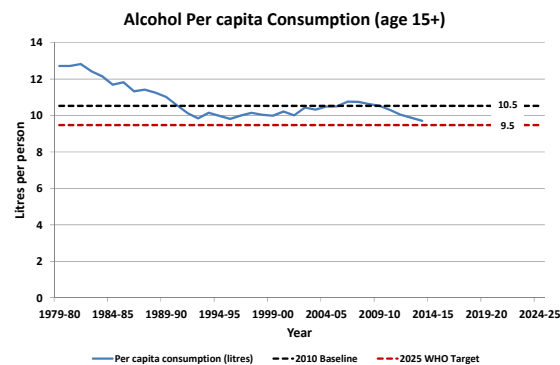


Figure 4: Alcohol per capita consumption for persons aged 15+ in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2015a.

The National Drug Strategy Household Survey (NDSHS) administered by the AIHW has been conducted every 2 to 3 years since 1985, the most recent of which was in 2013 (<http://www.aihw.gov.au/alcohol-and-other-drugs/ndshs>). The survey results are publicly available through detailed reports and data workbooks. NDSHS data includes the proportion of adolescents and adults (i.e. aged 14 years or older) that had more than 4 standard drinks on one occasion at least once a month (i.e. at single occasion risk based on the 2009 NHMRC guidelines) (Figure 5), although these have not been age-standardised (AIHW, 2014c). The ABS holds similar data collected through the triennial National/Australian Health Survey (ABS, 2012a).

The most recent report on alcohol-related morbidity and mortality in Australia was by the Foundation for Alcohol Research and Education (FARE) in 2014 (Gao *et al.*, 2014). Prior to this, alcohol's burden of disease in Australia had not been documented since 2003, as part of a broader burden of disease study (Begg *et al.*, 2007).

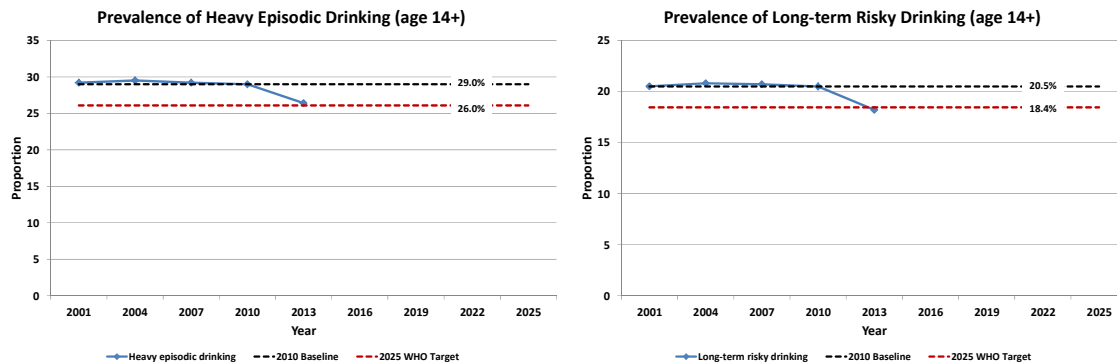


Figure 5: Prevalence of heavy episodic drinking and long-term risky drinking in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from AIHW, 2014c. Heavy episodic drinking: more than 4 standard drinks on one occasion at least once a month. Long-term risky drinking: more than 2 standard drinks per day on average. Classification based on the Australian Guidelines to Reduce Health Risks from Drinking Alcohol (NHMRC, 2009).

Feasibility: The WHO suggests member states “may choose to report against the indicator most appropriate to their national circumstances, or against all three indicators if possible. However, total per capita consumption is one of the most reliable indicators of alcohol at population level” (WHO, 2014). The WHO are concerned that heavy episodic drinking and alcohol-related morbidity and mortality are dependent on survey sampling, data collection instruments, and reliable reporting by individuals and health systems (WHO, 2014). However, they concede these indicators can reasonably be used in well-developed and stable health systems.

In contrast, an Australian Government Department of Health submission to the WHO argues that APC does not focus “on the primary area of concern with alcohol, namely, long term harm” (DoH, 2012). The submission also states that the indicator is unreliable as it merely reflects alcohol available for consumption without adjusting for alcohol that is stored, cellared, used in food preparation, discarded, or imported by overseas travellers (DoH, 2012).

With only sporadic data available on the alcohol-related morbidity and mortality, this may not be a worthwhile indicator. APC and prevalence of heavy episodic drinking seem to represent more useful indicators within an Australian context, although a decision would need to be made on which data source to use with respect to prevalence of heavy episodic drinking – NDSHS or National/Australian Health Survey. The prevalence of long-term risky drinking (drinking more than 2 standard drinks per day on average) could be considered as an additional indicator (Figure 5).

Physical inactivity

Target: A 10 per cent relative reduction in prevalence of insufficient physical activity (WHO, 2013a).

Indicators:

- Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily.
- Age-standardised prevalence of insufficiently physically active persons aged 18 years or older (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).

Data: In 2011-13, a National Nutrition and Physical Activity Survey (NNPAS) was included as part of the triennial Australian Health Survey (<http://www.health.gov.au/nutritionmonitoring>). When this will be repeated is currently unknown, as it will not be included in the 2014-15 Australian Health Survey.

Feasibility: The regular collection and dissemination of data relating to insufficient physical activity as part of the Australian Health Survey would make measurement and reporting of the indicators and target easily achievable (Table 1). The 10 per cent relative reduction in prevalence of insufficient physical activity should also be feasible, as this target is modest when compared to the (albeit now obsolete) 2008 National Partnership Agreement on Preventive Health by the Commonwealth, States and Territories to increase the proportion of adults participating in 150 minutes of moderate-intensity activity per week by 15 per cent before the year 2015 (COAG, 2008).

Table 1: Prevalence of insufficiently physically active persons in Australia.

Population	Prevalence of insufficiently physically active persons	
	2010 Baseline (%)	2025 WHO Target (%)
Children aged 5-17 years	80.4	72.4
Adolescents aged 12-17 years	91.5	82.3
Adults aged 18+	56.0	50.4

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2013d; 2013e.

