

Measuring health
promotion impacts:
A guide to impact evaluation
in integrated health promotion



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integrated health promotion**

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Foreword

As stated in the Ottawa Charter (1986), health promotion aims to enable people to increase control over, and to improve their health, ultimately to lead to improved population and individual health outcomes. Through the Primary Health Reform in Victoria, integrated health promotion has been highlighted as a crucial approach to improving population health and addressing issues that cause significant disease burden in our communities.

To establish that a health promotion program has had the intended effect, evaluation needs to take place to measure relevant changes in populations, individuals or their environments. It is not enough to implement a program or service – it is imperative we know if it has made a difference.

The impact evaluation guide has been developed to support agencies within primary care partnerships (PCPs) in assessing and reporting on the impact of their health promotion activity. This guide complements the health promotion planning and reporting tools being used by the sector and promotes a more rigorous approach to planning and evaluation.

Health promotion delivered by agencies within PCPs will be greatly informed by this impact evaluation guide and efforts to improve community health and well-being further enhanced.

Tracey Slatter

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1. Introduction

This guide has been developed to assist agencies within primary care partnerships (PCPs), design appropriate impact evaluation methods and develop impact indicators for health promotion programs. This guide supports the implementation of the key principles of health promotion and the Government's policy directions.

While these evaluation guidelines are primarily aimed at agencies within PCPs, the information provided in this document will also assist other organisations in the design of appropriate impact evaluation processes for health promotion programs.

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This guide should be read in conjunction with the *Health promotion practice guide*, particularly the chapters containing discussion of planning and evaluation processes for health promotion programs and services.

Health promotion action aims to enable people to increase control over, and to improve their health, ultimately to lead to improved population and individual health outcomes.¹

To establish that a health promotion program has had this intended effect, information about relevant changes in populations, individuals or their environments needs to be collected in a way that allows such changes to be attributed to the program.

Effective health promotion programs contribute to improved health outcomes, such as healthier lifestyles, more effective health services, healthier environments and, ultimately, decreased morbidity and disability and increased life expectancy, functional independence and quality of life. These changes in health status are referred to as the **outcomes** and they reflect fulfilling the **goal** of the program (see figure 1).

These ultimate **outcomes** are influenced by a wide range of determinants, including a person's physical, social and economic environment. Only a very small proportion of such determinants may be directly affected by a particular health promotion program. Moreover, changes to **outcomes** are likely to take place over a time period beyond the time-scale of most evaluations.

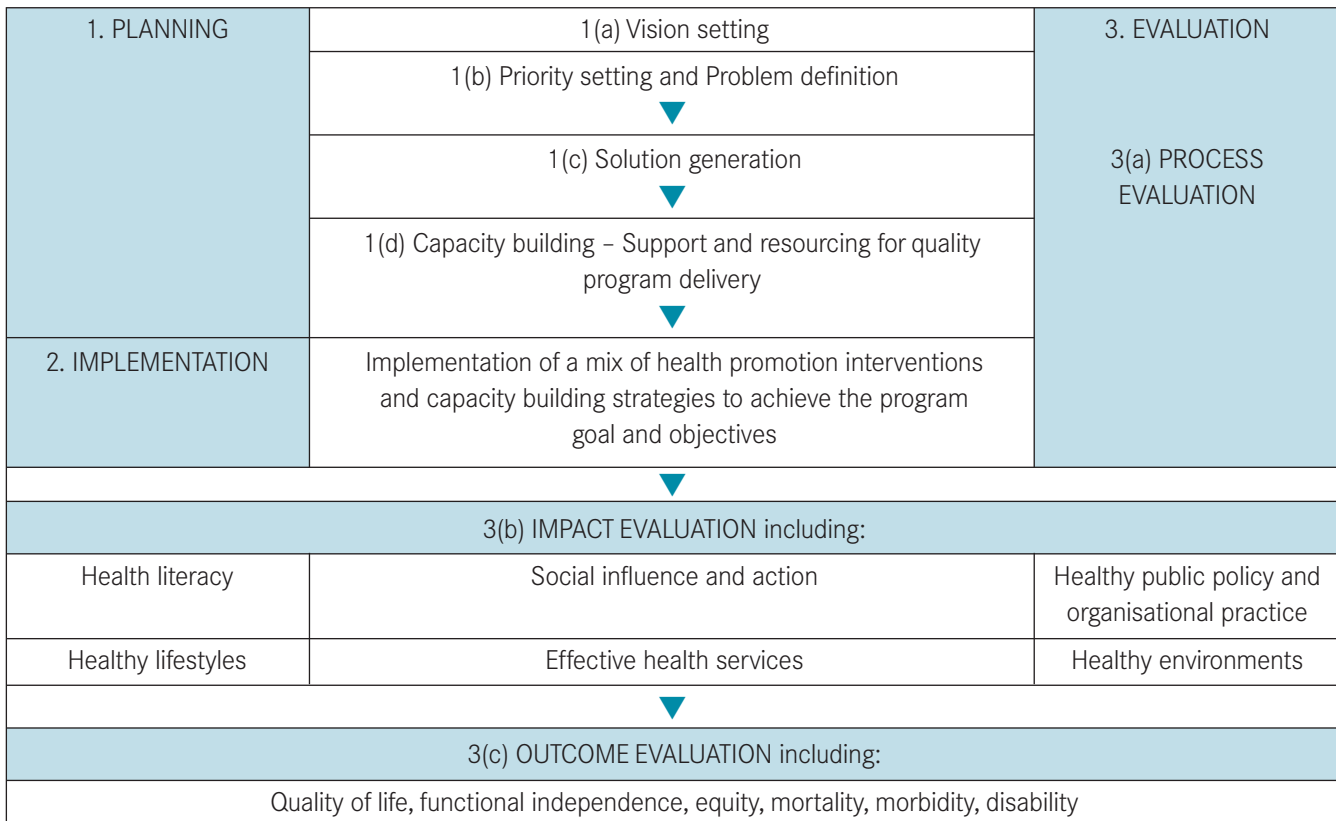
For these reasons, when assessing the effects of health promotion programs, the more immediate changes in populations, individuals or their environments are considered. These changes are known as **impacts** and they reflect fulfilling the **program objectives**.²

¹ World Health Organisation (1986) The Ottawa Charter for Health Promotion, Geneva.

² Public Health, Aged Community and Mental Health Services, (January 2001). Draft health promotion guidelines for primary care partnership, Department of Human Services. Melbourne.

Figure 1 Program Management for Integrated Health Promotion Programs/Services

Program management for integrated health promotion involves managing the total set of actions, including:



Depending on the objectives of the particular program, **health promotion impacts** include improved:

Health literacy – health related knowledge, attitudes, motivation, confidence, behavioural intentions and personal skills concerning healthy lifestyles, as well as knowledge of where to go and what to do to obtain health services.

Social action and influence – community participation, community empowerment, social norms and public opinion.

