Evaluating Educational Activity Effectiveness

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Learning Objectives

- Identify methods to evaluate activities using an established framework
- Identify “pitfalls” which may undermine the use of evaluation findings
- Describe a process for designing an activity evaluation

Definitions

Education Evaluation

- Collection of, analysis and interpretation of information about any aspect of an educational activity
- Assess and report about results or effects.

Why Evaluate

- Determine Activity Effectiveness
- Identify Quality Improvement Opportunities
- Measure Participant's Changes in Knowledge, Competence, Skills, Behavior
- Report Outcomes to Stakeholders (e.g., organization, funders)
- Publish and Share Knowledge
- Demonstrate Value of Education

Evaluation Implementation Process

1. Define & Plan
   - who, why, goals
2. Assess Learning
   - design strategy, tools & data collection
3. Analyze Results
4. Make Improvements & Share Results
   - Value!

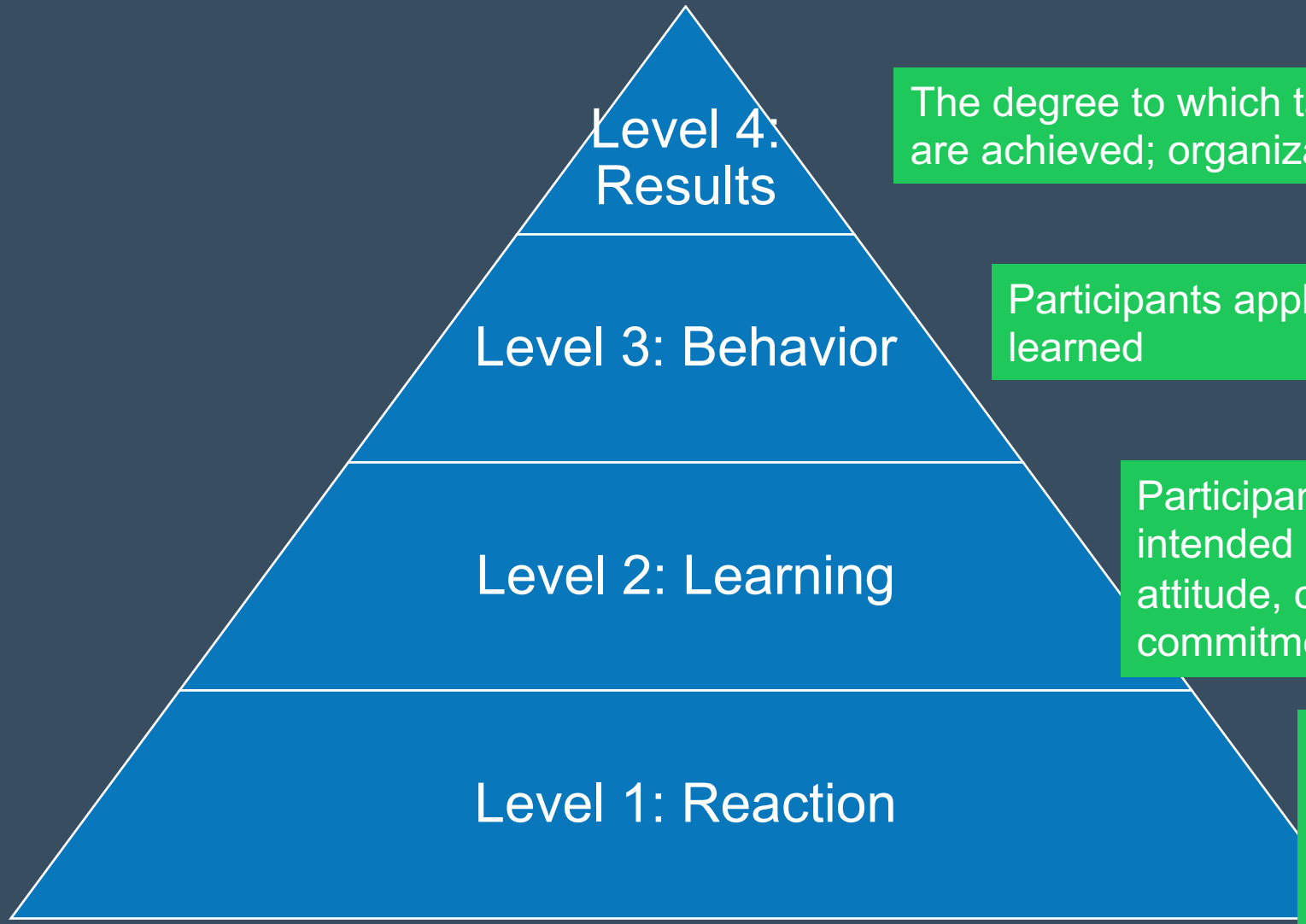
Tools to Use

- Observation
- Surveys
- Polls
- Tests (pre/post)
- Rating tools/checklists
- Interviews
- Focus Groups
- Audits
- Organization Metrics
- Health Records
- Databases

Evaluation Frameworks

- Kirkpatrick's Training Model
- Moore's Outcomes Levels

Kirkpatrick's Model



The degree to which targeted outcomes are achieved; organizational benefits

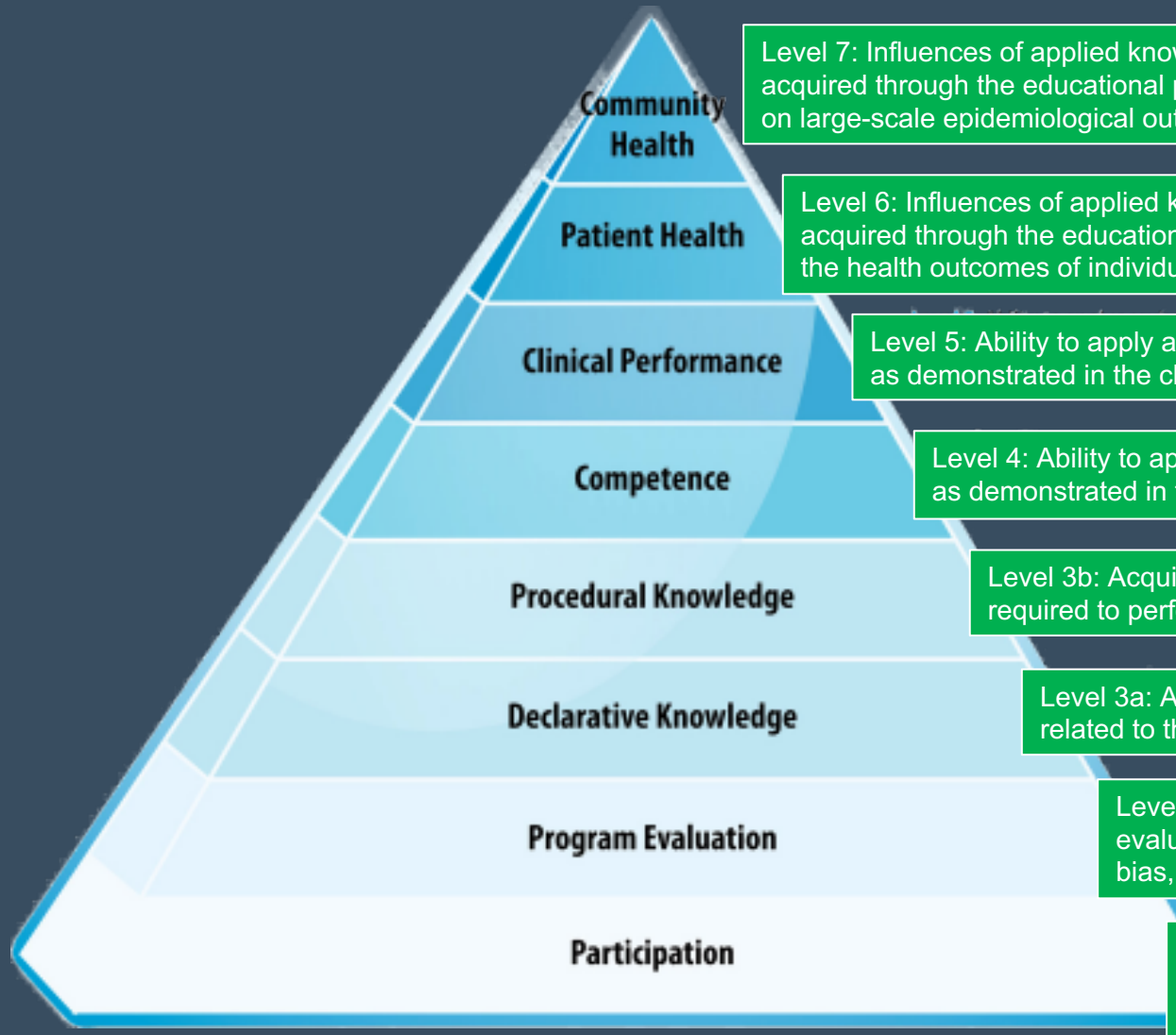
Participants application of what they learned