Salt/sodium intake

Target: A 30 per cent relative reduction in mean population intake of salt/sodium (WHO, 2013a).

Indicator: Age-standardised mean population intake of salt (sodium chloride) per day in grams in persons aged 18 year or older.

Data: Attempts to quantify Australians' salt intake have been limited to three most notable instances: a Food Standards Australia and New Zealand analysis based on the 1995 National Nutrition Survey (Boorman *et al.*, 2008); a trial conducted by the George Institute in 2011 (<http://www.georgeinstitute.org.au/projects/reducing-salt-in-the-australian-diet>); and biochemical analyses of daily sodium intake as part of the 2011-13 Australian Health Survey (ABS, 2014a). However, there has been much debate about the reliability of these estimates, the methodologies used, calculations of salt/sodium intake, as well as the interpretation of recommended daily intake.

An Australian Government Department of Health submission to the WHO also states that “at this stage there is no commitment to conduct further surveys” (DoH, 2012).

Feasibility: A submission to the WHO indicates that the Australian Government Department of Health “considers the salt target to be ambitious and would not support this target as it would be difficult to achieve and measure” (DoH, 2012). The absence of any consistent and reliable data on salt intake in Australia makes both the monitoring and reduction of daily salt intake very difficult.

Tobacco use

Target: A 30 per cent relative reduction in prevalence of current tobacco use in persons aged 15 years or older (WHO, 2013a).

Indicators:

- Prevalence of tobacco use amongst adolescents.
- Age-standardised prevalence of current tobacco use among persons aged 18 years or older.

Data: As well as collecting data on alcohol, the National Drug Strategy Household Survey (NDSHS) that is conducted every 2 to 3 years also provides data on tobacco use in Australia (<http://www.aihw.gov.au/alcohol-and-other-drugs/ndshs>). The survey results are publicly available through detailed reports and data workbooks, including the prevalence of tobacco use amongst adolescents between the ages of 12 and 17 years old (from the 2004 survey onwards) and age-standardised prevalence of current tobacco use among persons aged 18 years or older (Figure 6; AIHW, 2014b). The triennial National/Australian Health Survey collects similar data (ABS, 2012a).

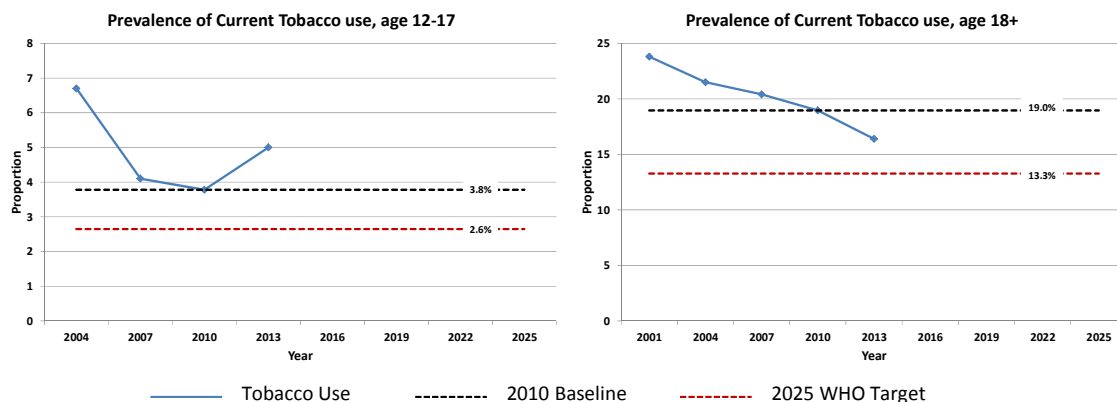


Figure 6: Prevalence of current tobacco smoking among adolescents and adults in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from AIHW, 2014b.

Feasibility: An Australian Government Department of Health submission to the WHO notes that a National Healthcare Agreement benchmark to reduce the prevalence of current tobacco use in Australia to 10 per cent between 2009 and 2018 would represent a relative reduction of 33 per cent

(DoH, 2012). If this benchmark is met, the WHO target of a 30 per cent relative reduction by 2025 should be easily exceeded.

There is regularly updated data available to allow for the monitoring of indicators in the Australian context. Whether the prevalence of tobacco use represents the best indicator, prevalence of daily smokers, or both could be a matter for discussion. A decision on which data source to use (NDSHS or National/Australian Health Survey) would need to be made.

6. Biological risk factors

Raised blood pressure

Target: A 25 per cent relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to the national context (WHO, 2013a).

Indicator: Age-standardised prevalence of raised blood pressure among persons aged 18 year or older (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure.

Data: National/Australian Health Surveys from 2001 onwards have included the prevalence of age-standardised hypertensive disease, defined as persons with a medical condition lasting 6 months or more (Figure 7; ABS, 2012a). Since 1999, the Family Medicine Research Centre (FMRC) at the University of Sydney and AIHW have released annual reports as part of a *General Practice* series (<http://sydney.edu.au/medicine/fmrc/publications/books/GP-series>). These reports include the proportion of general practitioner activity devoted to managing high blood pressure. However, neither of these are based on measurement data.

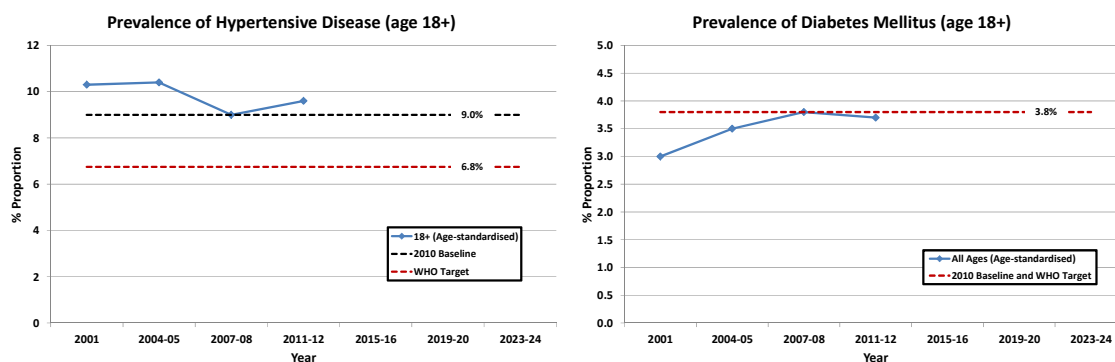


Figure 7: Prevalence of hypertensive disease and diabetes mellitus in Australia for persons aged 18+ years.

