

ESTABLISH KEY INDICATORS

Purpose

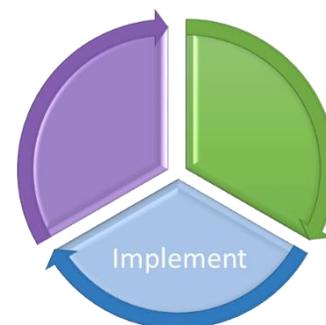
To identify and prioritize key indicators and develop a plan for collecting data about the program.

It is important to establish how a program's performance will be monitored **before** launching the program or implementing a program change. Identifying key indicators provides a way to monitor the program and identify areas for improvement. Indicators can help measure a program's accomplishments and its progress toward pre-established outcomes. Once established, these indicators can be used for a variety of internal (e.g. Planning & Budget Template, Balanced Scorecard) and external (e.g. Accountability Agreements, Annual Service Plans) reporting.

Key program documents such as the **Logic Model** and/or **Program Description**, Ontario Public Health Standards and related protocols can be used to help frame the discussion about indicators. Consider revisiting the *Describe Program* stage guide to develop a logic model and/or program description, if one has not been developed.

Step 1: Clarify program outputs and outcomes

Review and clarify the program outputs and outcomes with relevant stakeholders. Ensure that the wording is clear, specific and accurately denotes the intended outputs and outcomes – this is key to identifying the right set of indicators for monitoring. The program outcomes also need to clearly specify the type of change expected and the target and/or priority population(s) in which you expect to see the change. Depending on the program, the type of change expected may be relative, absolute or none. A relative change provides a direction (e.g. increase, strengthen, decrease) for the change. A change without a direction is referred to as an absolute change. This may be observed when the program is trying to create or introduce something new. No change may be expected when a program is intending to maintain an outcome. (CES, Workshop)



TOOLS

Establish Key Indicators

- *New Data Collection Tool*
- *Indicator Development*
- *Routine Monitoring & Reporting*

Tip: Stakeholder agreement on the intended program outputs and outcomes is important and will help develop indicators that are relevant to the program.

Step 2: Develop list of possible indicators

Now that the program's outputs and outcomes have been clarified, it's time to brainstorm a list of indicators with relevant stakeholders.

Indicators can be characterized in a number of ways. Generally, there are two main types of indicators, those that measure processes and those that measure outcomes. These indicators can be further categorized as Program Process Indicators, Health Equity Indicators, Program Outcome Indicators and Population Health Indicators.

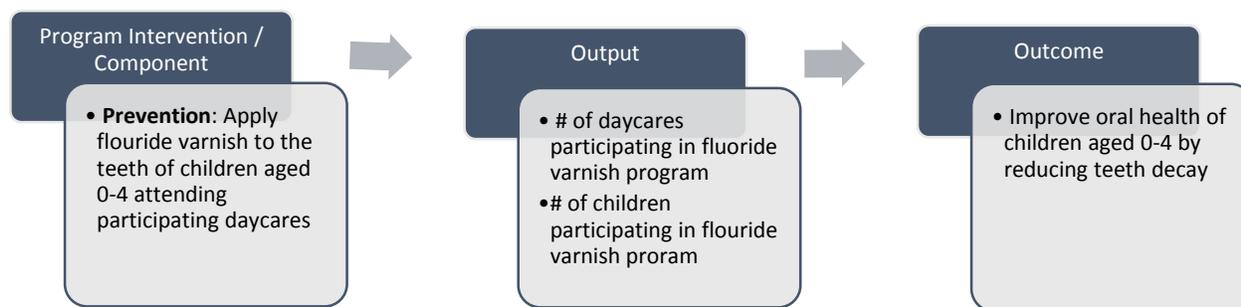
- Program process indicators measure changes in program components and other aspects of program delivery. These indicators can be used to help answer questions about program implementation (e.g. were the program activities implemented as intended?).
- Health equity indicators measure how well the program addresses the health inequities that may have identified in PLAN (e.g. if your program uses a targeting with universalism approach, you may have a health equity indicator that measures the reach of the program to the priority populations you are targeting). Review the *Health Equity Concept Guide* to learn more about other approaches to health equity.
- Program outcome indicators help you measure the program's progress toward its intended outcomes. These indicators can be used to answer questions about the program's success (e.g. did the program achieve its intended short-term outcomes?).
- Population health indicators measure changes in the population health outcomes. These indicators can be used to answer questions about the health status of a population (e.g. have reproductive health outcomes improved in women of reproductive age between 2000 and 2010?). Often times, the population health outcomes correspond to the long-term program outcomes identified in the **Logic Model** and/or **Program Description**. Figure 1 provides an example of a program component and the related output and outcome. Table 1 provides an example of indicators for the program component illustrated in Figure 1.