Healthy public policies and organisational practices – implementation of policy statements, legislation/regulations, resource allocation, supportive organisational practices and settings experiencing enhanced engagement with health promotion programs.

‘Second level’ health promotion impacts include those relating to **healthier lifestyles, more effective health services, and healthier environments**. These impacts may emerge at a later stage than the more immediate impacts described above.

2. The evaluation framework

This chapter outlines the key levels of evaluation for health promotion and the overarching framework that should be taken into consideration when designing local evaluation activities.

2.1 Different levels of evaluation

There are three key levels of evaluation for health promotion:

- (a) Process
- (b) Impact
- (c) Outcome

Process evaluation covers all aspects of the process of delivering a program. It focuses on evaluating health promotion actions and documenting reach and quality and the capacity of the system to deliver effective health promotion action. ‘Reach’ is the number of key stakeholders³, settings⁴ or members of the community affected by the health promotion program. Reach performance indicators should be reported for health promotion interventions and capacity building strategies that are part of the health promotion program (see *Health promotion practice guide* for more information on reach).

Impact evaluation is described in detail in chapter 3.

Outcome evaluation is linked to assessing the endpoint of interventions expressed as outcomes such as mortality, morbidity, disability, quality of life and equity.

2.2 Program logic

In addition to the evaluation undertaken by PCP member agencies of their integrated health promotion programs, there is also an overarching evaluation of the statewide PCP Strategy. It is important that local and overarching evaluation activities complement and support one another. To achieve this, similar frameworks have been developed for these evaluation activities. The framework being used for evaluation of the PCP Strategy is Program Logic. This framework should be considered by individual PCPs, community health services and women’s health services in designing local evaluation activities.

Program Logic analyses the logical reasoning that connects program activities to the ultimate program goals. It clarifies how and why particular activities make a difference for consumers. This process of logical reasoning identifies different levels of effect (including process, impact and outcome) that are predicted to occur over time as a result of program activities.

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For further information on Program Logic and for the Map of Program Logic for Health Promotion, refer to *Evaluation of the Primary Care Partnership Strategy*, June 2001 and the updated attachment released in November 2001. These documents can be found on the Primary Health Knowledge Base at www.dhs.vic.gov.au/phkb.

³ Stakeholders may include community leaders, provider representatives and agency staff.

⁴ Settings are specific physical locations such as schools and workplaces.

Impact is defined as the immediate effect that health promotion programs have on people, stakeholders and settings to influence the determinants of health. Health promotion programs may have a range of immediate effects on individuals and on social and physical settings.

3. Impact evaluation

Impact is defined as the immediate effect that health promotion programs have on people, stakeholders and settings to influence the determinants of health. Health promotion programs may have a range of immediate effects on individuals and on social and physical settings. For individuals, the immediate effects include improved health knowledge, skills and motivation, and changes to health actions and behaviour. In relation to settings, these include the creation of new organisations, programs and services to promote health, reductions in physical health risks and improvements to the physical environment to protect health and health promoting changes to organisational policies and practices. Integrated health promotion programs should specify impact indicators for program activities. These indicators should specify the type of change that is expected and the percentage of people or settings for which that change is anticipated.

It may be appropriate to develop an impact indicator for each intervention or strategy, or for a mix of interventions or strategies related to one objective. For example, the impact indicator may specify an increase in knowledge and awareness in 70 per cent of the target group about certain risk and protective factors. This indicator could be used to assess the effectiveness of a collection of interventions, such as health information/social marketing and health education.

3.1 Measuring health promotion impacts: general guidelines

Establishing which impacts to assess and how this should be done is an integral part of evaluation planning. Although the focus here is on impact evaluation, assessment of the program's impacts should be accompanied by the collection of information on the process of delivering the health promotion program, that is, a process evaluation. This is important because process evaluation measures the activities and quality of the program or service and who it is reaching.

3.1.1 Key tasks in impact evaluation

The key tasks in undertaking impact evaluation include:

- Identifying the impact indicators to be used – planning stage.
- Establishing the target levels for the impact indicators – planning stage.
- Identifying the information to be collected and methods of doing this – planning stage.
- Designing the evaluation to increase the likelihood that observed effects can be attributed to the health promotion program – planning stage.
- Implementing the impact assessment.
- Reporting the impact assessment.

Establishing impact indicators involves identifying the type of evidence or indicators that allow us to determine whether the program objectives have been achieved. There are many possibilities for the development of specific impact indicators.

3.1.2 Identifying impact indicators

Impact assessment involves measuring the extent to which the program objectives have been met. The first step, therefore, in planning an impact assessment is to specify the indicators of the intervention or capacity building strategy. Questions that can help with this task include:

- If this objective was met, what changes would the participants observe?
- What changes would be apparent in the organisations or other settings targeted by the program?

Establishing impact indicators involves identifying the type of evidence or indicators that allow us to determine whether the program objectives have been achieved. There are many possibilities for the development of specific impact indicators.

This guide sets out a format for specifying impact indicators for capacity building strategies and health promotion interventions contained in the *Health promotion practice guide*. The development of indicators needs to take into account the type of intervention and characteristic of the particular groups or settings participating in the program, in addition to the predicted impacts of the program. Useful indicators applicable to different types of health promotion interventions and capacity building strategies are listed later in this guide.

3.1.3 Establishing target levels

Impact indicators must specify the size of the effect being aimed for (at least for those interventions where there is a reasonable basis for establishing such targets). Nominating the percentage of the target group that will achieve a particular level of impact specifies the target levels for impact indicators. For example, ‘Ninety per cent of those attending the health education sessions will demonstrate knowledge of...’ or ‘all participating schools will adopt healthy lunch policies’.

Target levels are typically derived from previous work and represent a type of benchmark against which the impact of a particular intervention (or mix of interventions) can be assessed.

3.1.4 Identifying the information to be collected and methods of collection

Identifying the information to be collected and the means of doing this will involve a mix of qualitative and quantitative methods and deciding whether to develop new data collection tools, such as questionnaires and survey instruments, or to use instruments that have already been developed.

Qualitative or quantitative methods provide different types of information and tend to address different evaluation questions. Information collected via quantitative data collection strategies (for example, questionnaire responses and service utilisation data) is most useful for evaluating whether there is a relationship between a health promotion intervention and an effect (impact or outcome). Information acquired

through qualitative strategies (for example, focus groups or in-depth interviews) is most useful in explaining why this relationship may exist.

Some of the **qualitative methods** commonly used in impact evaluation are:

a) Focus groups

Focus groups consist of semi-structured discussion with 8–12 participants, lead by a facilitator who follows an outline and manages group dynamics. Proceedings are typically recorded. Focus groups have certain strengths as a data collection method: they provide in-depth information, they can be inexpensive to implement and require a minimum of specialised skills.

