Evaluation framework for health promotion & disease prevention programs

This document forms the basis of the evaluation framework for health promotion and disease prevention programs. It is complemented by an example plan and a list of agreed indicators. These have been developed for nutrition, physical activity and obesity projects in the first instance but it is envisaged that, in future, an agreed list of indicators will be developed for additional risk factors.

The aim of this framework is to improve the evaluation of health promotion and disease prevention programs. It aims to achieve this by:

- *Providing guidance on how to write an evaluation plan (included as part of this document)*
- *Providing an example of a good evaluation plan (the HPC:BAEW evaluation plan)*
- *Specifying some agreed parameters for good evaluation, e.g. what is a good study design for impact evaluation? (included in this document)*
- *Specifying an agreed list of indicators (the indicators). This will allow greater opportunity to compare the impacts and outcomes of different programs. Over time details of how to measure the indicators will be added.*

It is acknowledged that this framework cannot be a one-size-fits all and flexibility will be required in writing evaluation plans that meet the evaluation requirements of specific programs. Large scale evaluations are not required for all programs and it may be appropriate to simplify the evaluation plan in terms of number of questions asked, range of indicators measured and complexity of study design. (See 'Resources for the evaluation' under Step 2, and Step 3 for more information).

This framework needs to be complemented by the following actions:

- *Evaluation plans need to be developed jointly by program staff, key stakeholders and staff with evaluation or research expertise.*
- *A commitment from management and staff to support quality evaluation by requiring that evaluation plans be written at the same time as program plans and before program implementation or tendering.*
- *A commitment from management and staff to use the results of evaluations in future program design*

The language used in this document is consistent with the language of "Integrated Health Promotion" as used in the resource kit (Department of Human Services 2003a) and two evaluation guides (Department of Human Services 2003b, Round et al. 2005). However, it is acknowledged that not all sectors speak this language and different sectors may apply different terminologies. To increase understanding, definitions and explanations are given throughout the document where differences in use are evident.

This framework is designed to complement the Integrated Health Promotion evaluation resources (Department of Human Services 2003b, Round et al. 2005) and readers are referred to these resources for further details.

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An evaluation plan[1] should be developed for all new programs before they are implemented. The evaluation plan needs to be written alongside the overall program plan and allows you to:

- Identify the objectives of the evaluation,
- Clarify roles and responsibilities of those involved in the evaluation,
- Determine the most appropriate evaluation strategy/design,
- Clarify assumptions / evidence upon which program design and implementation were based,
- Outline how a program intends to produce results,
- Design the most appropriate evaluation questions to measure the impact of the objectives,
- Determine the most appropriate data collection methods,
- Outline how the evaluation results will be disseminated, and
- Cost the evaluation.

The six steps outlined in this guide are based on the framework used in the "Planning for effective health promotion evaluation" resource (Round et al. 2005), with some modifications. But flexibility can be exercised in the headings used as long as the key issues/parameters covered here are included.

Step 1. Describe the program

This section should briefly outline what the program is, including its goal and objectives, target groups, the policy context, supporting evidence and key assumptions. It should also include the 'program logic' and consider how the program is addressing health inequalities.

Program logic[2]

