Measuring The Difference: An Outcome Evaluation Resource for the Disability Sector

MODULE 5

Outcome Measurement Framework

Prepared for

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by

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Module 5

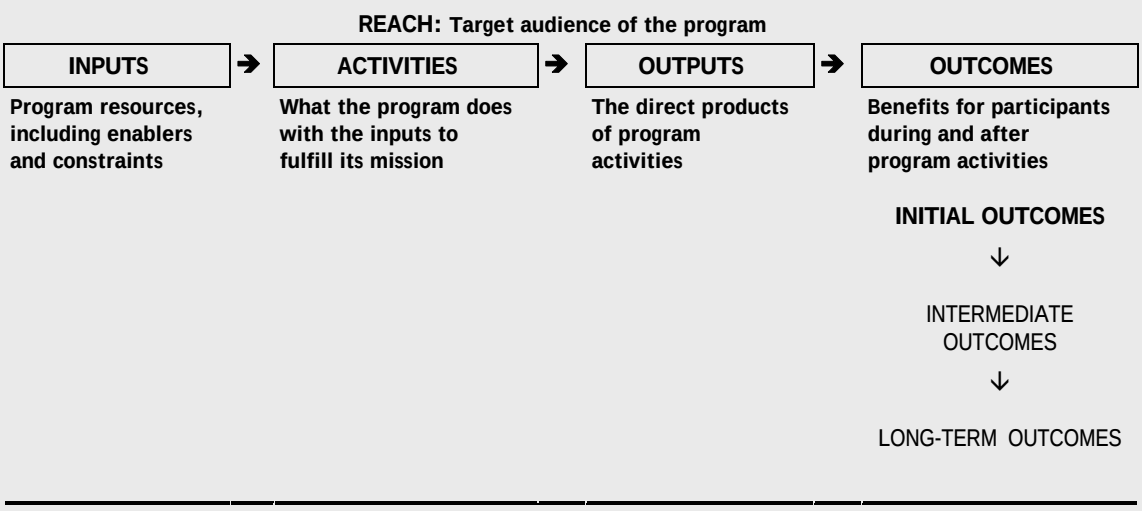
Outcome Measurement Framework

This Module outlines the *basic* steps in constructing an outcome measurement framework. The reader is advised to consult the online resources and references listed at the end of this document for more detailed and technical information.

5.1 What is an Outcome Measurement Framework?

A **Program Logic Model** (also known as a **Program Outcome Model**) (Module 4) summarizes how the program achieves its purpose and intended outcomes by showing how the program's resources, activities, outputs and outcomes link to each other. The end point of a Program Logic Model is a list of the program's intended outcomes, hierarchically arranged from initial (immediate or short-term) outcomes, followed by the intermediate outcomes and, lastly, the long-term outcomes (impact) (Exhibit 5.1).

EXHIBIT 5.1 PROGRAM LOGIC MODEL



To determine the level of benefits accrued for the participants during and after their involvement in the program, and therefore, to determine the effectiveness of the program, we need to **measure** these outcomes.

Outcome measurement "involves the identification of outcomes; development of appropriate outcome indicators and data collection procedures; data analysis to better understand organization achievements; and user-friendly, regular reporting of the findings" (Morley, Vinson & Hatry, 2001: 5).

An **outcome measurement framework** is a table that summarizes the following elements:

- **Program outcomes** that are most meaningful to measure to assess the program's performance.
- **Indicators** for the selected outcomes. An **indicator** is a measureable characteristic that is a reasonable representation of the item being measured, and which can be specified in terms of the specific statistic(s) that will be calculated (e.g., number or percentage, ratio, etc.) as well as the timeframe for measurement (e.g., "6 months after enrolment", etc.).
- **Data sources** that will be used to collect the information, for example, program records, assessment test, self-report, staff report, etc. The data is collected separately for each program participant (individual level data), and then aggregated to provide program-level information (usually as a ratio of total number of participants).
- **Data collection methods** that will be used for each indicator, for example, focus groups, test scores, observation, surveys, interviews, etc., as well as the timeframe when the data will be collected.
- **Influencing factors** that could significantly impact the outcomes achieved (e.g., age or gender of participant, geographic location of the service delivery unit, staff training and expertise, etc.). It may be necessary to analyse these groups separately to see the extent of their influence.