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2012a.

Until recently, the most up-to-date measurement data on blood pressure in Australia was from the 1999-2000 Australian Diabetes, Obesity and Lifestyle (AusDiab) Study (Briganti *et al.*, 2003). No other measurement data had been collected until the 2011-12 Australian Health Survey (Table 2; ABS, 2012d). It is currently unclear when or if blood pressure measurement data will be collected in future Australian Health Surveys, although an Australian Government Department of Health submission to the WHO indicated “there is no collection planned for the target year 2025” (DoH, 2012).

There does not appear any readily available measurement data on mean systolic blood pressure, although access to this from the AusDiab Study and the 2011-12 Australian Health Survey may be possible.

Table 2: Prevalence of raised blood pressure and raised blood glucose/diabetes among adults aged 18 years or more in Australia.

Measurement	Proportion of persons aged 18 years and over	
	2010 Baseline (%)	2025 WHO Target (%)
High blood pressure (140/90 mmHg of higher)	21.5	16.1
Raised blood glucose/diabetes	4.8	4.8

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2012d; 2013g.

Feasibility: The lack of relevant measurement data makes the prevalence of high blood pressure, and any population-wide changes, difficult to assess. Unless the Australian Health Survey is used to measure blood pressure for (or close to) the year 2025, benchmarking Australia’s progress against the 25 x 25 target will not be possible.

Diabetes and obesity

Target: Halt the rise in diabetes and obesity (WHO, 2013a).

Indicators:

- Age-standardised prevalence of raised blood glucose/diabetes among persons aged 18 years or older (defined as fasting plasma glucose concentration ≥ 7.0 mmol/L or on medication for raised blood glucose).
- Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex).
- Age-standardised prevalence of overweight and obesity in persons aged 18 years or older (defined as body mass index ≥ 25 Kg/m² for overweight and body mass index ≥ 30 Kg/m² for obesity).

Data: The prevalence of age-standardised, self-reported diabetes mellitus has been included as part of National/Australian Health Surveys since 2001 (Figure 7; ABS, 2012a). Reports on the proportion of general practitioner activity devoted to managing diabetes mellitus are available as part of the FMRC-AIHW *General Practice* series (<http://sydney.edu.au/medicine/fmrc/publications/books/GP-series>). While measurement data on blood glucose/diabetes from the 2011-12 Australian Health Survey is publicly accessible (Table 2; ABS, 2013g), “plans for future biomedical surveys are not yet in place” (DoH, 2012). Prior to this, the most recent measurement data was from the 1999-2000 AusDiab Study (Dunstan *et al.*, 2002).

National/Australian Health Surveys have collected and made publicly accessible measurement data on the prevalence of overweight and obesity in children aged 5 to 17 years of age and age-standardised prevalence of overweight and obesity in persons aged 18 years or older since 1995 (ABS, 2009b; 2012a; 2012c). Data for adolescents more specifically should be available through the ABS if required.

Feasibility: Progress in halting the rise in diabetes would be difficult to monitor if blood glucose measures are not included in future Australian Health Surveys. Whether self-reported prevalence of diabetes or another indicator would be an adequate substitute could be considered. In contrast, longitudinal measurement data on overweight and obesity (in adolescents and adults) are already gathered through National/Australian Health Surveys (Figure 8). While the WHO target of halting the rise in obesity may be achievable, it should be noted that the prevalence has been steadily increasing.

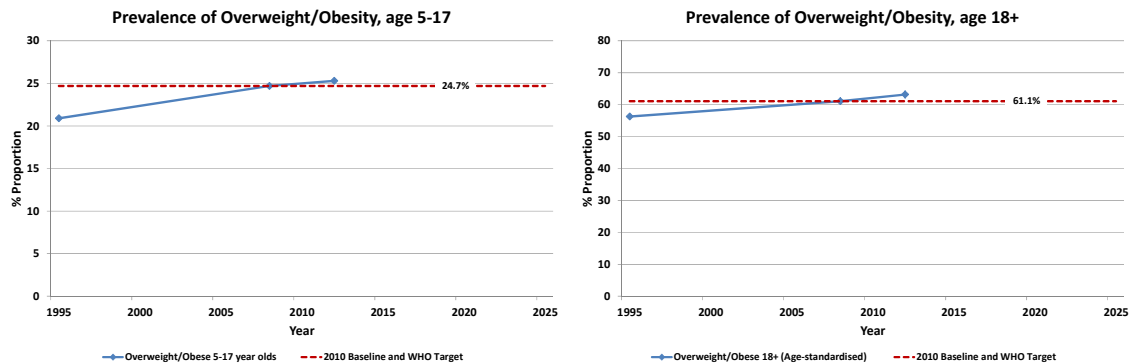


Figure 8: Prevalence of overweight/obesity in adolescents and adults (age-standardised, Australian 2001 standard population) in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from ABS (2009b; 2012a; 2012c).

Additional indicators

Target: There are no specific targets relating to these additional biological risk factors.

Indicators:

- Age-standardised mean proportion of total energy intake from saturated fatty acids in persons aged 18 years or older.
- Age-standardised prevalence of persons (aged 18 years or older) consuming less than five total servings (400 grams) of fruit and vegetables per day.
- Age-standardised prevalence of raised total cholesterol among persons aged 18 years or older (defined as total cholesterol ≥ 5.0 mmol/L or 190 mg/dL); and mean total cholesterol concentration.

Data: Data on the mean proportion of total energy intake from saturated fatty acids in persons aged 18 years or older is only available from the 1995 National Health and 2011-13 Australian Health Surveys, albeit not age-standardised (Figure 9; ABS, 2014b; 2014c).

Since 2004-05, National/Australian Health Surveys have recorded the crude prevalence of persons consuming fewer than the recommended daily servings of fruit and vegetables (Figure 9; ABS, 2009a; 2013c). However, in the Australian context two servings of fruit and five servings of vegetables are recommended daily whereas the WHO indicator is for five servings of fruit and vegetables combined.