In impact evaluation, focus groups have a number of applications including:

- To gather in-depth information from a small number of stakeholders.
- To pre-test materials with a target audience.
- To develop a better understanding of stakeholder attitudes, opinions, language.

b) In-depth interviews

In-depth interviews involve telephone or in-person one-on-one interviews in which the interviewer follows an outline but has flexibility in the order and nature of questions. In impact evaluation, in-depth interviews can be used to investigate sensitive issues with a small number of stakeholders and to develop a better understanding of stakeholder attitudes, opinions and language.

Compared to focus groups, in-depth interviews provide a confidential environment, eliminate peer influence and can provide more detailed information. They are, however, more expensive to implement than focus groups and the findings can be difficult to analyse.

c) Open-ended survey questions

These are structured questions on a telephone or mail survey that allow the respondent to provide a complete answer in their own words. They are often used to add depth to survey results and further explore the reasons for answers to closed-ended questions. They can provide depth with the potential to be quantified (for example, through thematic analysis).

d) Participant observation

Participant observation involves actual observations rather than asking questions. This strategy is used to better understand behaviours and actions of groups and individuals, the social context in which they arise and the meanings that individuals attach to them. Observers compile field notes describing what they observe; the analysis focuses on what happened and why. Data gained in this way can inform the choice or development of more quantifiable impact indicators or be used to complement quantitative impact data. Examples of quantitative measures are provided in the next section.

The best way to establish the effectiveness of interventions implemented in the program is to design the evaluation in a way that rules out alternative explanations for any observed changes in impact indicators.

Quantitative methods

There are advantages in using existing quantitative data collection tools rather than developing program-specific questionnaires and checklists. With existing, widely used tools, the validity (the extent to which these measures are actually measuring what they purport to measure) and reliability (the extent to which the measures give consistent results) of the particular questions or other data collection protocols have been confirmed. Also, using well-established measures allows direct comparison of the findings from the program with those from other studies.

Hawe, Degeling and Hall⁵, or other social research texts, provide further details of qualitative and quantitative methods and data collection tools.

3.1.5 Designing the evaluation

The best way to establish the effectiveness of interventions implemented in the program is to design the evaluation in a way that rules out alternative explanations for any observed changes in impact indicators. The standard research design to establish the effectiveness of a program involves one group of people or setting participating in the program compared with another group/setting that doesn't participate (the control group). The most rigorous method to ensure comparability of the two groups on all other factors that may influence the indicators, is to employ a random procedure to allocate participation and non-participation. This design is called a randomised-controlled trial. For most health promotion programs, it is not feasible or appropriate to undertake a randomised-controlled trial – it may be impractical and unethical to randomise groups or to have a control group at all.

Where no control group is possible, consider using pre-program measurement to provide a baseline against which the post-program results can be compared. This is a means of strengthening the case for a real effect due to the interventions and strategies implemented in the program. The absence of an appropriate control group or pre-program measurement means that rival explanations for any change in indicators cannot be ruled out and this needs to be acknowledged when interpreting the evaluation data.

In some cases, even pre-program measurement is not practical, but this does not mean that nothing useful can be concluded from the evaluation. If appropriate indicators clearly and objectively measure achievement of the program objectives and program processes are well documented, a strong case for program impact can still be made.

Impact measurement should also ensure that results can be generalised to the individuals and settings for which the health promotion program is intended. In some cases, impact measurement may involve measuring all individuals or organisations participating in the program. This is called a census approach and, by definition, the results can be generalised to all individuals or organisations that

5 P Hawe, D Degeling & J Hall (1990) *Evaluating health promotion*, Sydney, Mclennan & Petty

participated. In other circumstances, it is not possible to do this and a sample of participants is drawn. Samples should be selected so they are representative of the population of participants. There are various approaches that should be considered for qualitative and quantitative sampling. A useful discussion of these issues is available in Jackson & Furnham (2000)⁶ or Howe et al. (1990).

It is also important that privacy and ethical issues are taken into account. Information collection practices need to be consistent with relevant privacy legislation. In general, this requires that participants in evaluation studies provide informed consent when they provide data and that confidential data is held securely and used only for appropriate purposes.

3.1.6 Implementing the impact assessment

It is critical to create an evaluation plan detailing the evaluation questions, process indicators and impact indicators. The plan should also outline the information that will be collected, how, by whom and when.

The plan should include the following tasks:

- Preparing for data collection – design/identify data collection tools, develop questionnaires and checklists where necessary, locate existing tools, prepare templates for observing program operations, prepare focus group and interview questions. Include timelines for when data will be collected and sample sizes and identify informants.
- Data collection – administer questionnaires, conduct interviews, observe program operations or review or enter data from existing data sources. Include who will collect data.
- Data recording – collate the information gained through data collection, ensuring that it is accurate, and translate collected data into useable formats for analysis.
- Data Analysis – conduct statistical analyses (where relevant) or content analysis of qualitative data and prepare summary statistics, charts, tables and graphs.

3.1.7 Reporting impacts

PCPs are expected to report on health promotion impacts related to assessing the achievement of program objectives in their integrated health promotion programs. Community health services and women's health services will be expected to report on health promotion impacts in 2003–2004 and beyond.

The following sections discuss and illustrate a format for specifying impact indicators for capacity building strategies and health promotion interventions. Further useful resources are outlined in Appendix 1.

It is critical to create an evaluation plan detailing the evaluation questions, process indicators and impact indicators. The plan should also outline the information that will be collected, how, by whom and when.

⁶ C Jackson & A Furnham (2000) *Designing and analysing questionnaires and surveys: A manual for health professionals and administrators*, London, Whurr

4. Capacity building strategies for health promotion

Capacity building involves the development of sustainable skills, organisational structures, resources and commitment to health improvement in health and other sectors, to prolong and multiply health gains many times over.⁷

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A key tool to assist in evaluating and monitoring capacity building efforts has been developed by Hawe, King and Noort and is described in the report *Indicators to help with capacity building in health promotion*⁸. Nine checklists are detailed, which can be used for impact evaluation of capacity building.

These checklists are described briefly below:

Checklist 1

- **Assessing the strength of a coalition:** Assesses how well an inter-organisational coalition is functioning or to set tasks in relation to coalition planning.

Checklist 2

- **Assessing opportunities to promote incidental learning among other health workers:** For situations where the aim is to promote invisible skills transfer (not pertaining to formal training programs).

Checklist 3

- **Assessing opportunities to promote informal learning among other health workers:** For situations where the aim is to promote invisible skills transfer (not pertaining to formal training programs). To encourage others to be more engaged in 'on the job' health promotion skills development.

Checklist 4

- **Assessing if a program is likely to be sustained:** Assesses the presence of program, organisational and community level factors known to be associated with program uptake and maintenance.

Checklist 5

- **Assessing the learning environment of a team or project:** Assesses whether or not the structure and function of a group is optimal for innovation or learning.

Checklist 6

- **Assessing capacity for organisational learning:** Same as above but for organisations.