EXHIBIT 5.2 OUTCOME MEASUREMENT FRAMEWORK

Program Name: _____

Outcome	Indicator(s)	Data Source	Data Collection Method
	Influencing factors		

5.2 STEPS IN BUILDING AN OUTCOME MEASUREMENT FRAMEWORK

Step One: Identify program outcomes to measure

1. From the **Program Logic Model** (Module 4), **identify the outcomes that are most meaningful** with respect to reflecting the program's intended benefits for clients, and any negative outcomes, at all three levels of the outcome hierarchy (short-term, intermediate and long-term).
2. **Make sure that** *each* **program activity results in** *at least one* **outcome** that is included in the outcome measurement framework.
3. **List each outcome** in the first column of the outcome measurement framework.

Step Two: Specify indicator(s) for each selected outcome

1. **For each outcome, identify a specific measurable characteristic that reasonably represents the outcome**. For example, a participant's change in knowledge or awareness of something may be indicated by their change in score on an appropriate test before and after the program. Change in skill level may be indicated by staff

observation of (i) how quickly the participant can complete the task, and (ii) how accurately the task is completed. Some indicators are very easy to specify, for example, did the client get the job of his choice or not, did the client maintain that job for a specified period or not, etc. Most others, however, will require careful consideration.

2. **Use the check list below to help select indicators.** Selecting indicators is both an art and a science. It will be one of the most difficult tasks in the outcome measurement process, and the mot valuable one if done correctly.
3. **Collaborate with a working group** of individuals most knowledgeable about the program (see working group composition recommended in Module 4) to identify and refine the indicators.
4. **Identify the factors that could influence client outcomes**, for example, gender, age, disability type, education level, organizational unit offering program (e.g., if the organization provides the same program but in different locations, using different staff teams, using revised procedures, etc.). This will help compare outcomes across these different groups of program participants. Choose only the most relevant.
5. **Add these influencing factors under the indicators column in the outcome measurement framework**. You will need to identify data sources and data collection methods for these at a later stage.

INDICATOR CHECK LIST

- ❑ Does the indicator provide the best direct and reasonable evidence of the state of the outcome? (validity, credibility)
- ❑ Will the indicator be easily understood by stakeholders? (accessibility)
- ❑ Is the indicator observable and measurable?
- ❑ Is a statistic (number, percent, ratio, etc.) for the indicator specified?
- ❑ Does each outcome have at least one indicator?
- ❑ Is the wording of the indicator sufficiently specific about what will be measured?
- ❑ Does the indicator measure some specific and important aspect of the outcome that no other indicator in the list measures (if not, choose the best indicator avoid redundancy).
- ❑ Is the indicator defined the same way over time? (reliability)
- ❑ Is data available for the indicator or will a new process or system need to be created to collect it (readily available data is easier to compile than having to create something new).

Step Three: Identify the data sources for each indicator and each influencing factor

1. **Identify data sources.** Data sources may include key informants (program participants, staff and volunteers, participants' family members, etc.), agency and program records (internal or for other related programs that you have access to), trained observers, mechanical tests and instruments, etc.
2. **Consider and address research ethics issues with certain data sources,** for example, confidentiality and anonymity, voluntary participation, getting informed consent, etc.
3. **Consider and address data validity and reliability issues,** for example, potential bias when asking participants to self-report changes in their outcomes (tendency to provide the "right" answer to be perceived a "good" client, etc.), or asking program staff about

their observations of changes in client outcomes (tendency to want to make the program look good, etc.).

4. **Determine if each data source is useful, reliable and valid**, and finalize the list.
5. **Complete the data source column** in the outcome measurement framework.

Step Four: Determine the data collection methods

1. **Identify data collection methods for each indicator and influencing factor.** Data collection methods may include review of written records, informal conversations, structured, semi-structured or standardized interviews, closed and open-ended interviews, focus groups, standardized tests, telephone or mail-in surveys, etc.
2. **Identify data collection frequency,** i.e., how often will the data collection occur?
3. **Assess the feasibility, cost and perceived credibility of each data collection method proposed.**
4. **Determine if a data collection instrument needs to be created.** Pre-tested instruments that are applicable to the program's outcome indicators are considerably cheaper and more valid than new instruments developed from scratch without technical assistance. If these are not available and no other existing data collection method can be used, consider revising the indicator, or, enlist technical assistance to develop a valid and reliable instrument.
5. **Develop data collection instruments if needed.**
6. **Develop data collection procedures**. These include procedures such as when data will be collected, who will collect it, who will be considered a program participant or key informant (where these individuals are identified as data sources), how many people will data be collected from (sampling issues), how will confidentiality be assured, how will data be stored, where will data be stored, who will have access to it, when will data records be destroyed, etc.
7. **Complete the outcome measurement framework by finalizing the data collection method column.**
8. **Pre-test all data collection instruments and procedures, and revise** as needed. For example, for extraction of data from agency records, collect data from 5 to 10 randomly chosen records related to program participants, and see if the required data can be easily and correctly extracted. For questionnaires, conversation guides and so on, pre-test the instrument with 5 to 10 people selected from the relevant group that the instrument would have been applied to, and see how well the questions work.
9. **Finalise all instruments and procedures.**