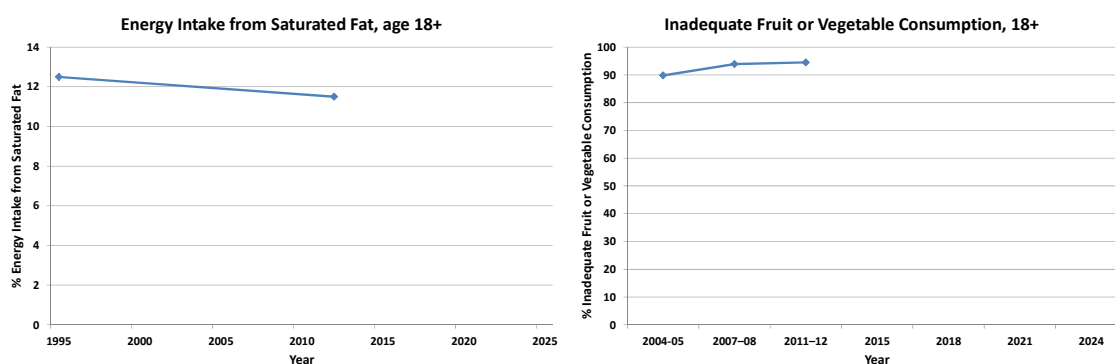


Figure 9: Mean proportion of total energy intake from saturated fat and prevalence of inadequate fruit or vegetable consumption among adults in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from ABS (2009a; 2012a; 2014a; 2014b).

The 2011-13 Australian Health Survey measured total cholesterol among persons aged 18 years or older, allowing for crude prevalence of raised total cholesterol to be determined (Table 3; ABS, 2013h). Mean total cholesterol data is not reported on, although it may be possible to obtain through ABS. No further plans to measure total cholesterol in future Australian Health Surveys have been announced.

Table 3: Prevalence of raised total cholesterol among adults aged 18 years or more in Australia.

Raised Total Cholesterol Measure	Proportion of persons aged 18 years and over	
	2010 Baseline (%)	2025 WHO Target (%)
WHO Standards (≥ 5.0 mmol/L or 190 mg/dL)	51.9	--
Australian Standards (≥ 5.5 mmol/L or 190 mg/dL)	32.8	--

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2013h.

Feasibility: Setting targets relevant to the Australian context may be possible for all three indicators, although there may be little or infrequent data available with regards to total energy from saturated fatty acids and total cholesterol. Monitoring daily intake of fruit and vegetables is feasible, once a target (and recommended number of servings) is agreed upon.

7. National systems response

Drug therapy to prevent heart attacks and strokes

Target: At least 50 per cent of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes (WHO, 2013a).

Indicator: Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk \geq 30 per cent, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.

Data: The National Vascular Disease Prevention Alliance (NVDPA), comprising Diabetes Australia, Kidney Health Australia, National Heart Foundation and the National Stroke Foundation, published guidelines for the assessment and management of cardiovascular disease risk (NVDPA, 2012). Using the risk calculator specifications (based on the Framingham Risk Equation), absolute cardiovascular disease risk can be calculated based on the prevalence of already existing cardiovascular disease, diabetes, or chronic kidney disease, age, familial or individual hypercholesterolaemia, hypertension, and smoking status.

The risk factor information needed to determine cardiovascular disease risk is collected in National/Australian Health Surveys, as are the medications and actions taken by individuals. Accessing this data through the ABS would enable cardiovascular disease risk to be calculated, before determining the proportion of those at risk who are receiving drug therapy and counselling.

Work to determine the proportion of Australians aged 45 to 74 years old with 5-year cardiovascular disease risk \geq 15 per cent is already underway, with the results expected to be published shortly (National Heart Foundation, manuscript in preparation).

Feasibility: The National Vascular Disease Prevention Alliance specifications are designed to calculate 5-year cardiovascular risk \geq 15 per cent as opposed to the WHO indicator of 10-year cardiovascular risk \geq 30 per cent. While the calculator can be adapted to determine 10-year cardiovascular risk \geq 30 per cent, this is inconsistent with Australian recommended practice, and thus deemed inappropriate for Australia. There must also be agreement on whether the age range of interest should be 40 years and older, 45 to 74 year old, or another age range altogether.

The data needed to determine the proportion of persons receiving drug therapy and counselling to prevent heart attacks and strokes is collected through the National/Australian Health Surveys meaning the monitoring of this indicator should be achievable should the data be accessible through the ABS.

Essential NCD medicines and basic technologies to treat major NCDs

Target: An 80 per cent availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities (WHO, 2013a).

Indicator: Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities.

Data: The availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities

refers to aspirin, statins, angiotensin converting enzyme inhibitors, thiazide diuretic, calcium channel blockers, metformin, insulin, bronchodilators, steroid inhalants, blood pressure measurement devices, weighing scales, blood sugar and blood cholesterol measurement devices and urine strips for albumin assay.

Feasibility: In Australia, quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies are available and affordable in both public and private facilities. This indicator is likely designed for less developed nations, and not relevant for Australia. Alternative targets and indicators around the accessibility and affordability of medicines, technologies and services could be considered.

Additional indicators

Target: There are no specific targets relating to these additional national systems responses.

Indicators:

- Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer.
- Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils (PHVOs) in the food supply, as appropriate, within the national context and national programmes.
- Availability, as appropriate, if cost-effective and affordable, of vaccines against Human Papillomavirus (HPV), according to national programmes and policies.
- Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt.
- Vaccination coverage against Hepatitis B Virus (HBV) monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants.
- Proportion of women between the ages of 30–49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programmes or policies.

Data: To comply with international drug control treaties, countries are required to submit national data to the International Narcotics Control Board (INCB) each year (<http://www.incb.org>). Data specifically relating to opioids are then made available to the Pain and Policy Studies Group (PPSG) at the University of Wisconsin-Madison (<http://www.painpolicy.wisc.edu>). Country-level data on morphine-equivalent consumption of opioids (excluding methadone) per capita are then published annually (with a 2-year lag time). Morphine-equivalent consumption per capita data can be combined with cancer mortality (available through Australian Cancer Incidence and Mortality excel workbooks, <http://www.aihw.gov.au/acim-books>) and population data (available through the ABS' Australian Historical Population Statistics) to calculate morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer (Figure 10).

