

Victorian Healthcare Association

Population Health Planning Framework

STEP 4: IDENTIFY AND PRIORITISE ACTION

This section discusses the process of selecting appropriate evidence-informed actions to address priority health issues identified in Step 3. This step includes:

- using evidence to identify intervention options
- appraising evidence to inform decision-making
- emphasising upstream interventions
- considerations for decision-making and
- assessing the likely impact on health inequalities.

Identifying options

Using evidence to guide decisions about actions

Decision-making based on evidence ensures that the selected actions are most likely to achieve population health outcomes and address inequities. Evidence-informed options include activities, interventions, and programs that are informed by the best available, current, and reliable evidence. Research-based actions result in improved effectiveness and efficiency, and equitable access to services and programs (Bowen & Zwi, 2005). In addition to identifying and prioritising new actions and programs, evidence-informed options can determine which current interventions and programs should be modified and/or ceased.

While there is no single approach for identifying evidence-informed options for population health actions, generally the following five steps need to be conducted:

1. asking answerable research questions to guide searches
2. searching for the best evidence
3. critically appraising all available evidence
4. applying the evidence to the questions posed
5. evaluating the process for identifying evidence-informed options

The research question

Formulating a question that assists in finding the right evidence is an important first step. The PICO principle dissects a question for research into four parts:

- | | |
|---|-------------------------------------------------------|
| P | A description of the population |
| I | An identified intervention or area of interest |
| C | A comparison intervention or status |
| O | An outcome |

Using the PICO approach, a question can change from 'what increases physical activity in children?' to 'what built environment interventions increase cycling and walking in primary school children?'

For more information on formulating research questions and inclusion criteria, see ['How to search for evidence of intervention effectiveness and cost-effectiveness'](#) (Department of Health 2010).

Appraising evidence

Identifying options for population health actions can involve reviewing a broad range of quantitative and qualitative evidence. **Evidence may be considered from a range of sources, including** health service providers, non-government organisations, private industry, universities, peak bodies, local government, communities of interest, government departments, education and early childhood sector, community welfare organisations, social services, sport and recreation, environmental protection agencies.

Evidence may be in the form of guidelines, systematic reviews (eg, Cochrane Database of Abstracts of Reviews of Effects), peer reviewed primary studies, program evaluations, expert opinion, or community knowledge. It is common for the quality of evidence collected to vary depending upon the source and format. Evidence should, therefore, be appraised for its strength and assessed for its general applicability and transferability (Wang et al 2005) before being used to inform decisions about priority actions. Tools are available to guide the assessment of evidence, based on the research design for quantitative and qualitative evidence. Access to expertise in epidemiology and research is also beneficial (Haby and Bowen, 2010).

Sources of evidence are commonly organised into a hierarchy of evidence with systematic reviews – **a method of summarising research evidence** – generally considered the most reliable. The strongest evidence available should be used to inform decision-making about actions. The Victorian Department of Health provides the following categories for rating the strength of the evidence.

Table 1: Strength of evaluation and research evidence for intervention effectiveness (Haby and Bowen, 2010)

| Category | Strength | Description | NHMRC designation of levels of evidence |
|----------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| 1 | Strong evidence of effectiveness | One systematic review or meta-analysis of comparative studies; or several good quality randomised controlled trials or comparative studies. | Levels I-III |
| 2 | Sufficient evidence of effectiveness | One randomised controlled trial; one comparative study of high quality; or several comparative studies of lower quality. | Levels II-III |
| 3 | Some evidence of effectiveness | Impact evaluation (internal or external) with pre- and post-testing; or indirect, parallel or modelling evidence with sound theoretical rationale and program logic for the intervention. | Level IV |
| 4 | Weak evidence of effectiveness | Impact evaluation conducted but limited by pre- or post-testing only; or only indirect, parallel or modelling evidence of effectiveness. | Level IV |
| 5 | Inconclusive evidence of effectiveness | No position could be reached because existing research/evaluations give conflicting results; or available studies are of poor quality or have very small sample sizes. | |
| 6 | No evidence of effectiveness | No position could be reached because no evidence of impact/outcome available. | |
| 7 | Evidence of ineffectiveness | Good evaluations (high quality comparative studies) show no effect or a negative effect. | Levels I-III |

Interventions should not necessarily be discounted because they are new or appear to lack evidence. However, these interventions will require rigorous evaluation to contribute to building the body of evidence. A program logic model (discussed below) is particularly useful in these instances for explaining the relationships between the issue, intervention, and expected outcome.

“Making decisions that are informed by evidence is rarely easy, but is very important, because these decisions are more likely to produce better health and wellbeing outcomes for the population. As skills in evidence evaluation increase and the evidence base improves, the task should become a little easier.” (Haby and Bowen, 2010:15).