5.3 Steps in Pilot-Testing an Outcome Measurement Framework

Step One: Prepare for the pilot-test

1. **Identify a sub-set of program components or program participants to pilot-test** the framework on. Pick sub-sets that are representative of the entire program.
2. **Identify who will collect the data and how.** Use the same data collectors for the pilot-test as you had planned to use for the actual implementation.
3. **Train data collectors in the data collection methods and procedures**, for example, interview techniques, confidentiality and consent processes, safe data storage, etc.

4. **Develop a plan to review the pilot-test.** The purpose of the pilot-test is to discover if the outcome measurement plan as proposed in the outcome measurement framework is feasible, results in meaningful information, if data collection tools and methods operate as expected, and to identify and iron out potential issues. As such, it is important to not just do a trial-run of the data collection and analysis, but to also review how each of the steps and processes works. This includes getting feedback from all the people involved in the trial-run regarding how the instruments and the processes worked for them.

Step Two: Collect and analyse the data

1. **Collect data.** Implement all the data collection methods as identified in the outcome measurement framework, and gather actual data as specified in the framework.
2. **Analyse the data.** Record all individual participant information gathered into spreadsheets and tables so that the data can be aggregated. If influencing factors had been identified (gender, age, etc.) that might impact client outcomes, analyse the data separately for each of these groups so the findings can be compared. Data analysis requires a technique but it is not a difficult process for the outcome measurement purposes under consideration here. Analysis is largely restricted to tallying up total numbers and obtaining percentages or ratios. (Further details on data collection and analysis can be obtained from the references provided at the end of this Module and in the Annotated Bibliography.)

Step Three: Present and interpret the data

1. **Present the aggregated data,** broken down as necessary by any influencing factors previously identified.
2. **Review and explain notable findings and differences.** The findings may be limited given that only a sub-set of the program is examined, however, there may be some notable findings worth explaining.

Step Four: Review pilot-test results

1. **Review** how well the data collection tools, methods, procedures, analytic activities, etc. worked; what issues were faced; etc.
2. **Iron out any potential issues.**
3. **Finalize the outcome measurement framework and processes** so that it is ready for full-scale implementation.

Outcome Measurement in Nonprofit Organizations: Current Practices and Recommendations (Morley, Vinson, Hatry, 2001) provides recommendations to nonprofits on the types of outcome information to collect, data collection and analysis procedures and the reporting and use of outcome information. A copy of this document is provided after the end of this Module.

5.4 Outcome Measurement Framework in Relation to the Organization's Strategic Framework

Exhibit 5.3 shows the **program outcome measurement framework** in relation to the **organization's strategic framework**. Program outcomes must relate back to the organization's mission and purpose (Module 3). Therefore, the information that is expected to be gathered about a program's benefits to clients from its outcome measurement framework must also relate back to the organization's mission and purpose. Key outcome data from each program can then be aggregated to provide an assessment of the organization's overall effectiveness.

EXHIBIT 5.3 PROGRAM OUTCOME MEASUREMENT FRAMEWORK IN RELATION TO ORGANIZATION'S STRATEGIC FRAMEWORK

ORGANIZATIONAL STRATEGIC FRAMEWORK

VISION	MISSION	VALUES	CHANGE THEORY

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STRATEGIC GOALS

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PROGRAM AREAS		
PROGRAM 'A'	**PROGRAM 'B'**	**PROGRAM 'C'**
Purpose & Mandate Target group Summary of activities and desired outcomes	Purpose & Mandate Target group Summary of activities and desired outcomes	Purpose & Mandate Target group Summary of activities and desired outcomes

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PROGRAM 'A' OUTCOME (LOGIC) MODEL					
INPUTS	**ACTIVITIES**	**OUTPUTS**	**OUTCOMES**		
			immediate	intermediate	long-term
Resources	Services	Deliverables or products	Benefits to participants		
			Outcome 1	Outcome 2	Outcome 3

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PROGRAM 'A' OUTCOME MEASUREMENT FRAMEWORK			
OUTCOME	**INDICATOR(S)**	**DATA SOURCE**	**DATA COLLECTION METHOD**
Outcome 1 Outcome 2 Outcome 3			

5.5 USEFUL ONLINE RESOURCES

Center for Civic Partnerships. *Focus Groups.*
http://www.civicpartnerships.org/docs/tools_resources/focus_groups.htm
Links to online tools and resources on focus groups.