The assessment of national policies restricting the use of saturated fatty acids and PHVOs in the food supply, and of policies restricting the marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt to children can be done through environmental scanning of national (and potentially state, territory and even local government) policies. Some of these may already be performed by other organisations, or can be benchmarked against policy

recommendations already proposed (MacKay *et al.*, 2011). In addition or in place of these indicators, the mean daily intake in grams of saturated fat, trans fatty acids, total sugars and sodium by age are available through the 2011-13 Australian Health Survey (Table 4; ABS, 2014a). When these measurements may be repeated in future Australian Health Surveys remains unclear.

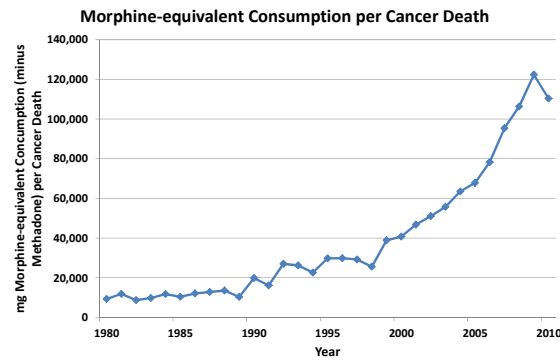


Figure 10: Consumption of morphine-equivalent strong opioid analgesics, excluding methadone, per death from cancer in Australia.

Source: Compiled by the Australian Health Policy Collaboration using data from: United Nations, 2013; Pain & Policy Studies Group, 2014; AIHW, 2015a.

Table 4: Mean daily intake of saturated fat, trans fatty acids, total sugars and sodium among children and adults in Australia.

Nutrient	Age Group		
	2-18 Years	19+ Years	2+ Years
Saturated Fat (g)	29.1	27.7	28.0
Trans Fatty Acids (mg)	1,384.6	1,390.9	1,389.5
Total Sugars (g)	112.4	102.9	105.0
Sodium (mg)	2,312.7	2,430.5	2,404.4

Source: Compiled by the Australian Health Policy Collaboration using data from ABS, 2014a.

The Australian Government Department of Health releases annual *Immunisation coverage* reports (with a 2-year lag time) prepared by the National Centre for Immunisation Research and Surveillance (NCIRS) (<http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-immunanrep.htm>). Data from the Australian Childhood Immunisation Register (ACIR) and the National Human Papillomavirus Vaccination Program Register are utilised to report on vaccination coverage against a range of preventable diseases, including Hepatitis B and some cervical cancers (Figure 11). These *Immunisation coverage* reports also include lists of recent significant changes in immunisation policies and incentives.

The number of women in 5-year age groups who participate in screening for cervical cancer each year is released as part of the AIHW *Cervical screening* series (<http://www.aihw.gov.au/publications/cervical-screening>). From this crude data, proportions can be calculated (Figure 12).

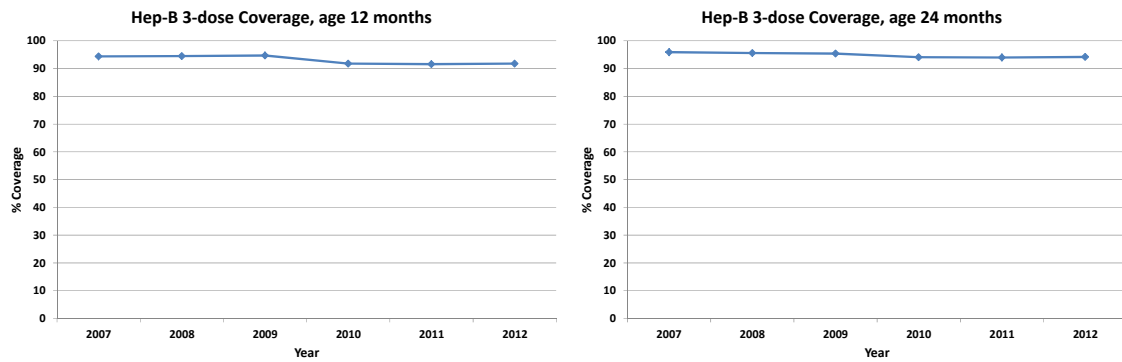


Figure 11: Vaccination coverage against Hepatitis B Virus monitored by the proportion of infants in Australia administered three doses.

Source: Compiled by the Australian Health Policy Collaboration using data from: Hull *et al.*, 2009; 2010; 2011; 2013a; 2013b; 2014.

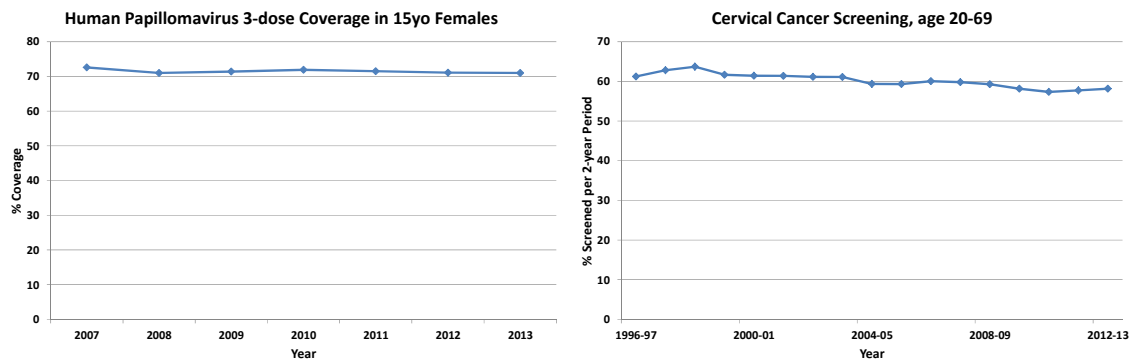


Figure 12: Cervical cancer immunisation and screening in Australia monitored by the proportion of females age 15 administered three doses of the Human Papillomavirus vaccine and the proportion of females aged 20-69 (age-standardised, Australian 2001 standard population) who were screened for cervical cancer over a 2-year period.