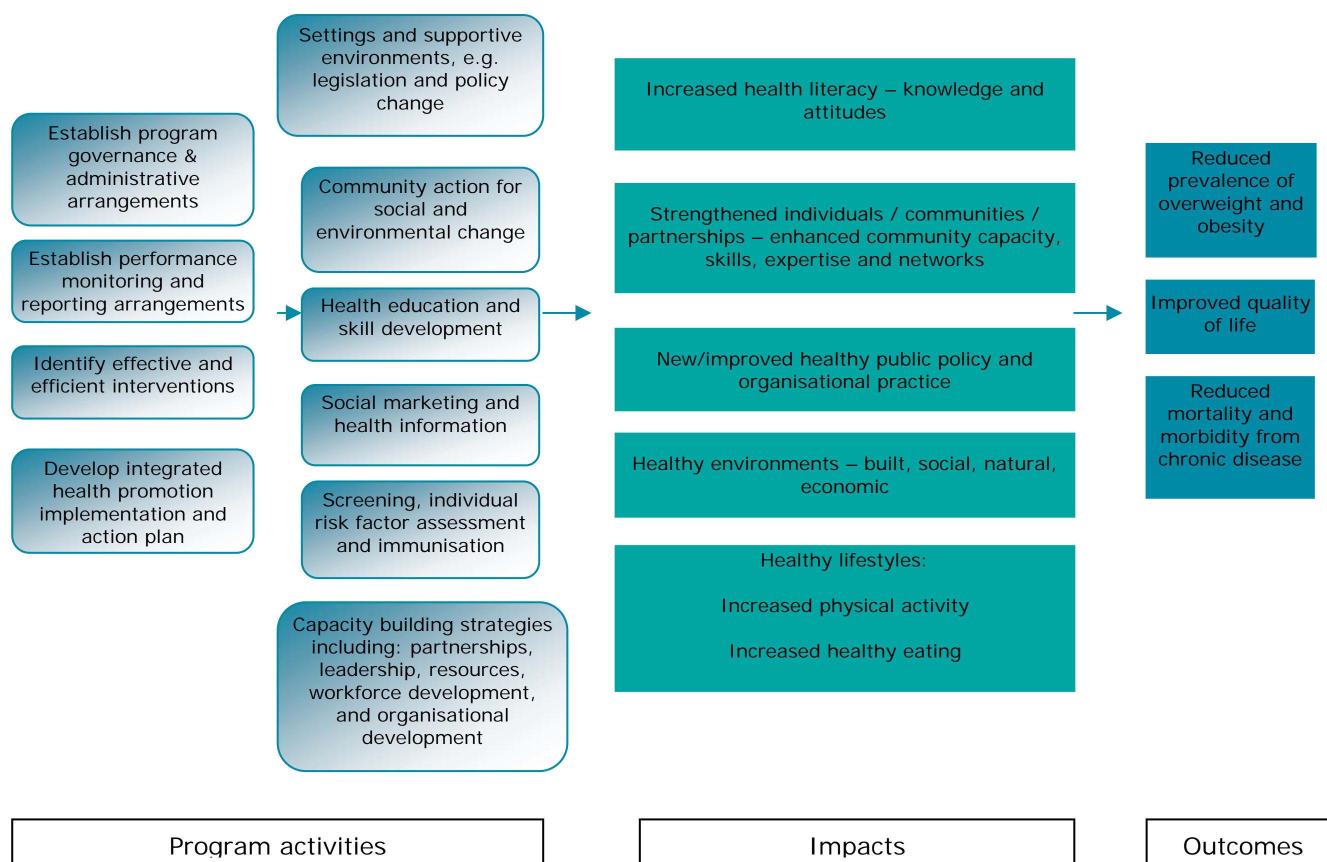
See figure 1 as an example program logic model that is applicable to a whole of community health promotion program for nutrition and physical activity. Using a program logic model in the program planning and evaluation planning stages can assist you to identify the activities, impacts and outcomes that need to be evaluated. Logic models can also provide a theoretical framework for your program design when evidence is less robust. Models like this can be developed for smaller components or objectives of the program, or they can be used to represent all programs across a community or state (US Department of Health and Human Services 2002).

Program logic models can also include a column on the left to identify inputs (resources needed to operate the program) – this is not included in this example (figure 1). Models can also include a column after activities to define outputs (the types, levels and targets of services to be delivered by the program) – these are not included here but can be found in Table 2. The second column of program activities is based on the language used in the Integrated Health Promotion Resource Kit (Department of Human Services 2003a). Note also that different definitions for impacts and outcomes are evident in the evaluation literature. Here, we define **impact** as the intermediate effect that health promotion programs have on populations, individuals or their environments (Round et al. 2005). **Outcome** is defined as the long-term effect of programs and may include reductions in incidence or prevalence of health conditions, changes in mortality, sustained behaviour change, or improvements in quality of life (Round et al. 2005).

Other examples of, and alternative approaches to, program logic models can be found in (W.K. Kellogg Foundation 2004) and (W.K. Kellogg Foundation 1998).

[1] The term evaluation framework is also used extensively.
[2] The term program logic is frequently used interchangeably with the terms program theory, logic model and causal model.

Figure 1. Underlying intention of the HPC:BAEW initiatives.



Health inequalities

In regards to health inequalities, it is important for the program to be clear about how population-wide approaches are used to reduce unequal health outcomes and to ensure that they do not inadvertently widen inequalities. Often, targeted interventions are used in conjunction with population-wide approaches to minimise this risk and further equality goals (Boyd 2008).

Step 2. Evaluation preview: Engage stakeholders, clarify the purpose of the evaluation, identify key questions and identify evaluation resources

This section should identify the key stakeholders involved; clarify the aspects of the program that are to be evaluated and the purpose of the evaluation, including who will use the results and how, e.g. to determine future funding.