For more information on appraising evidence, see

[‘How to search for evidence of intervention effectiveness and cost-effectiveness’](#) (Department of Health 2010)

[‘Making decisions about interventions: A guide for evidence-informed policy and practice’](#) (Haby and Bowen, 2010)

A range of options


Population health planning applies a broad lens to identify specific actions which address the entire chain of causal factors, spanning multiple levels and interacting across the life span (Gehlert et al 2006:339).

Population health planning should result in three types of outcomes-focused actions: upstream, midstream, and downstream. Conceptually, these actions represent markedly different approaches to addressing the health and wellbeing needs of populations. There is no formula or standardised approach for achieving the optimum mix of all three.

In population health approaches, the planning and leadership teams should aim to apply as many upstream actions as possible to address the social determinants of health and to reduce inequalities and inequities.

The table below (VicHealth 2006) identifies examples of upstream, midstream, and downstream factors affecting health.

Table 2: Factors affecting health- upstream determinants, midstream, and downstream risk factors (VicHealth 2006).

| Upstream determinants of health | Midstream risk factors | Downstream factors |
|--------------------------------------------------------------------------------------|-------------------------------|------------------------------|
| Social, physical, economic, and environmental factors | Psychosocial factors | Physiological systems |
| Education | Control | Endocrine |
| Employment | Stress, demand-strain | Immune |
| Occupation | Depression and self-esteem | |
| Working conditions | Hopelessness | Biological reactions |
| Income | Social support and networks | Hypertensions |
| Housing | Isolation and marginalisation | Fibrin production |
| Area of residence | | Adrenalin |
| | Health behaviours | Blood lipid levels |
| | Food and nutrition | Body mass index |
| | Smoking | |
| | Physical activity | |
| | Alcohol | |
| | Self-harm | |
| | Preventative health care use | |
|  | | |
| Main direction of influence | | |

Upstream actions

Upstream actions are at the macro level of the determinants of health, and comprise the social-structural factors operating within systems and society. Activities and interventions to influence upstream determinants are far-reaching in their scope, and include government policies, regulations, planning, social marketing, laws and by-laws.

Upstream actions include addressing the structure and costs of education systems, housing, working conditions, natural and built environments, and the cost of essential services such as water and public transport.

In Australia, many upstream actions seek to address social-structural issues – such as discrimination, racism, or the impact of colonialism on Indigenous people. These actions include strong welfare systems, universal healthcare (Medicare), redistributive and other taxation policy and trade agreements, and the active management of public goods, such as water, transport systems, and education. While upstream action to address social determinants often are most effective at a national level, there are opportunities for local upstream actions to address determinants, as reflected in the Victorian municipal public health and wellbeing planning.

Upstream actions are well-represented in the Victorian local government [Environments for Health framework](#) which identifies four environmental dimensions – built, social, economic, and natural which can contribute to health and wellbeing.

Examples of upstream actions include:

- anti-discrimination laws and human rights treaties and charters (ie, through community development and advocacy)
- organisational policies that address income inequalities and provide welfare support (ie, policies that explicitly recognise the need to address health inequities)
- affordable services and accessible service delivery systems (ie, reviewing populations' capacity to access and pay for services)
- [Health Impact Assessment](#) to assess potentially significant health impacts of local policy and system change
- training and education that gives populations opportunities for lifelong learning

The relationship between upstream determinants of health and health outcomes is not always fully understood. Advocacy is often needed to influence policy makers, governments, stakeholders, staff and management thinking about what creates good health and wellbeing among and within populations.

Midstream actions

Midstream actions target groups at risk of particular health issues, for example, chronic diseases and cancer. Midstream actions include early intervention, behaviour-change programs, health education, support programs, harm reduction programs, and targeted screening programs. They often address health-damaging behaviours and lifestyle choices, such as smoking, poor diet, and insufficient physical activity.

Examples of midstream actions include:

- promoting smoking cessation among parents (through local, targeted Quit campaigns and support groups)
- healthy meals and sports opportunities in schools (eg, encouraging local schools to adopt health promoting principles, or starting a breakfast club)
- home safety information packages in a range of languages (eg, safe storage of household chemicals, safe use of heaters)
- local fire prevention plans, including back burning to reduce fuel load, assisting elderly and those living alone to have a fire evacuation plan
- bowel cancer screening for older Australians deemed at higher risk
- helping groups at risk of social isolation (eg, newly arrived migrants, people with mental illness) to participate in neighbourhood projects
- 'self-lock-out' policies at gaming venues for people experiencing harm from personal gambling

Downstream actions

Downstream interventions occur once an individual has a diagnosis of disease or injury and requires healthcare services. Downstream programs and interventions are based on a behavioural-medical model of health and wellbeing.