Source: Compiled by the Australian Health Policy Collaboration using data from: AIHW, 2015g; HPV Register, 2014a; 2014b.

Feasibility: Morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer can be monitored using publicly available data. However, the “International Association for Hospice and Palliative Care (IAHPC) and several palliative care organisations proposed to WHO a modification to improve the indicator to monitor the development and progress

of palliative care” (De Lima *et al.*, 2013). The most appropriate indicator of access to palliative care in Australia may be a topic for debate.

The assessment of national policies restricting the use and marketing of certain nutrients, foods and non-alcoholic beverages should be easily performed given the right expertise and resources. The use of additional or substitute measurement indicators could be explored, although the availability of future measurement data may be an issue.

Vaccination coverage against certain HPVs and HBV should be easily monitored through the annual *Immunisation coverage* reports available for the years 2007 onwards. Access to raw data may also be possible through the Australian Childhood Immunisation Register and National Human Papillomavirus Vaccination Program Register if necessary.

The proportion of women screened for cervical cancer can be easily determined through the AIHW’s *Cervical screening* reports. Whether women between 30-49 years old or alternative age range(s) are appropriate indicators can be reviewed.

8. Inclusion of additional targets and indicators

While the *Global Action Plan for the Prevention and Control of NCDs 2013-2020* incorporates a comprehensive set of targets and indicators, this should not preclude consideration of other targets and indicators for Australia that may have been excluded by the WHO. It is particularly important since targets and indicators tend to grant risk factors and conditions attention and privilege, while those that have been excluded receive less attention, even though the issues they represent may equally require attention or be considered important by some stakeholders (Hibbert et al., 2013).

A significant omission from the WHO targets and indicators is mental health. The decision to omit mental health was based on the separate existence of the *WHO Global Mental Health Action Plan 2013-2020*, which has six global targets to be attained by 2020 (WHO, 2013b). One or more of these could be included in an Australian set of targets and indicators, such as the WHO goal to reduce the rate of suicide by 10 per cent by 2020 (WHO, 2013b). Given that an increasing number of the population suffer from two or more chronic conditions (mental and physical), the inclusion of multimorbidity targets and indicators could also be considered. Similarly, risk factors such as domestic-inter-personal violence could be considered for inclusion given the recognition and impact it has on health (VicHealth, 2004; Begg et al., 2008; Norman et al., 2010).

Another significant omission from the WHO targets and indicators is the issue of equity. As has been the case with smoking in Australia, while the prevalence of current smokers has decreased over time, the disparity between the highest and lowest quintiles of socioeconomic status has increased (Figure 13).

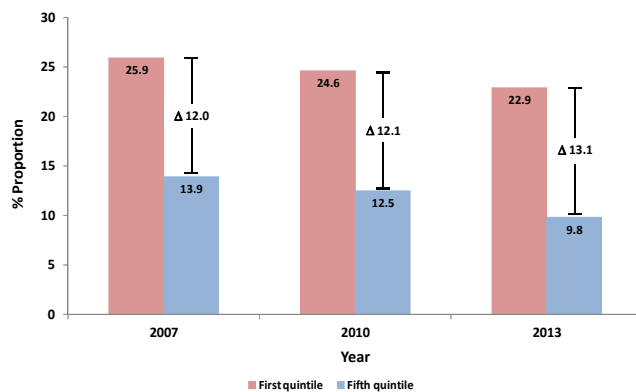


Figure 13: Prevalence of current tobacco smoking in Australia for persons aged 14 years and older, 2007 to 2013, by socioeconomic status.

Source: Compiled by the Australian Health Policy Collaboration using data from: AIHW, 2014e.

It is important that Australia better prevents and manages chronic diseases not just from a population perspective, but does so in an equitable manner. Measures of equity could focus on one or a combination of socioeconomic status, Aboriginal and Torres Strait Islander status and/or geographic location (Figures 14-23). Whether these be considered individually or are used to calculate a composite equity indicator could also be explored.

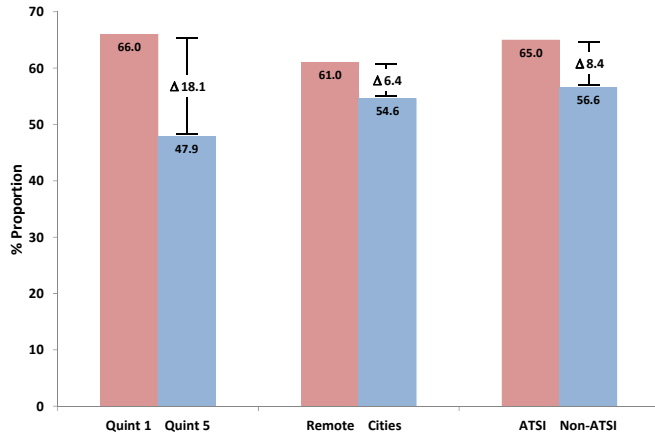


Figure 14: Prevalence of insufficiently physically active persons in Australia aged 18 years or older by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS, 2013f; 2014e.

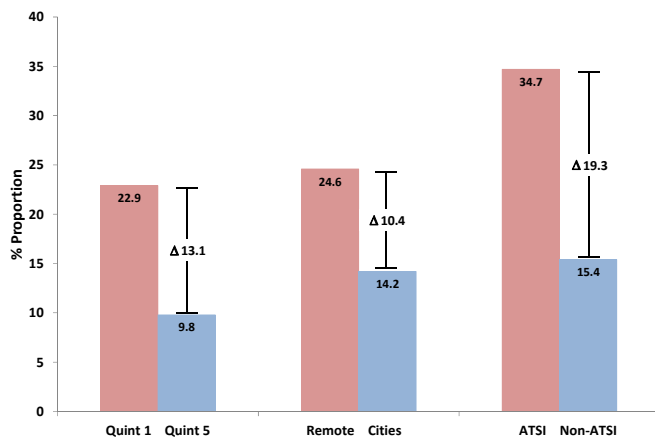


Figure 15: Prevalence of current smokers in Australia for persons aged 14 years or older by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: AIHW, 2014e.