Tip: Be sure to include the Accountability Indicators and the OPHS's Public Health Indicators that you are required to monitor and report on in Accountability Agreement Reporting and Annual Service Plans (ASPs).

Tip: When developing your indicators, check to see if you have all three elements for an indicator. Your indicator should specify a:

1. *Direction*
2. *Amount of Change*
3. *Time period*

Figure 1: Example of the Fluoride Varnish Program’s component and the related output and outcome



Note: Fluoride Varnish Program’s priority population are children age 0-4 who live in at-risk neighbourhoods. The licensed childcare providers who work in these neighbourhoods are a target group.

Table 1: Examples of indicators for the Fluoride Varnish Program

Program Process Indicator	Increase percentage of daycares in London-Middlesex who participate the Fluoride Varnish Program by 10%, each year
Health Equity Indicator	Increase in percentage of children aged 0-4 participating in the Fluoride Varnish Program by 10%, each year
Program Outcome Indicator	Increase percentage of children aged 0-4 who have received all three applications of fluoride varnish by 25%, each year
Population Health Indicator	Increase proportion of children aged 0-4 who are caries-free by 10% in the next 5 years

When brainstorming, consider both quantitative and qualitative indicators. Quantitative indicators are numerical measurements, such as counts, percentages and rates. Qualitative indicators are subjective such as opinions and perceptions. Ensure that the indicators developed are SMART. Additionally, consider the mnemonic SPICED for qualitative indicators. Consult your Epidemiologist and/or Program Evaluator for support with developing a list of possible indicators.

Considerations for indicator development

S	Specific
M	Measureable
A	Attainable
R	Relevant to program outcomes
T	Timely

S	Subjective
P	Participatory - developed with stakeholders
I	Interpretable - well-defined
C	Cross-checked with other indicators and stakeholders
E	Empowering to all groups & individuals involved
D	Disaggregated to reflect all target and priority populations involved

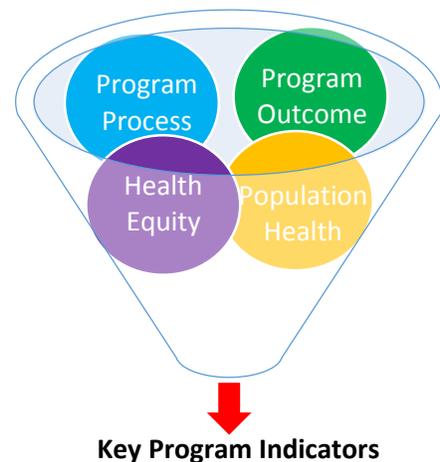
(World Bank Monitoring & Evaluation Handbook,)

Guiding questions

- Are the indicators clear and specific? Can each indicator easily be understood by internal and external stakeholders?
- Has an indicator from each program intervention / component been included?
- Has the program process, program outcome, health equity and population health indicators been identified?
- Is there a good balance of qualitative and quantitative indicators?

Step 3: Assess list to select a set of key indicators

By this step you may have an extensive list of indicators, some of which may be difficult to measure reliably and/or accurately. When selecting indicators for monitoring and reporting, it is important to consider the quality and availability of the data used to calculate the indicator, and the overall quality of the indicator. In this step you assess the list of indicators identified, and select a set of key indicators. The set of key indicators can be documented using the **Indicator Development Tool** and can then be monitored in the *Routine Monitoring & Reporting* stage. Once the key set of indicators are being monitored, the indicator data can be used to complete accountability documents (e.g. Program Budget Template, Annual Service Plan), identify areas for improvement and monitor the impact of the program over time.



Step 3a: Assess the quality of the indicators

Validity and reliability impact the overall quality of an indicator. Validity refers to whether the indicator accurately measures the concept it intends to represent. Reliability refers to consistency and replicability of the results. It is important to choose indicators that are both valid and reliable to have an accurate understanding of how the program is progressing toward its intended outputs and outcomes. Consider working with an Epidemiologist and/or Program Evaluator to assess the validity and reliability of the program indicators.

Step 3b: Identify the data sources and assess data availability

Data sources need to be identified for each indicator on your list. Sometimes, data may need to be obtained from multiple sources. Review the **Data Source Tool** to identify relevant data sources for each indicator. Consult an Epidemiologist for further information about data sources, as some (e.g. Better Outcome Registry & Network (BORN)) have restricted access. If existing data for the indicator is not available, your program may need to consider collecting its own data, however this may take an extensive amount of time and resources. If new data is being collected, consider using the **New Data Collection Tool**, to document the purpose, methods and intended use for the data collected. Also review the criteria in the Research and Evaluation Policy (2-040) to determine whether or not a Research Advisory Consultation (RAC) approval is required prior to starting data collection.

CheckMarket is the selected survey platform for MLHU. If you are collecting data for the indicator through an online survey, contact ppe@mlhu.on.ca to request an account.