Participants acquisition of intended knowledge, skills, attitude, confidence, and commitment to apply learning

The degree participants found the education favorable, engaging and relevant

https://www.kirkpatrickpartners.com/the-kirkpatrick-model/

Moore's Model



Level 7: Influences of applied knowledge, acquired through the educational program, on large-scale epidemiological outcomes

Level 6: Influences of applied knowledge, acquired through the educational program, on the health outcomes of individual patients

Level 5: Ability to apply acquired knowledge, as demonstrated in the clinical setting

Level 4: Ability to apply acquired knowledge, as demonstrated in the educational setting

Level 3b: Acquisition of knowledge required to perform key clinical procedures

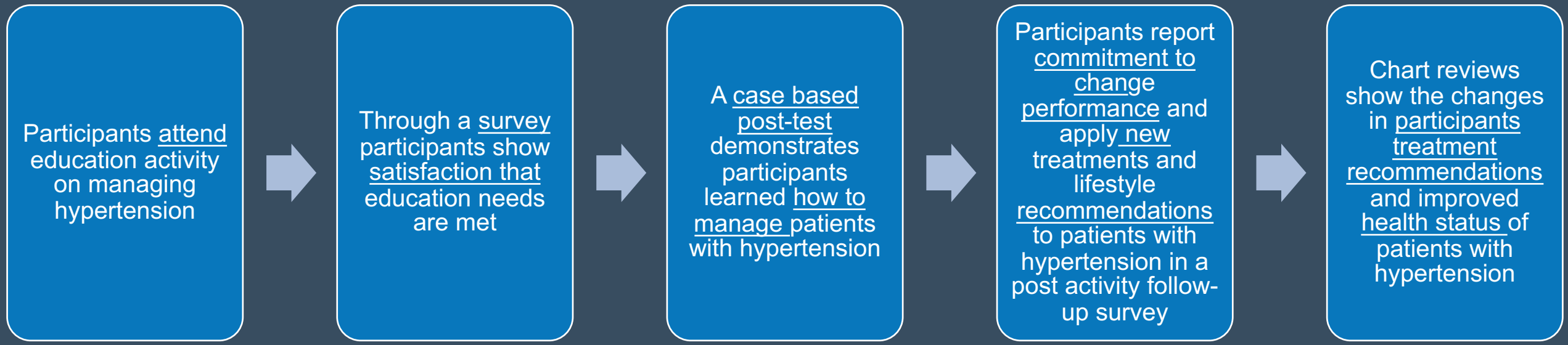
Level 3a: Acquisition of factual knowledge related to the program's learning objectives

Level 2: Participant satisfaction and evaluations of program objectivity, extent of bias, scientific rigor, and faculty effectiveness

Level 1: Numbers of participants in the educational program; distribution of participants by health care profession; patient populations served

https://jamanetwork.com/journals/jama/article-abstract/2670581?utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=olf&utm_term=0122188
PRIME's pyramid model of outcomes assessment, adapted largely from the recently refined framework of Moore et al: A model for assessing outcomes of continuing education programs for health professionals. Adapted from Kirkpatrick,[5] Miller,[6] and Moore et al.[7]

Applying an Evaluation Framework


Participants attend education activity on managing hypertension
Through a survey participants show satisfaction that education needs are met
A case based post-test demonstrates participants learned how to manage patients with hypertension
Participants report commitment to change performance and apply new treatments and lifestyle recommendations to patients with hypertension in a post activity follow-up survey
Chart reviews show the changes in participants treatment recommendations and improved health status of patients with hypertension