Prevention and timely management of disease are important factors in the health and wellbeing of populations.

Examples of downstream actions include:

- acute hospital and rehabilitation services
- effective prevention and management of chronic disease in primary healthcare settings (through local general practitioners, community health services, self-management programs and outpatient clinics)
- community-based primary health care programs (through community health and associated services)
- increased access to healthcare (eg, by locating community health and associated services at public transport hubs)

Decision-making

Transparent decision-making

Formal, transparent, and accountable decision-making processes should guide the allocation of limited health and social care resources. This is an important success factor in any planning process. The assumptions underlying the decision-making processes and the differing agendas of partner organisations must be clearly stated. Decisions should be based on the values and goals of population health planning process.

Population and stakeholder consultation

Key stakeholders, including the community, should be actively involved in making decisions about population health actions in addition to the planning partners (see Step 3). Community knowledge and stakeholder contributions are vital for selecting local and workable solutions that meet the needs of the population.

Assessing likely impacts on health inequalities

It is important to assess the likely impact of potential population health actions on health inequalities and on health outcomes. Some population health interventions have inadvertently increased health disparities by focusing on population-wide approaches. Conversely, some interventions targeting sub-population groups, (based on risk factors or vulnerabilities), have neglected the health of the broader population. Frohlich et al (2008) examines these unintended impacts and argues that population health requires a focus both on vulnerable groups and on population-wide approaches.

For more information, see [‘The Inequality Paradox: The Population Approach and Vulnerable Populations’](#) (Frohlich et al 2008)

Habey and Bowen (2010:10) propose categories for appraising intervention options, based on their expected impact on health inequalities (see table 3).

Table 3: Health inequalities categories (Haby and Bowen 2010)

| Category | Definition |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a | Intervention targeted for potential health improvement at population level, with an increasing rate of improvement with each step down the socio-economic gradient |
| b | Some health improvement at population level, with greater rate of improvement for the most disadvantaged groups |
| c | Likely health improvement for all groups |
| d | Likely health improvement for the most disadvantaged groups only |
| e | Greater rate of health improvement likely for advantaged groups, increasing the gap |
| f | Unknown impact on health inequalities |

An intervention that is expected to have a negative effect on inequalities should be discarded or modified, noting that changes may undermine the intervention’s effectiveness. Where an impact is unknown, regular monitoring and rigorous evaluation of inequalities will measure its effect over time.

Criteria for decision-making

Identifying priorities for action can involve the formal selection of criteria against which the interventions are judged (NPHP 2000). The criteria chosen should represent the values of the stakeholders and the goals of population health planning.

Factors to consider when deciding which actions to invest in include:

- data on the nature and size of the problem
- strength of evidence base (degree of certainty to produce improvements)
- expected impact on health inequalities
- feasibility and acceptability to stakeholders
- transferability of action to local population
- existence of concurrent initiatives that can be leveraged
- cost effectiveness, including the financial cost of not addressing the problem (Haby and Bowen 2010)
- the scope of interventions needed to cover upstream, midstream, and downstream actions
- contextual information (eg, alignment with current government policy, plans and budget)
- likelihood of funding

The planning context (see Step 2) should be considered when prioritising population health actions. The context includes factors such as feasibility of implementation, likelihood of sustainability, capacity to effect change, and ensuring actions meet the needs of the target population and other stakeholders.

For more information on deciding how to prioritise actions, see

- [Making decisions about interventions: A guide for evidence-informed policy and practice](#) (Haby and Bowen, 2010)
- [A self-paced online learning module on Evidence-Informed Decision Making in Public Health](#) (National Collaborating Centre for Methods and Tools)

Questions to ask when decision-making (adapted from Public Health Agency of Canada, 1999)

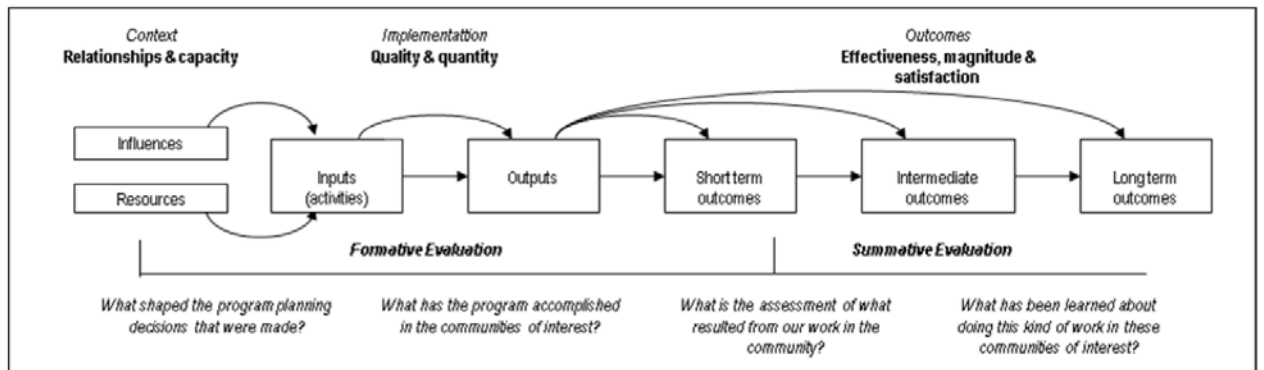
Ask yourself...