Checklist 7

- **Assessing the capacity of a particular organisation to tackle a health issue:** Arranges critical factors that may be assessed separately or in combination, including partnership capacity and program delivery capacity.

⁷ *Health Promotion Strategies Unit (1999) A framework for building capacity to improve health, NSW Health, Sydney.*

⁸ *Hawe P., King L., Noort M., Jorderns C., Lloyd B. (2000) Indicators to help with capacity building in health promotion. NSW Health Department, Sydney. This can be accessed at <http://www.health.nsw.gov.au/public-health/health-promotion/pdf/indicators/capbuild.pdf>*

Checklist 8

- **Assessing the quality of program planning:** Assesses one component of checklist 7 in more detail.

Checklist 9

- **Assessing community capacity to address community issues:** Sorts into predisposing enabling and reinforcing factors.

These checklists should be considered in evaluating capacity building strategies described in sections 4.1, 4.2 and 4.3. The appropriate checklists should be selected according to the nature of the capacity building strategy being assessed.

4.1 Organisational development

Organisational development to build health promotion capacity strengthens organisational support for health promotion within agencies. Examples of elements of organisational development strategies include:

- policies and strategic plans
- organisational management structures
- management support and commitment
- recognition and reward systems
- information systems – monitoring and evaluation
- information resources
- quality improvement systems
- informal organisational culture.

Impact indicators

The impact indicators for organisational development strategies specify the percentage of organisations that will implement practices and procedures to support health promotion, once the organisational development strategies have been completed. The indicator must specify **change**. The impact indicator should report the percentage of participating organisations that **have implemented** the desired health promotion procedures or practices.

For example, the strategy may be to incorporate health promotion activity into performance agreements and job descriptions within the agency or PCP. The impact indicator would report the percentage of participating organisations that have actually made changes to job descriptions within their workplace to reflect responsibility and accountability for health promotion activity. Alternatively, where there is only one agency involved, such as a community health or women's health service, the impact indicator would report the changes in procedures and practices that had been implemented in that organisation to support health promoting practice.

The impact indicators for organisational development strategies specify the percentage of organisations that will implement practices and procedures to support health promotion, once the organisational development strategies have been completed.

Measurement of impact involves collecting data on relevant organisational procedures and practices that have been implemented as a consequence of the organisational development strategy.

Measurement

Measurement of impact involves collecting data on relevant organisational procedures and practices that have been implemented as a consequence of the organisational development strategy. Organisational audits or checklists are used to measure the extent to which:

- health promotion is included in key agency policy documents
- documented health promotion plans are available
- management responsibility for health promotion has been formalised
- reporting and accountability systems are in place.

Impact measurement of organisational change to build health promotion capacity can be conducted through direct observation, document review, interviews with key stakeholders or mail surveys.

Example

The PCP identifies that systems are required to support services to achieve integrated health promotion goals. As one of its organisational development strategies, the PCP management committee will work with all member agencies to develop PCP/individual agency information dissemination and delegation processes that support the goal of integration in health promotion. These processes will ensure the sharing of information and allow formal delegation of activity to be agreed between member agencies, and also within individual agencies. In the planning phase, it is agreed that the impact indicator for the strategy will be that 80 per cent of member agencies will have implemented these dissemination and delegation processes. These processes include reporting and disseminating health promotion impacts between the health promotion working group and the executive group.

Data collection involves a review of the executive group minutes and a bi-annual focus group with a range of managers and staff from the PCP member agencies.

The executive group minutes indicate that recommendations from the PCP health promotion working group are discussed and actioned, as a regular item on the PCP executive group meeting. The focus group indicates that 75 per cent of agencies have introduced strategies within their agency to ensure all staff understand the role of the PCP integrated health promotion program and how it relates to the agency's health promotion role. They also have formally delegated staff time to represent the agency in PCP health promotion activity. This is supported by allocation of financial resources from the PCP to the individual agency for this staff time (impact measure of resource allocation). The evaluation indicates that the impact objective has been approximately met.

The PCP would report that the impact of their organisational strategy has been that 75 per cent of member agencies implemented the dissemination and delegation processes. The focus group data will provide an explanation as to why the target of 80% was not reached and this explanation will be included when impact is reported.

4.2 Workforce development

Workforce development to build health promotion capacity aims to enhance health promotion skills and knowledge of the participating workforce group. Examples of elements of workforce development strategies include:

- on-the-job-learning
- professional development opportunities, continuing education and undergraduate and postgraduate studies
- professional support and supervision systems
- performance management systems.

Impact indicators

The impact indicator for workforce development strategies sets out the percentage of staff participating in strategies who acquire specific health promotion knowledge and skills (competencies). Impact evaluation should report the percentage of staff **participating** in workforce development who then **integrate** the specific health promotion knowledge and skills into their daily work. (Participation on its own is a process evaluation measure – reach.)

Measurement

Workforce development impact indicators can be measured by formal exams, assignments and practical exercises that allow staff to demonstrate that they have acquired relevant skills and knowledge. Alternatively, staff can be asked to self-report on the extent to which they have acquired specific health promotion competencies included in the workforce development program. This can be done through surveys, log books or in personal interviews (for example with supervisors or mentors). Audits or surveys could also be undertaken to assess any change to organisational practice as a result of staff applying the knowledge they have acquired.

A tool has been developed to assist agencies, health promotion networks and PCPs to recognise the skills they have in health promotion and identify areas for further workforce development. It is known as the **organisational skill assessment tool for health promotion** and can be obtained from the Public Health Branch of the department or from departmental regional health promotion officers.

This tool uses a competency-based approach to assess knowledge and skills and has been developed in conjunction with health service practitioners working in community-based organisations. The tool's knowledge and skill units include the competencies needed to develop the organisation's capacity to support health promotion, and those needed for health promotion program management, such as competencies for planning, implementing and evaluating health promotion activities.

Workforce development impact indicators can be measured by formal exams, assignments and practical exercises that allow staff to demonstrate that they have acquired relevant skills and knowledge.

Example

A community health service initiates a health promotion mentoring strategy with participation from key staff involved in health promotion. The impact indicator of the strategy is that 90 per cent of these staff will demonstrate competent understanding of health promotion principles and program management skills. Mentors work with key staff over a period of ten months to:

- Plan, implement and evaluate the current community health service health promotion plan.
- Build on the current plan and knowledge gained from the first year of implementation to develop a new program plan for the next financial year.

At the completion of the mentoring program, participating staff are asked to rate their knowledge and skills against predetermined competencies. The results indicate that 90 per cent of staff in the mentoring program reported having achieved the target skills and competencies. This impact is also supported by management reporting staff utilising these skills in planning and implementation activities.