Key questions

Evaluation questions should be formulated in key areas (e.g. reach, appropriateness, implementation, effectiveness, efficiency, and/or maintenance). The number of key questions should be limited to 12-15 at most and may be as few as 2 or 3. A good evaluation question addresses a specific area of concern and is amenable to some type of measurement – which you will need to include in Step 3. See Table 1 for some example questions that can be adapted for specific programs. Other headings that can be used for evaluation questions

include: need for program, reach, effectiveness, adoption, implementation and maintenance (RE-AIM), efficiency and appropriateness. Note: to read more about the RE-AIM framework for evaluation see (Glasgow et al. 1999).

Table 1. Some generic questions for evaluation of health promotion programs

QUESTION FOCUS	QUESTIONS
Process	▪ Has the program been implemented as intended? ▪ What factors (both positive and negative) impacted on the implementation ▪ What proportion of the target group has received the program? ▪ Has uptake of the program varied by socioeconomic position, Indigenous status, non-English speaking background and/or rural/metro location? ▪ Have program participants (staff, community organisations, community members) been satisfied with the program? ▪ How effective were contracting and subcontracting arrangements that were established to support program implementation and evaluation?
Impacts and outcomes	▪ Have the program impacts and outcomes been achieved? ▪ What impact has the program had on populations facing greatest inequality? ▪ What unanticipated positive and negative impacts/outcomes have arisen from the program? ▪ Have all strategies been appropriate and effective in achieving the impacts and outcomes? ▪ What have been the critical success factors and barriers to achieving the impacts and outcomes? ▪ Is the cost reasonable in relation to the magnitude of the benefits? ▪ Have levels of partnership and collaboration increased?
Implications for future programs and policy	▪ Should the program be continued or developed further? ▪ Where to from here? ▪ How can the operation of the program be improved in the future? ▪ What performance monitoring and continuous quality improvement arrangements should exist into the future? ▪ How will the program or the impacts of the program be sustained beyond the funding timeframe? ▪ Will additional resources be required to continue or further develop the program?

Resources for the evaluation

It is important to consider the needs of the evaluation when deciding on resources for your evaluation. If the program is new and innovative it may be necessary to evaluate it more intensively, using a stronger study design[3]. This may be particularly important if you want to use the evaluation to obtain additional funding. If a program has been run a number of times and has been shown, through impact evaluation, to be effective, performance monitoring is likely to be sufficient. For these programs, a few agreed indicators of process, impact and outcome (where possible) should be specified in performance agreements (e.g. service agreements) to ensure collection of data on these indicators (also known as key performance indicators), i.e. data collection can be incorporated into routine practice.

Step 3. Focus the evaluation design: Specify the evaluation design, data collection methods and locate and develop data collection instruments

The quality of an evaluation depends upon the strength of evidence that is collected to answer the evaluation questions. In order to maximise the value of information collected for evaluation it is important to:

- Choose a study design that gives the best level of evidence possible given practical and financial limitations. For example, to establish the effectiveness of an intervention it is important to include pre and post measures in the same subjects and include an appropriate comparison to ensure that changes can be attributed to the program – this helps rules out alternative explanations for any observed changes in impact/outcome indicators. If you can't have a control group you may be able to compare the change in indicators in your intervention group to state-wide or regional trends in these indicators, as measured by the Victorian Population Health Survey or similar surveys in children and adolescents such as the Victorian Child Health & Wellbeing Survey (http://www.education.vic.gov.au/about/directions/children/default.htm)
- Identify reliable information sources and data collection tools to measure your indicators. In determining the most appropriate tools, consideration should be given to using existing data collection tools that have good validity and reliability (i.e. they actually measure what they purport to measure and give consistent results). They should also be comparable, where possible, with existing data collections, e.g. the Victorian Population Health Survey and the Victorian Child Health & Wellbeing Survey. Most programs will not require an extensive list of indicators and preference should be given to quality rather than quantity.

If this is new to you we recommend that you seek the help of someone with evaluation, epidemiology and/or research skills for this part of the plan.

Two main evaluation methods are appropriate to evaluate health promotion programs. These are process evaluation and impact/outcome evaluation. The methods and key indicators for each of these will be described in turn.

Process evaluation

Process evaluation covers all aspects of the process of delivering a program. It is useful in tracking the reach of the program and the level of implementation of all aspects of the program, and in identifying potential or emerging problems, i.e. whether the program has been delivered as planned and whether modifications to the plan need to be made[4].