Moore's Level	Evaluation Measures	Sources of Data
Level 1: Participation	# of Participants, Demographics (profession, specialty, location)	Registration records Attendance records
Level 2: Satisfaction	Satisfaction surveys – format, instructors, materials, environment Engagement and relevance	Activity surveys, Focus groups Interviews Audits
Level 3: Knowledge Procedural or Declarative	Change in knowledge Stating *what* the activity taught and *how* it should be applied Immediate change and long-term retention	Pre & post tests Sequential testing Self reported knowledge gains Interviews
Level 4: Competence	Changes in perceived self-efficacy Degree participant *shows how* to do something	Pre & post tests; Surveys; Case based testing Observations in educational setting (formative or summative) Learner exercises Interviews
Level 5: Performance	Degree participants perform what educational activity intended them to do – individual or team based	Self-reported performance changes Observation in patient care *or simulated* setting; Project/work implementation Organization database; Medical record reviews
Level 6: Patient Health	How much does health of patients change	Medical record reviews Patient interviews / surveys
Level 7: Community Health	Degree to which health of community affected	Epidemiological data Medical record databases

Activity

- Review an educational plan and design an evaluation strategy using Moore's framework
  - 15 minutes
  - Pick 1 person to share
- Reconvene for report out

Evaluation Plan Report Out

New Treatment Educational Need and Plan:

Chronic Kidney Disease & Diabetes - The Centers for Disease Control and Prevention reports that around 1 in 3 adults with Type 2 diabetes has chronic kidney disease (CKD). Good glycemic control can prevent damage to the blood vessels and nephrons in the kidneys. New treatments for Type 2 Diabetes (including glucagon-like peptide-1 receptor agonists (GLP-1 RAs)) have demonstrated efficacy and shown renal benefits. Few patients with CKD are prescribed this class of medicine, which underscores an educational need for healthcare professionals to learn about utilizing these new therapies.

To meet this continuing educational need a grant is obtained from ABC Foundation to teach healthcare teams in nephrology, endocrinology and primary care about new treatments and strategies for patients to adhere to clinical recommendations. The objectives are for learners to (1) apply new treatment options for affected patients and (2) utilize strategies to follow up with patients for monitoring health status and adhering to treatments. The educational activity is a one hour on-demand online webinar. Patient education guides are offered to learners to use for communicating with and disseminating to their patients. The activity is to be made available to learners across the health system and as well as offered to a national audience on the Clinic's website. The education will be offered for a one-year period.

Design an educational evaluation plan using Moore's Framework:

Communications Educational Need and Plan

Studies have shown that relationship-centered communication skills can be improved with effective training, and that effective communication improves healthcare outcomes, team performance and patient satisfaction. Effective communication is particularly critical when caregivers need to deliver bad news to a patient. Clinic leadership set a goal for all frontline caregivers to receive education in this area. No external funding was obtained for this organizational improvement initiative. To meet this education need, the following learning activities were planned:

All frontline caregivers across the health system were invited to participate in a series of small group workshops where they were taught about best practices in communications in a didactic format (1 hr) and practiced application (1.5 hrs) with a standardized patient with a hypothetical case. The case was an instance where a patient was scheduled for a surgical procedure, and after the case was started there was a mistake and the procedure was cancelled and needed to be rescheduled. Enough time was allocated so each member of the group could practice conversing with the standardized patient to apply best practices in communication.

Design an educational evaluation plan using Moore's Framework:

Pitfalls

What challenges or pitfalls do you anticipate in evaluating education activities?

Common Pitfalls

- Lack of time, evaluation process skipped
- Small “n”
- Target learners don’t show up
- Over-reliance and assumptions on testing
- Response rates (survey fatigue)
- Lack of skills carrying out the evaluation plan (poor question or test writing)
- Data is inconsistent
- Confounders

Reporting

- Share your story
- Key components:
  - What learning occurred
  - How this matters
  - Value of education
  - Lessons learned
  - Future needs
  - Cost benefit considerations
- Leverage an “elevator pitch”

Summary

- Evaluating education effectiveness takes a strategy
- A framework helps guide design and implementation
- Keep the learning objectives in mind
- Be practical and do what’s feasible

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