4.3 Resources – human, financial and information

Allocation and development of resources to build capacity focuses on ensuring resources to support health promotion are available and that they are allocated strategically. Examples of resource strategies include:

- Committing financial resources to support health promotion action.
- Allocating human resources to advocate for health promotion principles and implement health-promoting action.
- Conducting evidence-based research and commissioning specialist services to support quality health promotion action.
- Developing decision making tools to inform the financial allocation of resources to health promotion.
- Ensuring the availability of administrative and physical resources to support health-promoting action.

Impact indicators

The impact indicators for resource activities include the percentage of agencies that achieve the agreed levels of agency resource allocation to support health promotion. Impact should be reported as the percentage of participating agencies contributing resources to support the implementation of the integrated health promotion program. For an individual agency, it may be the percentage increase in the agency's resources contributing to implementing the health promotion program.

Allocation and development of resources to build capacity focuses on ensuring resources to support health promotion are available and that they are allocated strategically.

Data relating to resources comes from budget and financial documents that indicate the allocation of staff, integration of research findings into practice and commitment of administrative resources.

Measurement

Data relating to resources comes from budget and financial documents that indicate the allocation of staff, integration of research findings into practice and commitment of administrative resources. Where resources are in the form of in-kind contributions, there needs to be a consistent method for estimating their monetary cost amongst the participating agencies to ensure valid measurement of allocations and the impact of this intervention.

Example

Members of the PCP health promotion working group develop a program plan as part of the integrated service planning process to address an identified local health issue. The program is aimed at reducing risk factors for diabetes in local southern European communities. They design a fully costed plan that includes a mix of health promotion interventions and capacity building strategies. The PCP member agencies, which will be participating in the implementation of the program, agree to provide in-kind support in addition to the PCP integrated health promotion funding allocated to the program. It is agreed that the in-kind support will match 15 per cent of the total fiscal budget for the project.

In the planning process, the impact indicator in relation to resource allocation was set as: 90 per cent of PCP agencies participating in the risk reduction program will provide a 15 per cent (of the budget) in-kind contribution.

At the completion of the implementation, participating PCP agencies reported on their resource allocations for the risk reduction program. The results indicated that 100 per cent of participating agencies had collectively provided at least 15 per cent in-kind contribution of the total budget of the risk reduction program. As such, the target of 90 per cent of participating PCP agencies was met and exceeded.

5. Health promotion interventions

This chapter outlines impact indicators and measurement considerations for the health promotion interventions in the *Health promotion practice guide (2003)*.

5.1 Screening, risk assessment and immunisation

Screening involves the systematic use of a test or investigatory tool to detect individuals at risk of developing a specific disease that is amenable to prevention or treatment. It is a population-based strategy to identify specific conditions in targeted groups before any symptoms appear, and is undertaken in accordance with community-based screening protocols. Screening can also be an effective community engagement strategy that can lead to involvement in other health promotion activities for targeted population groups.

Individual risk factor assessment involves a more comprehensive process of detecting the overall risk of a single disease or multiple diseases. This can involve biological, psychological and behavioural risks.

Individual risk factor assessment involves a more comprehensive process of detecting the overall risk of a single disease or multiple diseases. This can involve biological, psychological and behavioural risks.

Immunisation aims to prevent the spread of vaccine-preventable disease across targeted population groups.

Impact indicators

The impact indicator should report the percentage of people **participating** in screening, risk assessment or immunisation who are identified as at risk **and have taken appropriate action** to reduce their risk.

The impact of the screening, risk assessment or immunisation activities is evaluated by comparing the actual percentage of people at risk who took appropriate action with the target level set in the planning phase.

Measurement

Sample telephone, mail or personal surveys are the primary approach to the measurement of the impact of screening, risk assessment and immunisation intervention. Impact should be measured through sample surveys of people participating in the screening, risk assessment and immunisation activity at the completion of the activity or at a logical point in a sequence of activities. Surveys can be conducted in person, by telephone or by mail or point of access questionnaires. The survey should provide the information required to report on the impact of the activity.

Screening, immunisation and risk assessment usually involve comparatively large numbers of people. As such, the measurement of impact is generally based on sample surveys of those who participated in the program. Survey design, implementation and analysis should ensure reliable and valid information is collected. Information on survey design, implementation and analysis is provided in standard resource texts^{9,10}.

⁹ Jackson, C.J. & Furnham, A. (2000). *Designing and analysing questionnaires and surveys: A manual for health professionals and administrators*. London; Whurr Publishers.

¹⁰ Hawe, P., Degeling, D., & Hall, J. (1990). *Evaluating health promotion: A health workers guide*. Artomen: McClennan & Petty.

Example

A community health service initiates a cardiovascular risk screening intervention as one activity in the overall health promotion goal of reducing cardiovascular risk for men aged 40 or over in the local community. One process indicator (reach) is defined as the number of men aged 40 or over who participated in the screening activities. In the planning process, an impact indicator for this activity is established: 60 per cent of men in the population group (who were screened as at risk of cardiovascular disease on a range of factors such as body weight, diet, family history, life circumstances and tobacco intake) will consult a general practitioner (GP) to reduce their level of risk.

All men screened as at risk are provided with referral information for their GP. The impact indicator for this screening program is the percentage of participants deemed at risk who consulted their GP to reduce their risk of cardiovascular disease.

A sample of participants in the program who were screened as at risk are followed up by telephone and interviewed to determine whether they had consulted a GP. (Refer to section 3.1.5 regarding privacy and consent issues related to follow-up.) The survey results indicated that 30 per cent of those screened as at risk had consulted a GP about their screening result. The evaluation, therefore, indicated that the intervention had achieved half the desired impact for the at risk participants of the intervention.

5.2 Health information

Health information interventions aim to increase people's capacity to make informed choices about their health and wellbeing.

Health information interventions aim to increase people's capacity to make informed choices about their health and wellbeing. This includes providing opportunities for preventive care, by improving their understanding about the causes of health and illness, the services and support available to help maintain or improve health, and personal responsibility for actions affecting their health.

Impact indicators

The impact indicator for this activity should specify the percentage of people who will **use health information to improve their health** following access to the health information provided in the intervention. Impact should report the percentage of people who have **accessed** health information and report **using** the information to take health-related action.

Measurement

Sample telephone, mail or personal surveys are the primary approach to measuring the impact of health information. Impact should be measured through sample surveys of people after they access health information. The survey should provide the information required to report on the impact of the activity.

In many situations, using pre-measures or a control group that did not receive the information to provide a comparison to assess the impact of the information provision, is not practical. It is, therefore, acceptable to report only post-activity impact. The provision of information is often opportunistic and ad hoc and it is difficult to contact those who have accessed information. A common approach to assessing impact is to collect contact information on a sample of those who access information and follow them up. Survey design, implementation and analysis should ensure reliable and valid information is collected. Information on survey design, implementation and analysis is provided in standard resource texts (see Appendix 1).

Example

A women's health service funds and organises the provision of health information sessions to women from a culturally and linguistically diverse background in their own language in their workplaces. Five to six sessions are provided at each workplace as well as one-to-one information sessions in women's homes where appropriate. These visits are conducted by bilingual community health educators who are trained to discuss sensitive women's issues in a non-threatening and safe environment.