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[3] This may also be necessary if the program is being implemented in a new site or setting.

[4] This process can be described as action research because the results of the process evaluation lead to changes in the program.

From an equalities focus, it is important to reflect on how program delivery has engaged with key populations facing greatest inequality in culturally appropriate ways, and process evaluation should measure how this was undertaken.

The main methods used for process evaluation are review of key program documents to assess the extent to which the activities identified in Figure 1 have been implemented, other qualitative methods, and data collection to measure program reach. Reach is the proportion (%) of key stakeholders, settings or members of the community affected by the program, i.e. = number affected / number eligible x 100. Some aspects of reach, e.g. program attendance, may be measured as part of the impact/outcome evaluation. Other aspects addressed by process evaluation include the quality and appropriateness of the processes undertaken during its implementation.

Data collection tools / data sources for process evaluation:

- Key documents include Steering Group or Advisory Group minutes, contract management records, project action plans, progress reports[5], project evaluation plans.
- Other qualitative methods can be employed, as appropriate, such as open-ended surveys, in-depth interviews, focus groups, narrative and participant observation - see pages 8-12 of *"Planning for effective health promotion evaluation"* and the *"How to use qualitative research evidence when making decisions about interventions"* tool (Round et al. 2005, Holt 2009).
- Reach can be established from attendance records and documentation of stakeholders and settings by the project manager. Community surveys may also be necessary.

See Table 2 for some example outputs and reach indicators that can be considered in the process evaluation to measure the extent of implementation. The list of activities comes from the program logic (figure 1). This will be complemented by the qualitative data collected in the process evaluation.

Table 2. Some example key activities, outputs and reach indicators – for process evaluation

ACTIVITIES	OUTPUTS / REACH INDICATORS
1. Establish program governance and administrative arrangements	▪ Contracts with project implementators established ▪ Project Advisory Group / Steering Group established ▪ Contract with evaluators established
2. Establish performance monitoring and reporting arrangements	▪ Project milestones identified, or ▪ Key indicators identified for program monitoring and reporting
3. Identify effective and efficient interventions	▪ Evidence reviewed ▪ Interventions selected ▪ Evidence incorporated into action plan
4. Develop integrated health promotion implementation and action plans	▪ Community assessment conducted and reported ▪ Action plans finalised
5. Settings and supportive environments, e.g. legislation and policy change	▪ Proportion* and range of stakeholders involved in new/improved legislation and policy change (reach)

[5] It is important that these, or other documents, include a description of the strategies used as they may have changed from what was written in the action plan.

ACTIVITIES	OUTPUTS / REACH INDICATORS
6. Community action for social and environmental change	▪ Proportion* and range of stakeholders/settings involved (reach)
7. Health education and skill development	▪ Proportion* and range of stakeholders/settings involved (reach)
8. Social marketing and health information	▪ Evidence on effective social marketing messages and methods reviewed ▪ Key marketing channels/methods (e.g., newspaper, Internet, telephone helpline, point of sale displays etc.) identified ▪ Marketing materials developed ▪ Campaigns implemented in targeted areas ▪ Proportion of target group aware of funded social marketing/health information activities and resources (reach)
9. Screening, individual risk factor assessment and immunisation	▪ Proportion of target group participating in each activity (reach)
10. Capacity building strategies including: partnerships, leadership, resources, workforce development, and organisational development	▪ Proportion* and range of stakeholders/settings involved (reach)

* of those eligible

Definitions for activities 5-10 are available in the Integrated Health Promotion Resource Kit (Department of Human Services 2003a).

Impact/outcome evaluation

This type of evaluation is used to measure intermediate (impacts) and longer-term (outcomes) effects of the program and to check whether programs are having an impact on populations facing greatest inequality.

The main method used is comparison of the intervention group(s) with another group that does not receive the intervention (the control group), with changes in individual level impacts/outcomes measured pre and post intervention in a randomly selected sample of individuals. The appropriate sample size should be determined by an evaluator with appropriate skills or through consultation with a statistician. Sample size calculations should aim to achieve a meaningful level of behaviour change compared to the control group (e.g. difference in prevalence of >10%) and weight over the project period (eg. 0.5kg/m^2 change in BMI or >2kg in children and >3kg in adults). Consideration should be given to attaining an adequate response and follow-up rate to ensure maximum validity and generalisability of results.

