

Healthy life expectancy matters to Australians

About the author

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Background

Traditional macroeconomic measures such as GDP provide a partial view of living standards in Australia (2). There exists an opportunity to reform measures of societal progress and focus more closely on what matters to Australia's people. The Australian Government is acting on this opportunity (2). Health is an issue of fundamental importance to people and will naturally be the subject of one or more lead indicators in any well-being framework. The OECD Framework for Measuring Well-being and Progress is one such framework which includes indicators for life expectancy and self-reported health status (3). An Australian framework could be more concise and informative in the health domain.

Aim

My primary aim is to recommend adopting **healthy life expectancy** as a lead indicator in the health domain of an Australian well-being and progress framework. Life expectancy (quantity of life) and health status (quality of life) could be retained as accompanying headline indicators. In support of this recommendation, I define healthy life expectancy, describe its current relevance to Australians' health outcomes, then outline its attributes in areas of:

- Relevance to contemporary policies;
- Completeness and flexibility;
- Objective measurement within an international health accounting framework;
- Reliability and extensive evaluation through peer reviewed literature and health system application; and,
- Ease of use in discussion with policy-makers and service planners, communities, clinicians and practitioners.

Indicator definition

Healthy life expectancy is a summary measure of population health describing the number of years a person can expect to live in good health, free of disease and injury (4-7). That is, healthy life expectancy includes both life expectancy and health status into one measure.

International experts refer to healthy life expectancy as the best overall health status indicator (4) because it can be disaggregated by: quantity and quality of life; sex and age; and contributing disease related conditions and risk factors (4, 8-12). It can also be evaluated across time, geography and people groups.

Relevance to Australians' health now

Healthy life expectancy is a suitable lead indicator for summarising health outcomes throughout Australia as it quantifies the way outcomes change over time, what influences those changes and how outcomes are distributed throughout the community. For example, healthy life expectancy has continued to increase in recent years in Australia. Within this increase, Australians lived longer but also spent more time living with illness (13). On average though, the relative amount of life expectancy lost to illness remained fairly constant (13) at around 13% (14). However, when average health expectancy is separated by socio-economic disadvantage the changes in healthy life expectancy over time were unevenly spread within the population. For example, health expectancy gaps between the lowest and highest socio-economic areas increased in the years to 2018 (15). This was accompanied by proportionately more illness in lowest socioeconomic areas and conversely, less illness in highest socioeconomic areas (13, 16).

Relevance to contemporary policies

Australia's health system, its policies and ongoing reform are focussed on delivering health outcomes to all Australians (17) – keeping all Australians healthy for longer.

Health system performance in delivering person-centred outcomes

The health system's performance in equitably delivering outcomes is the focus of Australia's National Health Performance Framework (NHPF) (18). Health status is the leading component of that framework and healthy life expectancy is a suitable overall measure of health status expressed as a single figure. Addressing health need by improving health status is the key criterion for evaluating subsequent health system activities. Those activities include delivery of effective, efficient and equitable services which maintain and improve a person's health status. Healthy life expectancy is amenable to evaluating service delivery against these criteria which also makes it suitable for informing decision-making and commissioning health interventions and programs (19).

Health system reform toward person-centred, integrated health care

The Commonwealth, state and territory governments all share a commitment to a sustainable health system that delivers better integrated and person-centred health care (17). Consistent with the budget initiative, reform towards a person-centred health system will focus on outcomes that matter to people. Quantity and quality of life are two important dimensions and healthy life expectancy captured in a single metric.

Sustainability of the system will be influenced by the value that health care offers to people. Value assessment requires information on costs to the system, services and clients. But it also

necessitates outcome measures on issues of importance to those using services. Again, quantity and quality of life are fundamental and quantified using healthy life expectancy.

Complete and flexible

The summary outcome provided by health expectancy can be broken down to examine the influences of a comprehensive set of health risks and conditions on the amount of life lived and the quality of life lived at the same time. This concurrent assessment of change in the quantity and quality of life is needed where health outcomes shift from surviving disease toward living fulsomely after disease onset. For example, survival and life expectancy after many cancers has improved greatly. This change is accompanied by the need to ensure life quality after cancer is maximised. One measure that captures both aspects is useful and flexible.