Reach is defined as all those provided with the information. In the planning process, the impact indicator is established as: 10 per cent of women who are provided with information will change their health behaviour. Contact details are gathered for a representative sample of women who were provided with information. A survey is conducted to determine the extent to which action had been taken on the basis of the information provided. Other questions to help refine and improve the information are also included, but not for the purpose of reporting impact.

The survey finds that 10 per cent of those who accessed the information report that they changed their health behaviour as a result of the information provided. The evaluation indicates that the desired impact of the health information intervention was achieved.

Impact indicators for health education and skills development should specify the percentage of people participating in these activities who will achieve a desired level of action or behaviour change.

5.3 Health education and skills development

Health education and skills development include providing education to individuals (through discrete planned sessions or opportunistically through clinical contacts) or groups, with the aim of improving knowledge, attitudes, self-efficacy and individual capacity to change.

Impact indicators

Impact indicators for health education and skills development should specify the percentage of people participating in these activities who will achieve a desired level of action or behaviour change. Impact should report the percentage of people who **participated** in the health education or skills development activities **who have achieved the desired action or behaviour change**.

Measurement

The primary means of measuring the impact of health education is to ask those who have taken part (when the program is completed) what they are doing as a consequence of this participation. Many questionnaires have been developed to measure a range of health-related behaviours including nutrition, alcohol intake, drug use, physical activity and smoking behaviour. In Australia, most State health departments support the development of standardised 'health surveys'. It is recommended that one of the standard questionnaires be used or, if the whole questionnaire is not relevant, use the standard questions that are appropriate to the objectives of the particular project. For example, the Public Health Branch of the Victorian Department of Human Services has developed the Victorian Population Health Status Survey¹¹ that includes questions on tobacco use, alcohol use, nutrition, physical activity, health care utilisation and social networks.

Impact assessment should be a standard feature of health education interventions for all participants. Assessing the pre-intervention levels of the relevant behaviours as a benchmark against which post-intervention levels can be compared, will provide stronger evidence for the impact of the intervention. Where this is not possible, reporting only post-intervention activity is acceptable. Remember that the maintenance of health education impacts is an important issue. A proportion of people who achieve successful change immediately following a health education intervention will relapse. It is therefore wise to specify beforehand the period after the intervention at which impact is to be measured (for example, immediately, at three months, at 12 months).

¹¹ A summary of this survey and contact details are available on the Department of Human Services web site at <http://www.dhs.vic.gov.au/phd/>

Adverse selection is a common issue for assessing the impact of health education interventions. That is, those who self-select to participate in the activities are most likely to achieve a positive impact. It is therefore important to monitor whether the target population group, which is the focus of the health education intervention, actually participated in the intervention.

Example

A community health service plans ten group sessions with middle-aged women and men who have one or more cardiac risk factors. The groups are facilitated by a community development worker (with other expert advice invited depending on the topic) to:

- Develop cooking skills and provide other healthy lifestyle education (to encourage better eating habits and reduce tobacco intake and body weight).
- Provide an environment for discussion around key socio-environment challenges in their area.
- Build physical activity opportunities in a non-competitive environment.

The impact indicator specifies that participants will achieve appropriate reductions in body weight, blood pressure and smoking and appropriately increased physical activity to reduce their risk of cardiovascular disease and that these changes will be maintained three months following the completion of the group sessions. In the planning process, the impact indicator is established as: 25 per cent of participants will successfully achieve these changes.

Impact is measured as the percentage of women and men participating in the program who achieved the level of change intended across all these criteria at three months follow up. Observational and self-report measures based on material available from the National Heart Foundation is adapted for the program. Participants are measured at the beginning and the end of the program. All participants are measured as at risk of cardiovascular disease at the commencement of the program. Three months after the group sessions, 30 per cent of participants are measured as having achieved the intended risk reduction level. The evaluation indicates that the impact indicator for this activity has been exceeded.

Social marketing involves activities designed to advocate for change and influence the voluntary behaviour of target audiences to benefit this audience and society as a whole.

5.4 Social marketing

Social marketing involves activities designed to advocate for change and influence the voluntary behaviour of target audiences to benefit this audience and society as a whole. It typically uses persuasive communication (not just information) and cultural change processes. Social marketing is not restricted to the use of mass media but can involve a wide range of media, from radio and television to highly targeted messages delivered through low technology media.

Impact indicators

The impact indicator for social marketing should specify the percentage of people who are aware of the key message of the social marketing interventions and intend to **take the action promoted by that message**.

Measurement

Surveys, via face-to-face interview, telephone or mail, are usually employed to assess the impact of social marketing interventions. Typically, the same questionnaire is used to measure the level of awareness of the campaign among the population group and the impact. Questions in the survey will address awareness of the campaign (and of its different elements if appropriate) and how the message was acted on by the target population group, including what actions were undertaken or planned.

To determine whether there have been any changes in relation to knowledge, attitude and behaviour in relation to the health issues, ideally information should be collected from the participating population group prior to the launch of the campaign (this is often referred to as the benchmark survey). The same survey questions are then used to assess impact at a later date, although at this time, information on the awareness of the campaign and its elements would also be collected (post-launch surveys are often referred to as tracking surveys). In the absence of a benchmark survey, useful information about the impact of the intervention can still be gained by asking the respondents what effect the message had on their knowledge, attitudes and behaviour.

Example

A PCP initiates a social marketing intervention to complement the recent Commonwealth Government immunisation social marketing campaign¹². Consistent with the campaign, the PCP social marketing intervention (as one of a mix of interventions required for sustained change) is designed to address specific immunisation relevant knowledge, attitudes and behavioural intentions. As well as aiming to increase and reinforce the existing positive attitudes to childhood immunisation, the intervention is designed to encourage and reinforce intentions of parents to review their children's current levels of immunisation coverage; initiate and complete age-appropriate childhood immunisation; and obtain further information on childhood immunisation from appropriate service and information providers.

¹² Cramer, P., & Carroll, T. (1998). *Immunise Australia: Community Education Campaign*. Sydney: Department of Health and Family Services

Community action aims to encourage and empower communities (both geographical areas and communities of interest) to build their capacity to develop and sustain improvements in their social and physical environments that are conducive to improved health outcomes.

The interventions involve participation of parents using Maternal and Child Health Services (MCHS) and preschools. The impact indicator is established as:– 5 per cent of parents using MCHS and preschools who are aware of the campaign will review their child’s immunisation status. To measure impact, a sample of parents attending the targeted services was interviewed by telephone. It was found that 30 per cent of parents were aware of the social marketing campaign and 5 per cent of this group had reviewed or were intending to review their child’s immunisation status. The evaluation indicated that the impact indicator had been met.

5.5 Community action (for social and environmental change)

Community action aims to encourage and empower communities (both geographical areas and communities of interest) to build their capacity to develop and sustain improvements in their social and physical environments that are conducive to improved health outcomes.

