

Measuring physical activity at the population level

Key messages

- There are standardised ways of measuring population physical activity in Australia, but the measures are implemented slightly differently across jurisdictions in Australia.
- Standardisation of physical activity measures across jurisdictions is recommended to monitor physical activity progress towards the 2030 targets set by the World Health Organization and is essential to the development of better practice.
- The key features of physical activity measurement should include consistency, standardisation, and sustained usage for the prolonged periods of time required for policy and program implementation to have population-level effects.
- Work should embark on the development of a more comprehensive Physical Activity Surveillance System (a PASS), with measures and indicators defined and agreed across agencies and jurisdictions.
- A PASS should use a systems approach to assessing physical activity and will require cross-jurisdictional and cross-sectoral engagement, commitment and collaboration.

Why is it important to measure physical activity?

Physical activity is an important health-related indicator

- Physical activity is a key chronic disease prevention indicator
- Single estimates of the proportion of people meeting physical activity guidelines enable policy makers to make clear statements about the burden of disease and disability attributable to physical inactivity
- As part of broad national and regional health surveys, estimates of physical activity provide essential information to policy makers, practitioners and governments

Relevance across multiple sectors and strategies

- Components of physical activity are important beyond the health sector
- Elements are relevant to sectors such as sport, education, transport, urban planning and infrastructure, parks and recreation, and wellbeing and wellness strategies
- Using comparable measures will enable cross-agency data utilisation and comparisons between sectors and over time

To track progress towards important targets

- Australia is a signatory to WHO global targets for health and preventive health (also linked to the WHO Sustainable Development Goals)
- The monitoring of physical activity is one of the key chronic disease prevention targets, with a goal of a 15% reduction in population levels of physical inactivity by 2030
- Coordinated and standardised monitoring of physical activity (and the broader physical activity system) is essential to assess progress towards this and other important health and cross-sectoral goals

What is best practice in physical activity measurement?

The overall purpose of physical activity measurement is to assess the proportion of the population meeting physical activity guidelines, and measures should be designed with that purpose in mind.

Physical activity measurement can be obtained through self-report (e.g. through questionnaires, online responses or personal interviews), device-based measurement (e.g. accelerometers or pedometers), or inobtrusive population monitoring (e.g. through the use of information on smart phones, or future community-based surveillance).

Current best practice suggests that self-report measures are still the most feasible and affordable, and are recommended in population measurement and surveillance.

Important considerations for best practice physical activity measurement

Properties of optimal physical activity measures

- An optimal measure of physical activity will have properties of acceptable reliability and validity, sensitivity to change, and simplicity and clarity for use in population surveys
- It is important to consider whether to include measures that assess strength training and balance, and sedentary time (in addition to measuring aerobic activities e.g. walking, most sport, running, cycling, swimming)

Domains of physical activity

- Consider whether measures should focus on all domains of physical activity (occupational physical activity, domestic activity, active travel, and recreation or leisure activities) or whether physical activity should be measured globally; the latter involves fewer questions and less respondent burden in population surveys

Population subgroups

- Physical activity measurement needs to occur in population subgroups and in special populations
- Although most self-report physical activity measures can provide estimates by gender, age group, socioeconomic status and cultural background, special and additional surveys may be required for some specific groups (e.g. Aboriginal and Torres Strait Islander populations)

Repeat over time

- Physical activity measures should be repeated over time
- Current measures include the National Health Survey (conducted by the ABS) which has comparable measures dating back to the National Health Survey in 1989
- State-based measures typically use the Active Australia Questionnaire (developed in the late 1990s by the AIHW, it comprises six core questions that estimate population aerobic activity against the physical activity guidelines)
- Measures for children and adolescents are different, with a population target of 60 minutes a day that can be assessed by direct respondent measurement, parent or carer response as a proxy measurement, device-based measurement, or other means. Measures should meet the same properties expected of adult measures.

Towards a physical activity surveillance system (PASS)

Physical activity involves many different behaviours in different sectors and settings. For this reason, it is necessary to develop a systems approach to assessing physical activity. Changes in physical activity should be linked to changes in policy and program implementation, cultural or economic circumstances, infrastructure or urban form, and social norms around being physically active.

It is important to measure physical activity prevalence over time, as well as to assess cross-sectoral population measures over time (e.g. for the sport or transport sectors, among others).

A systems approach entails the development of a standardised set of measures and indicators beyond measuring prevalence alone. These measures:

- Would assess national and regional plans and policies and their implementation
- Would assess indicators of the built environment, transport and urban form
- May require organisational measures in settings such as workplaces and schools.

Such a comprehensive physical activity surveillance system (PASS) would need to have system-wide indicators and sustained measurement that is simple, affordable, comparable and adaptable between state, territory and national jurisdictions.

A PASS remains to be developed in Australia. The measures and indicators for a PASS would need to be agreed across agencies and jurisdictions, which would require substantial cross-jurisdictional commitment and collaboration.

Getting Australia Active III (GAA III) is an Australian guide for policy makers to support the implementation of a whole-of-systems approach to increasing population physical activity. This policy brief summarises key points from **Chapter 1.2** and **Chapter 5** of this guide. For more detailed guidance and supporting evidence, you can access the full report at: preventioncentre.org.au



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