Step 3c: Assess the relevance of each indicator

By now the original list of possible indicators should have been narrowed down and indicators of poor quality and with limited data availability will have been eliminated. To help further refine the list, assess the relevance and feasibility of each indicator. To do this, check to see if the indicator is relevant to the program intervention / component(s) and the intended outputs and/or outcomes. Additionally, ensure that the indicator is feasible to measure. For example, resource constraints may impact the feasibility of an indicator if it requires collection of new data.

Step 3d: Document the selected set of key indicators

Once the set of key indicators have been selected, it is important to document them using the **Indicator Development Tool**. Consider working with a Program Evaluator and/or Epidemiologist to complete the following columns in the tool: Type of Indicator, Indicator, Indicator Description, Method of Calculation and Data sources.

Guiding questions

- Is each indicator clearly defined?
- Is each indicator valid and reliable?
- Is the indicator biased in any way?
- Are there any unintended consequences as a result of using any of the indicators?
- Is the data necessary to calculate the indicator accessible to your team or the Health Unit within the required reporting timeframe?

Step 4: Identify targets and/or benchmarks

Now that a set of indicators have been selected, you will need to identify program targets and/or benchmarks for each indicator. A benchmark is the goal the program aims to reach, as demonstrated by

indicator results. Targets are small incremental objectives that can help monitor the program's progress toward the established benchmark. Having clear benchmarks identified will help to establish realistic and appropriate targets. Consider consulting relevant stakeholders to help identify realistic benchmarks and/or targets. For example, the process indicator for the Fluoride Varnish Program is "increase percentage of daycares in Middlesex-London who participate the Fluoride Varnish Program by 10%, each year". A potential benchmark could be to have 90% of daycares in Middlesex-London participate in the Fluoride Varnish Program. In year 1 of the program, 50% of daycares in Middlesex-London participated in the program. The target for year 2 would be to have 60% of daycares participate. By year 4, the program would be expected to reach its benchmark of 90%.

Depending on the program, benchmarks may have already been identified in the literature, or mandate documents such as Ministry Accountability Agreements or protocols. There may also be situations where there are no well-established benchmarks. This makes it difficult to set targets and ultimately know how well the program is performing. In this situation, it may be necessary to first collect baseline indicator data for a period of time, prior to setting targets and/or benchmarks. Additionally, relevant internal and external stakeholders may be able to provide some guidance and input to help establish benchmarks and/or targets.

Tip: Be sure to include the identified benchmarks in the Indicator Development Tool.

Guiding Questions

- Are there national or provincial benchmarks and targets that need to be met?
- Do you have baseline data available, so that progress toward the benchmark or target can be measured?
- Have you involved the appropriate stakeholders in setting the targets and benchmarks?

Step 5: Document Routine Monitoring & Reporting

You are now ready to set up a monitoring and reporting schedule for the set of key indicators that you have selected. In this step you may use the **Routine Monitoring and Reporting Tool** to document the monitoring and reporting frequency. Depending on the indicators, some may need to be reported on more frequently than others. Consult relevant stakeholders and mandate documents to determine the appropriate reporting frequency for each indicator. Keep in mind that it may not be feasible to make adjustments to your program as frequently as your reporting schedule. For example, you may need to report on the number of licensed childcare providers who attended the education sessions each year for the team PBT; however, resource constraints may only allow you to increase the number of sessions or change the recruitment strategy every two years.

It may not always be feasible to reach a benchmark in a single reporting cycle. That is why it is important to set incremental targets that are realistic and appropriate.

Establish Key Indicators Checklist

Checklist items relevant to complete this stage are dotted

Checklist items relevant to the Program Manager are solid

<input type="checkbox"/>	Review the identified program outputs and outcomes (e.g., in your Logic Model and/or Program Description)
<input type="checkbox"/>	Develop a list of indicators corresponding to the identified program outputs and outcomes
<input type="checkbox"/>	Request a consultation with a Epidemiologist and/or Program Evaluator for support
<input type="checkbox"/>	Ensure that qualitative indicators are SPICED and quantitative indicators are SMART
<input type="checkbox"/>	Assess the quality of each indicator
<input type="checkbox"/>	Assess the availability of data and determine the data sources for each indicator
<input type="checkbox"/>	Assess the relevance of each indicator to program intervention / components
<input type="checkbox"/>	Select a set of key indicators that reflect program processes, program outcomes, health equity, and population health, for routine monitoring and reporting
<input type="checkbox"/>	Start the Indicator Development Tool
<input type="checkbox"/>	Identify Targets and Benchmarks for each indicator
<input type="checkbox"/>	Complete the Indicator Development Tool
<input type="checkbox"/>	Review and approve the key set of indicators documented in the Indicator Development Tool