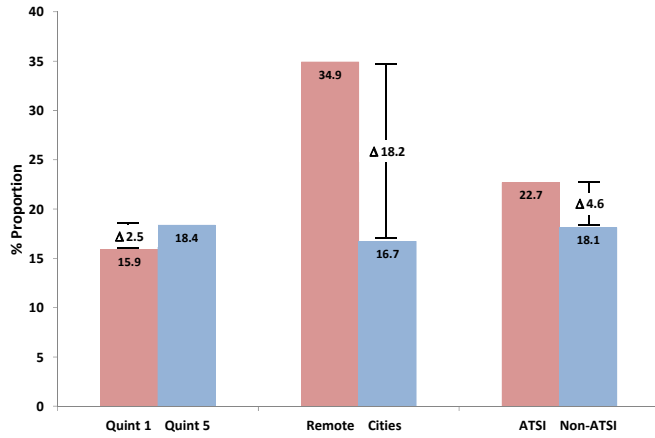


Figure 16: Prevalence of long-term risky drinking in Australia for persons aged 14 years or older by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: AIHW, 2014f.

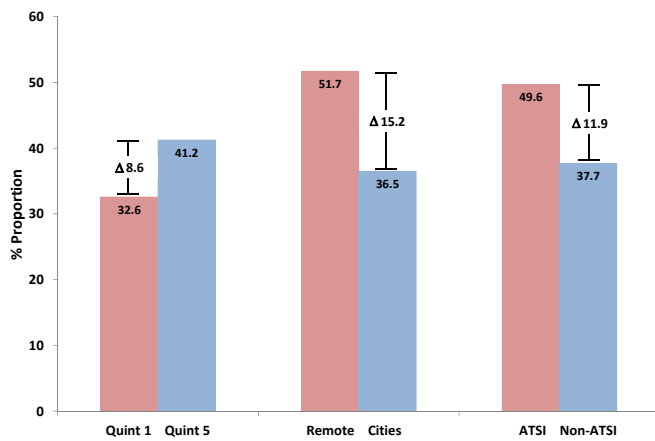


Figure 17: Prevalence of heavy episodic drinking in Australia for persons aged 14 years or older by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: AIHW, 2014f.

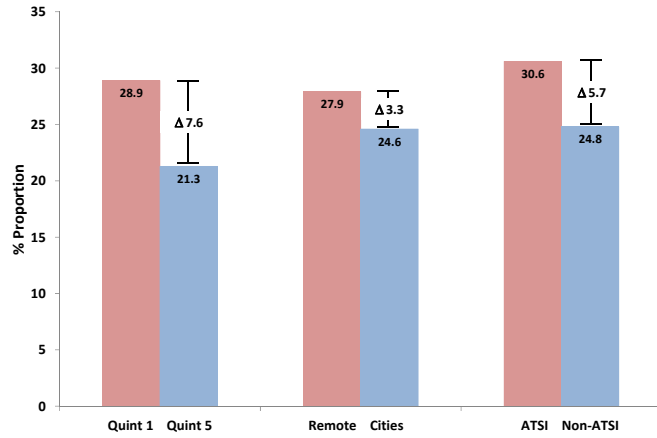


Figure 18: Prevalence of overweight/obesity in Australia for children aged 2 to 17 years old by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS, 2013b; 2014h.

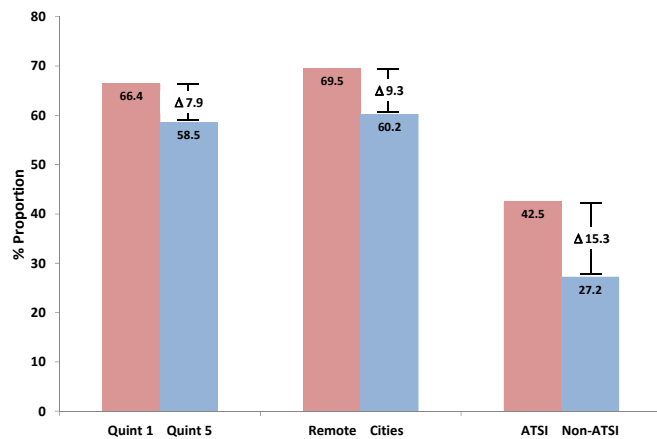


Figure 19: Prevalence of overweight/obesity in Australia for persons aged 18 years or older by selected characteristics.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS, 2013b; 2014g.

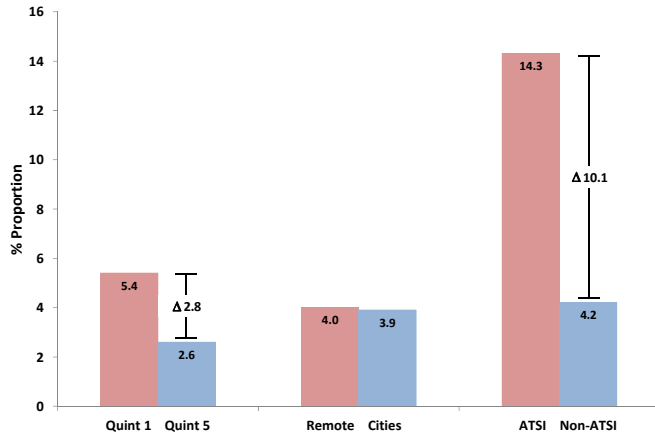


Figure 20: Prevalence of diabetes mellitus in Australia for persons aged 18 years or older. ATSI/Non-ATSI data are for persons aged 2 years or older.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS 2012b; 2014f.