Someone with skills in research and/or epidemiology will be able to help you to adjust this study design to fit your evaluation context and budget, while endeavouring to obtain the best level of evidence possible.

The methods used to measure individual level impacts include questionnaires and other instruments for objective assessments, e.g. tools to measure height and weight, pedometers to measure physical activity.

Methods to assess changes in public policy, communities, and environments can include policy and environment audits, tools to assess partnership strength and community capacity building.

The difference is that these measures are done at the level of the setting, community or partnership rather than in individuals.

Some example key impact and outcome indicators for nutrition, physical activity and obesity health promotion programs are identified in Table 3. Details of data collection tools / data sources and questions used in the tool will also need to be specified when implementing the evaluation plan. For nutrition, physical activity and obesity programs an agreed list of indicators will soon be available and details of data collection tools to measure these indicators is in development. When choosing indicators and tools, the focus has been to first use validated state-wide indicators (e.g. the Victorian Population Health Survey) and then, if needed, national indicators and other validated tools.

Go to: http://www.health.vic.gov.au/healthpromotion/evidence_evaluation/cdp_tools.htm for updates.

Table 3. Example impact and outcome indicators for nutrition, physical activity and obesity programs.

IMPACTS AND OUTCOMES	INDICATORS
1. Increased health literacy	*No agreed indicators available*
2. Strengthened individuals / communities / partnerships	*No agreed indicators available*
3. New/improved healthy public policy and organisational practice	*No agreed indicators available*
4. Increased physical activity	Proportion of adults aged 18 years and over who did the recommended levels of physical activity in the past week* Proportion of children & young people who do the recommended levels of PA every day†
5. Decreased sedentary behaviour	*No adult indicator currently available* Proportion of children & young people who use electronic media for more than 2 hours per day†
6. Increased healthy eating	Proportion of adults meeting recommended levels of fruit and vegetable consumption* Proportion of children and young people who eat the minimum recommended serves of fruit & vegetable every day†
7. Increased breastfeeding	Proportion of infants exclusively and fully breastfed at 3 & 6 months of age
8. Decrease in energy dense, micronutrient-poor foods and drinks	*No agreed indicators available*
9. Increased water consumption	*No agreed indicators available*
10. Healthy environments – built, social, natural, economic	*No agreed indicators available*

IMPACTS AND OUTCOMES	INDICATORS
11. Reduced prevalence of overweight and obesity[‡]	Proportion of adults who are overweight or obese Proportion of children & young people who are overweight or obese
12. Reduced mortality and morbidity	Disability-adjusted life years[§]
13. Improved quality of life	*No agreed indicators available*

* Victorian Population Health Survey (VPHS) - http://www.health.vic.gov.au/healthstatus/vphs.htm,

[†] Victorian Child Health & Wellbeing Survey (VCHWS) and Victorian Adolescent Health & Wellbeing Survey (VAHWS) - http://www.education.vic.gov.au/about/directions/children/vcams/default.htm,

[‡] Measured height and weight is the gold standard for measuring this but is not currently part of an ongoing monitoring system,

[§] Victorian Burden of Disease Study - http://www.health.vic.gov.au/healthstatus/bod.htm.

Health inequalities

To check whether programs are having an impact on populations facing greatest inequality, it is important that measures collect demographic data wherever possible and appropriate. This allows analysis of impacts and outcomes by health inequality.

When collecting demographic data, it is important to capture key populations that face greatest inequality so that impacts and outcomes can be analysed to see their effect on reducing inequality. This means individual or household demographic measures including:

- Socio-economic position
- Indigenous status
- Rural residence
- Non-English speaking background

Socioeconomic position can be measured in a number of ways and each has its advantages and limitations. The two principle methods of defining socioeconomic position for the purpose of monitoring progress to reduce inequality are:

a) By a measure of household income
b) By area level disadvantage.

Low socioeconomic disadvantage is defined as households earning less than 50% of median household income - this concords with Department of Health and Department of Education and Early Childhood Development practice (such as the State of Victoria's Children reports) and with the OECD definition of poverty. Other definitions suggest 60% of median household income. In 2008, this equates to household income of around $31,000 per year or less. When using an area level of disadvantage, low socioeconomic areas are recognised as those in the lowest two quintiles (lowest 40%) of advantage according to the ABS Index of Relative Socioeconomic Disadvantage (IRSED). It is also possible to use education or employment status as a measure of socioeconomic position as well.

Indigenous status is usually asked as "Are you of Aboriginal or Torres Strait Islander descent?"

