MODULE 4

Gather Credible Evidence

Now that you have developed a logic model for your health workforce training program, chosen an evaluation focus, and selected your evaluation questions, your next task is to gather the evidence. You want credible data to strengthen the evaluation judgments and the recommendations that follow. You should consider the following questions:

- What data will be collected? What are the **data indicators** that you will use for your evaluation?
- Who will collect the data, or are there existing sources you can use? How will you collect and access the data? What are the **data collection methods and sources**?
- What are the **logistics** for your evaluation? When will you collect the data (i.e., what is the timeframe)? How will the data be entered and stored? How will the security and confidentiality of the information be maintained? Will you collect data on all (trainees), or only a sample?
- How much data (**quantity**) do you need to collect to answer your evaluation questions?
- What is the **quality** of your data? Are your data reliable, valid, and informative?
- How often will data be analyzed? What is the **data analysis** plan?

STEP 1: Select your health workforce training data indicators

Process indicators focus on the activities to be completed in a specific time period. They enable accountability by setting specific activities to be completed by specific dates. They say what you are doing and how you will do it. They describe participants, interactions, and activities.

Outcome indicators express the intended results or accomplishments of program or intervention activities within a given time frame. They most often focus on changes in policy, a system, the environment, knowledge, attitudes, or behavior. Outcomes can be short-, intermediate-, or long-term.

Consider the following when selecting indicators for your health workforce training evaluation.

- There can be more than one indicator for each activity or outcome.
- The indicator must be focused and measure an important dimension of the activity or outcome.
- The indicator must be clear and specific about what it will measure.
- The change measured by the indicator should represent progress toward implementing the activity or achieving the outcome.

Example health workforce training program indicators

PROGRAM COMPONENT	INDICATOR
Simulated team-based care delivery training	**PROCESS:** Number of trainings **OUTCOME:** Increased trainee knowledge based on semi-annual survey assessment
Faculty development on interdisciplinary learning	**PROCESS:** Number of staff trained **OUTCOME:** Number of presentations and publications by faculty with research including interdisciplinary teams.

ADAPTED FROM: U.S. Department of Health and Human Services Centers for Disease Control and Prevention. Office of the Director, Office of Strategy and Innovation. Introduction to program evaluation for public health programs: A self-study guide. Atlanta, GA: Centers for Disease Control and Prevention, 2011. Available at: http://www.cdc.gov/eval/framework/index.htm

STEP 2: Select your data collection methods and sources

Now that you have determined the activities and outcomes you want to measure and the indicators you will use to measure progress on them, you need to select data collection methods and sources.

Consider whether you can use existing data sources (secondary data collection) to measure your indicators, or if you will need to collect new data (primary data collection).

Secondary Data Collection

Existing data collection is less time consuming and human resource intensive than primary data collection. Using data from existing systems has the advantages of availability of routinely collected data that has been vetted and checked for accuracy. However, you will have less flexibility in the type of data collected, and accessing data from existing systems may be costly. Examples of existing data sources that may be relevant for health workforce training evaluation:

1. Student tracking systems such as eValue that show demographics of patients that trainees have seen, and the health conditions of those patients.
2. Traditional and non-traditional sources for surveying graduates. Traditional surveys distributed through the alumni office, or (non-traditional) LinkedIn or Facebook groups.
3. Existing clinical data sources reported by organization. For safety-net clinics, this could be clinical performance measures reported through the Uniform Data System (UDS) to HRSA. These measures include chronic disease management and preventive health indicators for cancer screening, immunizations, behavioral, and oral health, and are reported on an annual basis for all patients within the health center organization. Consider other secondary sources available based on health care enhancement and payment based on value. Examples include measures being reported as part of participation in an accountable care organization, or for some organizations participating in CMS-funded practice transformation efforts, such as Comprehensive Primary Care Initiative (CPCi). Clinics that are part of a Medicaid Managed Care organization may receive summary claims data or clinical feedback on patient use of the hospital and emergency room.
4. Patient satisfaction surveys from the Consumer Assessment of Healthcare Providers and Systems (CAHPS), or other sources such as the Midwest Clinicians' Networks' surveys specific to behavioral health and employee satisfaction.

Primary Data Collection

The benefit of primary data collection is that you can tailor it to your health workforce training evaluation questions. However, it is generally more time consuming to collect primary data. Primary data collection methods include:

- Surveys: personal interviews, telephone interviews, instruments completed by respondent received through regular or e-mail.
- Group discussions/focus groups.
- Observation.
- Document review, such as medical records, patient diaries, logs, minutes of meetings, etc.

Quantitative versus Qualitative Data

You will also want to consider whether you will collect quantitative or qualitative data or a mix of both.

Quantitative data are numerical data or information that can be converted into numbers. You can use quantitative data to measure your SMART objectives (for more on developing SMART objectives, see Module 3). Examples:

- **Number** of trainees.
- **Percent** of trainees who have graduated.
- **Average** number of trainees who pass boards on first attempt.
- **Ratio** of trainees to faculty.

Qualitative data are non-numerical data that can help contextualize your quantitative data by giving you information to help you understand why, how, and what is happening with your health workforce training program. For example, you may want to get the opinions of faculty, trainees, and clinic staff on why something is working well or not well. Examples include:

- **Meeting minutes** to document program implementation.
- **Interviews** with trainees, providers, faculty, or patients.
- **Open-ended questions** on surveys.
- **Trainee writing,** essays, or journal entries.
- **Focus groups** with former or current students.