Healthy life analysis can be repeated for groups of people based on age, sex, regional geography, social and economic position, and other characteristics, including ancestry. The availability of good quality data, improving data integration and flexibility of analysis enable routine, comprehensive regional profiles of health status and need. Local decision-making and responses based on need is advocated by the Australian Productivity Commission (20).

Measurable

Objective measurement of healthy life expectancy in Australia is supported by a well-established, internationally adopted health accounting framework widely known as a “burden of disease” approach.

Calculating healthy life expectancy requires two age-specific data components for a population in a given time period: mortality rates and measures of morbid health status (21, 22). Mortality rates are informed by long-standing methods at the Australian Bureau of Statistics who routinely compile registrations of death and its underlying causes. The latter morbid health status estimates involve a systematic approach to describing health states and assessing exposure to those health states (21, 23) across a comprehensive set of health conditions. Each condition-specific model can comprise of several disease stages, durations and levels of severity. Models draw on relevant data from disease registries, hospital inpatient collections, survey results and distinct epidemiological studies. The rigorous and systematic method yields an internally consistent, collation of descriptive epidemiology.

A second approach to quality of life assessment in healthy life estimation is used in Europe. That approach uses self-reported survey responses grouped as good or poor health. However, there are also precedents harmonising the two approaches by further expanding self-reported survey information using health preference as a continuous measure for health status (24, 25).

Comparable

Healthy life expectancy is widely reported at global, regional and national levels (9) through the World Health Organization (WHO) (26) and the Institute for Health Metrics and Evaluation (IHME) (27). The latter’s principals substantially contributed to methodological and data developments through a Global Burden of Disease (GBD) framework.

Australia was at the forefront of emerging national (28-31) and sub-national (10, 32-37) production of healthy life expectancy estimates using the burden of disease framework. The Australian Institute of Health and Welfare continue to produce healthy life expectancy estimates for Australia and all states and territories (15, 16, 38-42).

The underlying data within the framework can be further disaggregated and provide intra-state level estimates. State and territory health departments have experience in estimating healthy life expectancy within Victoria (32, 43-45), Queensland (10, 35, 46, 47), Northern Territory (36, 37), Western Australia (48-50) and South Australia (11, 51) where healthy life expectancy was adopted as a strategic target area (51, 52).

Reliable

Healthy life expectancy estimates are considered reliable because they are underpinned by objective and accurate data and methods which are the subject of extensive peer reviewed, scientific literature and health system applications. For example, international region and country level health expectancy estimates are repeatedly published in in pre-eminent journals such as the Lancet (7, 53, 54). Australian analyses and applications are also the subject of peer-reviewed literature (10, 11, 46, 55-57).

Understandable and easy to use

As a single figure summarising population health, healthy life expectancy is readily used in many settings. Easy decomposition into mortality and morbidity components, and the ability to describe outcomes by: geographic areas; sex; age; across a wide range of discrete conditions and, risk factor exposures (58) makes it useful for conversations with (59):

- Policy-makers and service planners.

Health expectancy helps inform resource allocation across population groups, disease conditions and intervention modalities (60) with the aim of meeting population health needs (61). From a health promotion approach, health expectancy illustrates the extent to which exposure to health risks affects population health (62). From an equity perspective, it also highlights inequalities between population sub-groups, for example by Aboriginal and Torres Strait Islanders (63) and/or area level socio-economic disadvantage (64).

- Communities

Using a simple way of presenting explicit information about intervention risks and benefits to patients to facilitate informed decision-making (59, 65). For example, framing the effect of risk factor exposure such as obesity and cigarette smoking on healthy life expectancy and its distribution can help build active participation in health decision-making (58).

Increase accountability of government by reporting on population health levels including changes in local areas and by socio-economic position (20, 66-68).

- Clinicians and practitioners

Over and above describing outcomes by conditions, health expectancy can illustrate likely outcomes of preventive activities such as lifestyle change and pharmacotherapy interventions.

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