Rural residence is usually asked by suburb or postcode and then assessed by organising data by whether this places them in a rural or metropolitan local government area.

Non-English speaking background can be asked by whether participants speak a language other than English in the home or by asking country of birth and then analysing data by whether the country is mainly English speaking or not.

Step 4. Collect data: coordinate the data collection

In this section you need to specify:

- what tasks need to be completed
- who will undertake the tasks
- when the tasks should be undertaken
- what resources are required.

Also give some thought as to how you might maximise response rates. Techniques for doing this can be included here, e.g. providing incentives, using reminder messages (Round et al. 2005). Low response rates are becoming an important issue for community surveys and a low response rate will impact on the validity and generalisability of the evaluation results. If you can't be sure of a high response rate consider if any data can be collected on non-responders or the general population so that it can be compared to responders to help rule out some biases, e.g. gender and SES data as these are known to correlate with some health behaviours.

Step 5. Analyse and interpret data

Data analysis involves identifying and summarising the key findings, themes and information contained in the raw data (Round et al. 2005). Specify here what data analysis techniques you will use and what computer software you will use. If you are not very familiar with qualitative or quantitative data analysis we recommend that you seek the help of someone with evaluation, epidemiology and/or research skills for this part of the plan.

Step 6. Disseminate the lessons learnt: consider reports to be prepared, appropriate format, appropriate audience and how the findings will be disseminated

Dissemination of health promotion evaluation findings is crucial in establishing a strong evidence base for health promotion. It is important to document not only what worked, but what didn't work and what some of the reasons for success and failure might be (Round et al. 2005). It is recommended that you use the 1:3:25 format put forward by the Canadian Health Services Foundation (Canadian Health Services Research Foundation 2009) - http://www.chsrf.ca/knowledge_transfer/pdf/cn-1325_e.pdf.

The one in the Foundation's 1:3:25 rule is one page of main message bullets. These are the lessons decision makers can take from your research. It is your chance, based on the evaluation results, to tell decision makers what implications the evaluation has for theirs.

The three in 1:3:25 is the executive summary. These are your findings condensed to serve the needs of the busy decision maker, who wants to know quickly whether the report will be useful.

The body of the report should fit into 25 pages, plus appendices for highly technical material. Key categories for the report should include: context (or background), methods (or approach), results, conclusions, implications (or lessons) for key stakeholders, and references. The methods section should include the design of the study, program logic, details of the specific methods used (e.g. focus groups, surveys), data collection tools and instruments used, details on the sample, the response rate and analysis techniques.

It is important to ensure that the final report is of the highest quality possible as it will provide the basis for preparing summary reports, reports for different audiences, journal paper/s for publication etc as needed.

Dissemination strategies

A mix of dissemination strategies can be used, including:

- training
- communication through print, including a technical report, summary reports for different audiences and peer-reviewed journal articles[6].
- communication through new information technologies
- personal face-to-face contacts, including briefings or presentations
- policies, administrative arrangements and funding incentives.

It is important to make time and allocate a budget for dissemination activities. Without comprehensive dissemination your evaluation results and learnings will have little influence. Work with the funder of the evaluation to ensure that these activities have maximum effect.

Business case for new and continuing data collections

For evaluations funded by the Department of Health a business case for new and continuing data collections is required to be made and submitted to the Information Management Strategy Unit, Department of Health. The Information Management Strategy aims to improve the quality of collected data, and achieve a better balance between the information needs of the Department of Health and the burden of collection to the department and funded organisations (http://www.health.vic.gov.au/hacims/index.htm). The following checklist will assist you to facilitate the process:

Evaluation data collection checklist			
Need to collect information for evaluation has been demonstrated	**Yes** No	Relevant stakeholders consulted in development of evaluation methods	**Yes** No
All existing sources of potential DHS data have been reviewed	**Yes** No	Requirements for ethics committee approval have been considered	**Yes** No
Data collection has been designed to minimise burden	**Yes** No	Roles and responsibilities for data collection have been specified	**Yes** No
Frequency and duration of data collection has been specified	**Yes** No	Scope of data collection activities is congruent with available funding	**Yes** No
Method of reviewing evaluation information has been identified	**Yes** No	Appropriate standards of measurement have been adopted	**Yes** No
Method of validating evaluation information has been specified	**Yes** No	Guidelines to assist data collection and reporting have been provided	**Yes** No

[6] Where possible publication of the results in a peer-reviewed journal is encouraged and supported by the Department to contribute to the health promotion evidence base.

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