Mixed Methods

Sometimes a single method is not sufficient to measure an activity or outcome because what is being measured is complex and/or the data method/source does not yield reliable or accurate data. A mixed-methods approach will increase the accuracy of your measurement and the certainty of your health workforce training evaluation conclusions when the various methods yield similar results. Mixed-methods data collection refers to gathering both quantitative and qualitative data. Mixed methods can be used sequentially or concurrently. An example of sequential use would be conducting focus groups (qualitative) to inform development of a survey instrument (quantitative), and conducting personal interviews (qualitative) to investigate issues that arose during coding or interpretation of survey data. An example of concurrent use of mixed methods would be conducting focus groups or open-ended personal interviews to help affirm the response validity of a quantitative survey. For more information on using mixed-methods approaches to evaluation, see "Recommendations for a Mixed-Methods Approach to Evaluating the Patient-Centered Medical Home."[1]

Matrix of potential evaluation areas and publicly available tools/measures

TOPIC	TOOL NAME	BRIEF DESCRIPTION	CONSIDERATIONS FOR USE
Team-based care	Team Development Measure Developed and distributed by PeaceHealth, a nonprofit health care system with medical centers, critical access hospitals, clinics, and laboratories in Alaska, Oregon, and Washington.	Measures a clinical team's development level. Can be used as a performance measure to promote quality improvement in team-based health care. Levels determined by measuring firmness of components on a team.	Appropriate for variety of student types. Publicly available. Authors request permission for use.
Population health	Patient Centered Medical Home Assessment-A Developed by the MacColl Center for Health Care Innovation at the Group Health Research Institute and Qualis Health for the Safety Net Medical Home Initiative.	Helps sites understand current level of "medical homeness" and identifies opportunities for improvement. Helps sites track progress in practice transformation if completed at regular intervals.	Assess practice-level progress on providing a population health approach to primary care delivery.
Integration of primary care and behavioral health	Site Self-Assessment Developed by the Maine Health Access Foundation.	Measures integration of behavioral health and primary care at site level.	Could be used at practice-site level.
Community health	Methods and Strategies for Community Partner Assessment Developed for the Health Professions Schools in Service to the Nation program.	Assesses program engagement with community partners who provide service learning opportunities for trainees.	May be useful for PCTE programs that engage community health partners for student learning in community health programs (e.g., housing, food security, and legal advocacy).

1 Goldman R.E., Parker D., Brown J., Eaton C., Walker J., & Borkan J. Recommendations for a Mixed-Methods Approach to Evaluating the Patient-Centered Medical Home. Annals of Family Medicine, 2015;13(2):168-75.

Example Data Indicators and Data Sources Worksheet

Use the following worksheet to identify the indicators and the data methods/sources for each component of your evaluation.

	LOGIC MODEL COMPONENTS IN EVALUATION FOCUS	INDICATOR(S) OR EVALUATION QUESTIONS	DATA METHOD(S)/SOURCE(S)
1	*Enhanced trainee knowledge and confidence in addressing social determinants of health.*	*Are trainees able to address social determinants of health?*	*Trainee journal reflections on ability to meet patient needs, before and after program implementation.*
		Is the patient experience improved as a result of provider training?	*Patient satisfaction surveys with questions on ability of care team to help them overcome housing/food/other barriers.*
2	*Interdisciplinary training enhances communication between trainees and learning to work as a team caring for patients with chronic conditions.*	*Do trainees opt to work in settings with interdisciplinary teams?*	*Graduate survey incorporates questions on team-based care.*
		Are the clinical outcomes improved for patients with chronic disease?	*Comparison of chronic disease indicators in interdisciplinary team patient panels with those at clinical sites without interdisciplinary teams.*

RESOURCES

Patient Experience Surveys

- CAHPS: Consumer Assessment of Healthcare Providers and Systems. Available through the Agency for Healthcare Research and Quality
- Midwest Clinicians Network: Surveys of patient experience in medical, behavioral, and oral health and staff satisfaction.

Secondary Clinical Data Sources

- Uniform Data System (UDS): Clinical quality measures collected and reported by health centers.
- CMS Primary Care Transformation initiatives may be a source of data if your clinical sites are participating. Consider information from the Primary Care Transformation Initiative and Multi-payer Advanced Primary Care Practice Demonstration and the Transforming Clinical Practice Initiative, which is supporting more than 14,000 clinical practices through September 2019.

TOOL 4.1

Data Indicators and Data Sources Worksheet

Use the following worksheet to identify the indicators and the data methods/sources for each component of your evaluation.

	LOGIC MODEL COMPONENTS IN EVALUATION FOCUS	INDICATOR(S) OR EVALUATION QUESTIONS	DATA METHOD(S)/SOURCE(S)
1			
2			
3			

TOOL 4.2

Data Collection Worksheet

Use the following worksheet to identify the data collection methods and sources, how data will be collected, and by whom.

	DATA COLLECTION METHOD/SOURCE	FROM WHOM WILL THESE DATA BE COLLECTED	BY WHOM WILL THESE DATA BE COLLECTED AND WHEN	SECURITY OR CONFIDENTIALITY STEPS
1				
2				
3				

TOOL 4.3

Long-Term Trainee Tracking Worksheet

Sample trainee tracking template

Graduate name	Year	Program	Location of practice	Gender	Practice Type (hospital affiliate, FQHC, free clinic, private practice)	Percent of patients who are on Medicaid/ uninsured	Leadership roles	Clinical quality information	Years of practice at current site