Center for Civic Partnerships. (2007). *Quantitative and Qualitative Evaluation Methods.*
http://www.civicpartnerships.org/docs/tools_resources/Quan_Qual%20Methods%209.07.htm.
Tips on various data collection methods, their strengths and limitations and links to other related information sources.

Harvard Family Research Project. (2008). *Indicators: Definitions and Use in a Results-Based Accountability System.*
http://www.hfrp.org/publications-resources/publications-series/reaching-results/indicators-definition-and-use-in-a-results-based-accountability-system.
Defines indicators, lists different types, and provides criteria for selecting indicators.

Imagine Canada. (2006). *Project Evaluation Guide for Nonprofit Organizations. Fundamental Methods and Steps for Conducting Project Evaluation.*
http://nonprofitscan.imaginecanada.ca/files/nonprofitscan/en/csc/projectguide_final.pdf.
A thorough presentation of creating, implementing, analyzing the data from, and communicating the results from a project evaluation. Templates and tip sheets make this a very useful resource.

McNamara, C. (1997). *Basic Guide To Program Evaluation*.
http://managementhelp.org/evaluatn/fnl_eval.htm.
Overview of major data collection method, purpose, advantages and disadvantages.

McNamara, C. (1997). *Basics for Conducting Focus Groups.*
http://www.managementhelp.org/evaluatn/focusgrp.htm.
Practical guide to preparing for, conducting and analyzing data from focus groups.

Organizational Research Services.
http://www.organizationalresearch.com/publications_and_resources.htm.
This website has two free downloadable handbooks.
"How to Manage and Analyze Data for Outcome-Based Evaluation" (2000) teaches how to prepare and analyze outcome evaluation data using common Microsoft programs. It is thorough and informative.
"Outcomes for Success" (2000) provides an accessible overview of outcome evaluation together with examples of logic models, outcome plans, coaching exercises, etc. Informative and well-written.

San Diego Social Venture Partners. (n.d.) A Guide to Outcome Planning.
http://www.organizationalresearch.com/publications/aecf_theory_of_change_manual.pdf.
Outcome planning is the term used here for outcome measurement. The article provides a good, high-level presentation of the steps in outcome measurement.

5.6 ATTACHMENTS

Claussen, C. (2004). Using quality of life measures for program evaluation: A review of the literature. *Rehabilitation Review, 15*(1). The Vocational and Rehabilitation Research Institute: Calgary, AB.

Morley, E., Vinson, E., & Hatry, H. (2001). *Outcome Measurement in Nonprofit Organizations: Current Practices and Recommendations.* Independent Sector. http://www.independentsector.org/programs/research/outcomes.pdf.

Tymchyshyn, D. (2007). Measuring community inclusion: Laying the groundwork for an inclusion profile tool. *Rehabilitation Review, 17*(8). The Vocational and Rehabilitation Research Institute: Calgary, AB.

Wagar, J. & Bailey, M. (2005). The "I" in inclusion: Individual indicators of inclusion across quality of life domains. *Rehabilitation Review, 16*(6). The Vocational and Rehabilitation Research Institute: Calgary, AB.

REFERENCES

Morley, E., Vinson, E., & Hatry, H. (2001). *Outcome Measurement in Nonprofit Organizations: Current Practices and Recommendations.* Independent Sector. http://www.independentsector.org/programs/research/outcomes.pdf.

Rossi, P., Lipsey, M., & Freeman, H. (2004). *Evaluation: A Systematic Approach, 7th Edition.* Sage Publications, Inc.: Thousand Oaks, CA.

United Way of America. (1996). *Measuring Program Outcomes: A Practical Approach*, 13th Edition. United Way of America: Alexandria, VA.

Wholey, J., Hatry, H., & Newcomer, K. (Eds) (2004). *Handbook of Practical Program Evaluation, 2nd Edition.* Jossey-Bass: San Francisco, CA.