Impact indicators

The impact indicator for community action specifies the percentage of individuals and organisations that will continue to participate in health promoting activities when the community action activity to build capacity has been completed. The number of individuals and organisations that participate in the sponsored community activities can be taken as the reach of the program. Impact for community action should be reported as the percentage of people or organisations that participated in the community action activity and continued their participation in activities, organisations, networks and relationships promoted by the community action program after it was completed. There would also be other impact indicators of success, such as percentage change of environments or public policy due to the community action interventions. These impact indicators will be dependent on the particular program objectives established during the planning process.

Measurement

Impact indicators include measuring continuing participation in program activities in the absence of ongoing support. Data collection would be based on staff observation or self-report or both and may include personal and telephone interviews or mail surveys. Consent for follow up contact with the people and organisations that took part in the activities would be required (see section 3.1.5).

Community action impact indicators and measurement require a clear definition of the ongoing environmental (organisation, community, social) and individual change as part of the program objectives. A good overview of the issues is provided in the text, *Community based prevention: programs that work*¹³.

¹³ Brownson, R.C., Baker, E.A., & Novick, L. F. (1999) *Community based prevention: programs that work*. Maryland: Aspen.

Example

A women's health service implements a program to address social isolation amongst older women. The program involves working with community organisations and volunteers to establish social networks and social activities within the target population.

The impact indicators are established as: 80 per cent of organisations and 50 per cent of isolated older women who participate in community action activities will continue their participation three months after the formal community action activities are completed.

Program reach is defined by both the number of organisations sponsoring group activities and the number of older people who participate in one or more of the program activities during the period of program. Impact is reported as the percentage of:

- Agencies originally providing support to the program which are still participating three months after the health promotion workers have ended their involvement in the project.
- Original program participants, who are participating in activities promoted by the community program three months after the health promotion workers have ended their involvement in the program.

Impact is measured through interviews with key organisational staff and personal interviews with a sample of participants (see section on sampling) in the activities put in place as part of original community action intervention.

At three months follow up, it is found that 80 per cent of the agencies and 50 per cent of the older women are still participating in the activities promoted by the community action. The impact evaluation indicates that the community action has been successful in terms of meeting the targets for ongoing participation.

5.6 Settings and supportive environments

This intervention category encompasses a broad range of actions that aim to improve the living conditions and working conditions conducive to health. It covers the former intervention categories of organisational development and economic and regulatory activities with the addition of advocacy. This category was changed to better reflect a social model of health and current approaches in community-based health promotion.

5.6.1 Settings and supportive environments – organisational development

Organisational development aims to create a supportive environment for health promotion activities within organisations such as schools, local businesses and sporting clubs. It involves ensuring that health promotion principles are integrated into policy, service directions, priorities and practices.

This intervention category encompasses a broad range of actions that aim to improve the living conditions and working conditions conducive to health.

Impact indicators

Impact indicators will indicate the percentage of organisations (external to the agency/agencies implementing the intervention) **participating** in the organisational development activities that **have achieved the desired changes** to their procedures or practices.

Measurement

Impact measurement of organisational development interventions involves collecting data on relevant organisational procedures and practices that have been implemented as a consequence of the intervention. Organisational audits or checklists that address the extent to which health promoting practices have been implemented in the participating organisations would be used. An audit tool would typically address some or all of the following:

- staff knowledge of the practices
- the existence of policies that support the desired practices
- the existence of procedures for implementing the practices
- the extent to which practices are implemented.

The impact of organisational change strategies would require data to be collected through staff observation, interviews with key agency personnel or mail surveys. Information on impact should be collected for all organisations participating in the interventions.

Example

A community health service initiates discussions and planning opportunities with local primary schools to improve the nutritional value of food provided within primary school canteens. The organisational development activities include establishing menu guidelines for school canteens, conducting workshops with school canteen staff and managers, auditing existing menus and practices and making recommendations for change. Through the planning process, the impact indicator is established as: 70 per cent of school canteens will achieve practices consistent with the guidelines. Reach is defined as the number of schools that participated in the program. The impact indicator to be reported for this intervention is the percentage of participating schools that changed practices to meet the guidelines at the completion of the organisational development activities. Impact is measured by conducting an audit of canteen menus in participating schools. It is found that 90 per cent of participating schools have practices consistent with the guidelines at the completion of the organisational development activities. The evaluation indicates that the impact indicator has been exceeded.

Advocacy, economic and regulatory activities apply to developing healthy public policy and regulatory/financial incentives or disincentives to support healthy choices.

5.6.2 Settings and supportive environments – advocacy, economic and regulatory activities

Advocacy, economic and regulatory activities apply to developing healthy public policy and regulatory/financial incentives or disincentives to support healthy choices. Advocacy action typically focuses on advocating for healthy public policies, structural change and social acceptance. Economic and regulatory activities focus on pricing, availability, restrictions and enforcement.

Impact indicators

The impact indicator will specify the desired change as a result of advocacy, economic or regulatory activity and the percentage of stakeholders who will implement the change.

Measurement

Impact is measured by developing specific questions or checklists that relate to the desired level of practice to be implemented. Generally, the level of change is measured by direct observation of independent observers who rate the extent to which levels of practice have been implemented against a standard checklist or protocol.

For local community-based interventions, it is often possible to measure impact of advocacy, economic and regulatory activity for all participating stakeholders. For larger scale programs or where the impact is measured in relation to individual behaviour, a sample may need to be employed.

Example

The PCP initiates a campaign to encourage compliance with regulations relating to the advertising and sale of tobacco products. This involves health promotion staff and members of a local community action group visiting local shops, supermarkets, and hotels and rating their compliance with relevant regulations and providing them with information on their obligations. The impact indicator is determined by regulation, that is, 100 per cent of local shops, supermarkets and hotels will comply with relevant regulations. Impact is measured as the percentage of outlets selling tobacco products targeted by the campaign which fully comply with the regulations. Impact is measured by repeating the initial survey. At the initial survey, 85 per cent of shops were compliant with the regulations. At the completion of the survey, 100 per cent of shops were found to be compliant with the regulations. The evaluation indicated that the impact objective had been met.

6. Outcomes

The ultimate goal of health promotion programs is to improve health outcomes for communities.

The ultimate goal of health promotion programs is to improve health outcomes for communities. Health outcomes include improvements in quality of life, function, independence, equity, mortality and morbidity.

Health outcomes are a function of health promotion activities and a range of other social, environmental and biological determinants. However, there may be considerable lags between social, environmental and biological change and health outcomes. Therefore, it is difficult to directly attribute these longer-term health outcomes to any one specific health promotion program.

Agencies within PCPs will eventually be able to report on the **trends** in health outcomes for their communities. Over time, it is expected that their health promotion programs will have a significant impact on key health indicators in catchment populations.