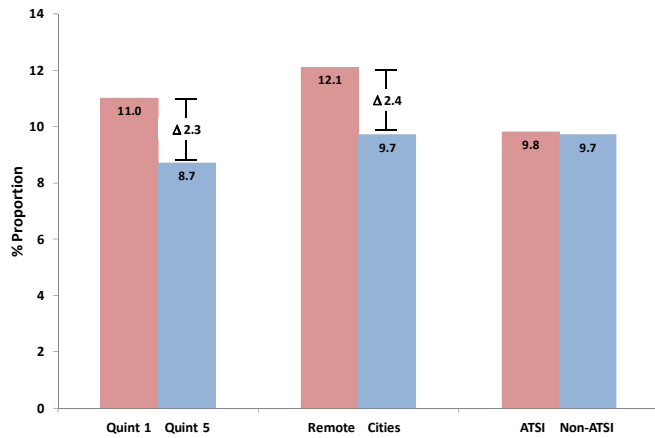


Figure 21: Prevalence of hypertensive disease in Australia for persons aged 18 years or older. ATSI/Non-ATSI data are for persons aged 2 years or older.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS 2012b; 2014f.

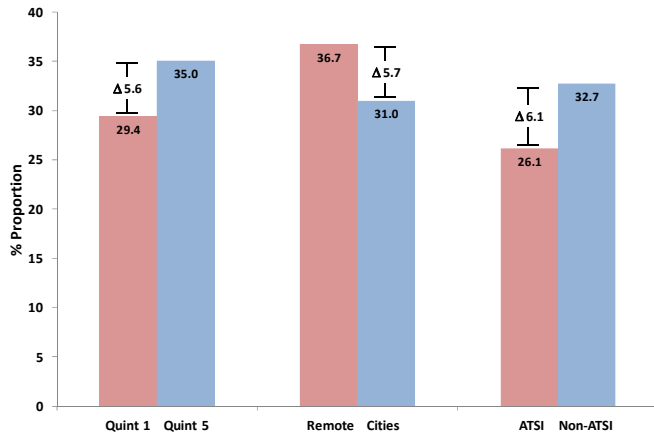


Figure 22: Prevalence of abnormal total cholesterol (defined as blood total cholesterol concentration ≥ 5.5 mmol/L) in Australia for persons aged 18 years or older.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS, 2013i; 2014d.

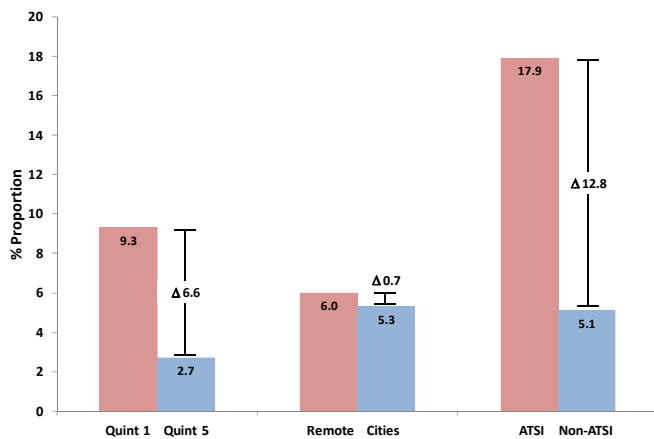


Figure 23: Prevalence of diabetes mellitus (defined as fasting plasma glucose concentration ≥ 7.0 mmol/L or on medication for raised blood glucose) in Australia for persons aged 18 years or older.

Source: Compiled by the Australian Health Policy Collaboration using data from: ABS, 2013i; 2014d.

9. Conclusion

The World Health Organization's (WHO) *Global Action Plan for the Prevention and Control of NCDs 2013-2020* identifies nine targets measured by 25 indicators of performance to better prevent and manage chronic diseases (WHO, 2013a). This report provides an audit of what data and gaps currently exist for the surveillance and reporting of Australia's progress against the WHO 25 x 25 targets and indicators, the intention of which is to inform and stimulate debate as to which are both relevant and feasible for the Australian context.

While some of these targets and indicators are appropriate for Australia, there may be others that are less suitable for inclusion, or that may be harder to monitor due to an absence of regular surveillance and data collection at a national level. There may also be targets and indicators not identified in the WHO *Global Action Plan for the Prevention and Control of NCDs 2013-2020* that warrant greater attention.

In particular, the health system targets and indicators identified by the WHO seem ill suited to the Australian context. A more appropriate set of measures to monitor the performance and management of Australia's health system will need to be established. There is also widespread support for including mental health into chronic disease targets and indicators tailored for Australia (Tolhurst, 2014; 2015).

This report also demonstrates the importance of equity targets and indicators. While a mixture of universal and targeted strategies and interventions will undoubtedly be required to better prevent and manage chronic diseases in Australia, this must be achieved while also closing the health gaps that exist between different population groups, whether based on socioeconomic status, Indigenous status, or geographic location. How this may be monitored and incorporated into a set of Australian targets and indicators is a matter for further consideration.

One theme that has clearly emerged from this report is the need for the regular collection and dissemination of nutrition, physical activity, anthropometric and biomedical measurements. The data collected from these components of the National/Australian Health Survey are crucial for monitoring Australia's performance in preventing and managing chronic diseases. And yet, prior to 2011-12, the last time these were all collected on a national scale was the 1995 National Health Survey. When they will next be collected in an Australian Health Survey remains unclear, although indications suggest not before 2025 (DoH, 2012).

The collection of such rich and valuable data should not be seen as an unnecessary expense to be avoided in times of austerity, but rather vital systems infrastructure enabling prospective evaluation, and real-time response, flexibility, and adaptation to Australia's health, public health, and chronic disease needs and challenges. It is therefore essential that the collection of nutrition, physical activity, anthropometric and biomedical measurements become core components of the triennial National/Australian Health Survey, or at a minimum, every alternate survey. Furthermore, the data collected from these and other surveys need to be made as timely and easily accessible as possible.

The findings from this report will now be used to develop a set of Australian chronic disease targets and indicators. The Australian Health Policy Collaboration will convene working groups of health organisations in Australia to reach broad agreement on the following questions:

- Which WHO targets and/or indicators apply to Australia? How should others be amended to be more ambitious or more realistic?
- Which WHO targets and/or indicators are inappropriate for Australia?
- What would be the most appropriate mental health target and/or indicator(s) for Australia?
- How should equity be incorporated into targets and indicators?
- Are there alternative targets and/or indicators with readily available data that should be considered for Australia?
- Is timely data readily available for the agreed upon targets and indicators?

The outcome of this process will be a set of agreed upon Australian chronic disease targets and indicators to monitor Australia's progress in better preventing and managing chronic diseases.

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