- How did we determine what action to take?
- Are the interventions selected based on evidence?
- What evidence did we have and use to justify the strategies selected?
- What were its sources? Was the evidence valid, reliable, and relevant?
- Was the evidence extensive or fragmentary?
- Does the intervention reflect what we found out about the problem's root causes?
- Was there evidence against taking the course we chose, and if so, why did we dismiss it?
- Where on the health continuum have we invested/concentrated resources, and what was the rationale?
- Are we documenting the intervention to add to the evidence base?

Program logic model

A program logic model may help to clarify links between the issue, proposed actions, and expected health outcomes. This model focuses on outcomes by illustrating the logic or theory of the program using “if/then” relationship statements. Program logic is commonly used to plan health promotion and community programs in Victoria.

A diagrammatic representation of a logic model is provided below (North and West Metropolitan Region Department of Health, 2008)



(Adapted from Logic Model Development Guide, Kellogg Foundation, 2004)

Guidance on using program logic is available from

- Department of Health (Victoria) [Evidence and evaluation for health promotion and disease prevention website](#).
- [University of Wisconsin-Extension Program Development and Evaluation website](#)
- [Centers for Disease Control and Prevention \(USA\) evaluation website](#)
- [WK Kellogg Foundation Logic Model Development Guide](#) (2004)
- [A Results-Based Logic Model for Primary Health Care](#) (The University of British Columbia, 2004)

Additional Resources

Victorian Government Health Promotion website

The following tools are available from the [Victorian Government Health Promotion website](#):

- [Guidelines and evidence summaries for health promotion and disease prevention interventions](#)
- [How to search for evidence of intervention effectiveness and cost-effectiveness](#)
- [How to use qualitative research evidence when making decisions about interventions](#)
- [Evaluation framework for health promotion and disease prevention initiatives](#)
- [Impact and outcome indicators for nutrition, physical activity and obesity programs](#)
- [Evaluation tools for nutrition, physical activity and obesity programs](#)
- [Understanding program logic](#)

- [Integrated Health Promotion Resource Kit](#)

Assessing Cost-Effectiveness (ACE) Prevention project

The ACE Prevention Project is the result of five years' research, funded by the National Health and Medical Research Council. It is the most comprehensive evaluation of health prevention measures ever conducted world-wide, involving input from 130 top health experts. The ACE Prevention Project provides useful information on the economic benefit of specific health programs.

[ACE Prevention Project- Final Report](#)

The Health Planners Toolkit

The Ontario Ministry of Health and Long-term Care developed a health planners' toolkit, which includes a useful module on evidence-based planning.

[The Health Planners Toolkit. Module 3: Evidence Based Planning \(2006\)](#)

VicHealth website

The VicHealth website features research, evidence-based guides, and case studies on interventions tackling a wide range of health issues and inequities:

- [Fairer health: Case studies on improving health for all](#) (2009) showcases a selection of innovative approaches to tackling health inequalities
- [People, Places, Processes](#) (2008) is a guide to planning population health interventions with the greatest potential to reduce health inequalities
- [Leading the Way: Councils Creating Healthier Communities](#) (2002) is aimed at increasing local government understanding of social, economic, and environmental factors in health and wellbeing. It also looks at how councils can take action on the determinants of health.

National Partnership Agreement on Preventive Health (NPAPH)

The [COAG National Partnership Agreement on Preventive Health](#) (NPAPH) focuses on preventing obesity by encouraging healthy eating and regular physical activity in schools, workplaces, and communities. It also includes strategies to reduce smoking. Related initiatives include [Health promoting communities](#), [Health promoting schools and early childhood settings](#) and [Health promoting workplaces](#). Information on these evidence-based interventions is available on the [Victorian Government Prevention and Population Health website](#).

The Community Guide

The [Community Guide](#) is a USA resource developed to support planning. The Guide is useful when selecting evidence-based actions to improve health and prevent disease in the community.

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Further reading

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Further Information

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