Appendix 1: Resources

Evaluating health promotion action

- Abelin, T., Brzezinski, Z., & Carstairs, V. D. (Eds.). (1987). *Measurement in health promotion and protection*. Copenhagen: WHO Regional Publications.
- AGB McNair. (1997). Evaluation Research for the BreastScreen Australia Campaign. Sydney: Commonwealth Department of Health and Family Services.
- Bowling, A. (1997). *Measuring Health A review of quality of life measurement scales (2nd ed.)*. Buckingham: Open University Press.
- Carroll, T. (1997). The 1995 Mass Communication Campaign for the National Childhood Immunisation Program: An Overview of Research Conducted for the Development, Implementation and Evaluation of the Campaign. Sydney: Research and Marketing Group Public Health Division.
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- Davies, J. K., & MacDonald, G. (1998). *Quality, evidence and effectiveness in health promotion: Striving for certainties*. London: Routledge.
- Flay, B., & Cook, T. (1989). Three models for evaluating prevention campaigns with a mass media component. In R. Rice & C. Atkin (Eds.), *Public communication campaigns* (2nd ed., pp. 175–196). Newbury Park: Sage.
- Hawe, P., Degeling, D., & Hall, J. (1990). *Evaluating health promotion: A health workers guide*. Sydney: MacLennan and Petty.
- Health Canada (1996) *Guide to project evaluation: A participatory approach*, downloadable from <http://www.hc-sc.gc.ca/hppb/phdd/guide/index.htm>
- Irving Rootman, Michael Goodstadt, Brian Hyndman, David V. McQueen, Louise Potvin, Jane Springett and Erio Ziglio (Editors) (2001) *Evaluation in health promotion: Principles and perspectives*, WHO Regional Publications, European Series, No. 92, xxvi + 533 pages, ISBN 92 890 1359 1. Can be ordered or downloaded from: http://www.euro.who.int/eprise/main/WHO/InformationSources/Publications/Catalogue/20010911_43
- Lefebvre, R. (1992). The social marketing imbroglio in health promotion. *Health Promotion International*, 7(1), 61–64.
- Noack, H. (1988). Measuring health behaviour and health: towards new health promotion indicators. *Health Promotion*, 3(1), 5–11.
- Nutbeam, D. (1998). Evaluating health promotion – progress, problems and solutions. *Health Promotion International*, 13(1), 27–44.
- Sarvela, P. D., & McDermott, R. J. (1993). *Health education evaluation and measurement A practitioner's perspective*. Melbourne: Brown & Benchmark Publishers.

South Australian Community Health Research Unit: The Project Planning and Evaluation Wizard (PEW) is a software tool designed to assist project officers working on primary health care and health promotion projects for project evaluation plans and reports. Online tool at:<http://www.sachru.sa.gov.au/PEW/index.htm>

Their website also details information of other resources related to community evaluation that can be purchased see <http://www.sachru.sa.gov.au/>

The Community Tool Box provides 'how -to' sections using simple, friendly language to explain how to do the different tasks necessary for community health and development. The program evaluation section is at http://ctb.lsi.ukans.edu/tools/EN/part_1010.htm

The International Union for Health Promotion & Education (IUHPE). (1999). *The evidence of health promotion effectiveness shaping public health in a new Europe: Part 2 evidence book*, IUHPE. Contact by email: cjones@iuhpe.org for more information.

The Prevention Dividend Project is designed to provide some leadership in the critical, but underdeveloped, application of economic evaluations. See tools at http://www.prevention-dividend.com/en/tools/Empowerment_Evaluation.htm

The Public Health Branch has also commissioned a series of evidence-based reviews for health promotion planning. These documents can be found at the following website address www.dhs.vic.gov.au/phd/ebhp/

- No. 1 Oral Health (Jan 2000)
- No. 2 Adolescent Health (May 2000)
- No. 3 Falls Prevention (Feb 2001)
- No. 4 Child Injury Prevention (Sep 2001)
- No. 5 Public Health Nutrition (available 2003)
- No. 6 Body Image (June 2002)

Tolley, K. (1995). *Health promotion: How to measure cost-effectiveness*. London: Health Education Authority.

Health information, education and skills development

Armstrong, T., Bauman, A., & Davies, J. (2000). *Physical activity patterns of Australian adults: Results of the 1999 National Physical Activity Survey*. Canberra: Australian Institute of Health and Welfare. (Provides a copy of the physical activity survey).

Bowling, A. (1997). *Measuring health: A review of quality of life measurement scales* (2nd ed.). Buckingham: Open University Press.

Cohen, S., Underwood, L. G., & Gottlieb, B. H. (Eds.). (2000). *Social support measurement and intervention*. New York: Oxford University Press. (Reviews most measures of social support).

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Community action

Baum, F. (1998). Measuring effectiveness in community-based health promotion. In J. K. Davies & G. McDonald (Eds.), *Quality, evidence and effectiveness in health promotion: Striving for certainties* (pp. 68–90). London: Routledge.

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Israel, B., Checkoway, B., Schulz, A., & Zimmerman, M. (1997). Scale for measuring perceptions of individual, organisational and community control. In M. Minkler (Ed.), *Community organisation and capacity building for health* (pp. 378–381). New Brunswick: Rutgers University Press.

Capacity building – general

Crisp, B. R., Swerissen, H., & Duckett, S. J. (2000). Four approaches to capacity building in health: consequences for measurement and accountability. *Health Promotion International*, 15(2).

Hawe, P., King, L., Noort, M., Jordens, C., & Lloyd, B. (1999). *Indicators to help with capacity building in health promotion*. North Sydney: NSW Health Department. This can be accessed at <http://www.health.nsw.gov.au/public-health/health-promotion/pdf/indicators/capbuild.pdf>

The NSW Health Promotion website also has a range of other resources related to capacity building and its measurement at <http://www.health.nsw.gov.au/public-health/health-promotion/hpps/capacitybuilding/indexcbintro.htm>

Labonte, R., & Laverack, G. (2001). Capacity building in health promotion, Part 2: whose use? And with what measurement? *Critical Public Health*, 11(2), 129–138.

Laverack, G., & Wallerstein, N. (2001). Measuring community empowerment: A fresh look at organisational domains. *Health Promotion International*, 16(2), 179–185.

Organisational development and evaluating partnerships

Abatena, H. (1997). The significance of planned community participation in problem solving and developing a viable community capability. *Journal of Community Practice*, 4 (2), 13–34.

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Taylor-Powell, E., B. Rossing and J. Geran. (1998) *Evaluating collaboratives*. The University of Wisconsin Extension Department, Madison Wisconsin. Available online at: http://cf.uwex.edu/ces/pubs/pdf/G3658_8.PDF

Social marketing

The Australian Department of Health and Aged Care maintains a Population Health Social Marketing website which is a useful source of information on national campaigns at <http://www.health.gov.au:80/pubhlth/strateg/educat/index.htm>

