Program Evaluation

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Objectives

- Determine the importance of program planning, implementation, and evaluation.
- Describe the six steps to program implementation and evaluation (CDC).
- Apply the six steps to program implementation and evaluation (CDC).

Evaluation Framework

Focus Evaluation Design

- Why is evaluation important?

Focus Evaluation Design

- Why is evaluation important?
  - To monitor progress toward the program's goal
  - To evaluate your process
  - To assess your outcomes
  - To determine whether program components are producing the desired results/outcomes
  - To identify and explore program assumptions
  - To describe *how* you achieved the results/outcomes

Focus Evaluation Design

- Purpose: *What is the intent or motive for conducting the evaluation (i.e., to gain insight, change practice, assess effects, or affect participants)?*
- Users
- Uses
- Questions
- Methods
- Agreements

Focus Evaluation Design

- Purpose
- Users: *Who are the specific persons that will receive evaluation findings or benefit from being part of the evaluation?*
- Uses
- Questions
- Methods
- Agreements

Focus Evaluation Design

- Purpose
- Users
- Uses: *How will each user apply the information or experiences generated from the evaluation?*
- Questions
- Methods
- Agreements

Focus Evaluation Design

- Purpose
- Users
- Uses
- Questions: *What questions should the evaluation answer? What unit of analysis is appropriate (e.g., a system of related programs, a single program, a project within a program, a subcomponent or process within a project)?*
- Methods
- Agreements

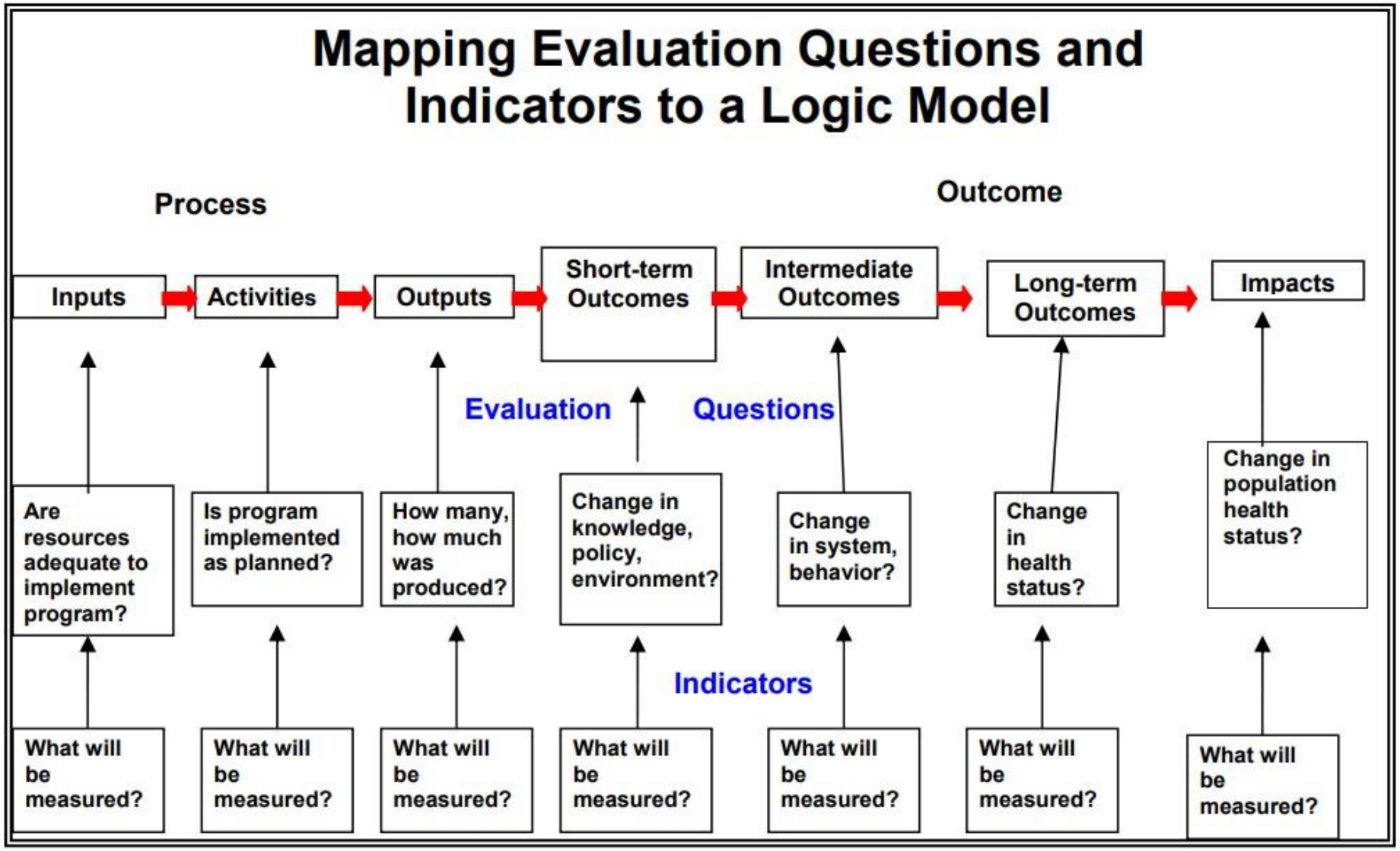
Focus Evaluation Design

- Purpose
- Users
- Uses
- Questions
- Methods: *What procedures will provide the appropriate information to address stakeholders' questions (i.e., what research designs and data collection procedures best match the primary users, uses, and questions)?*
- Agreements

Focus Evaluation Design

- Purpose
- Users
- Uses
- Questions
- Methods
- Agreements: *How will the evaluation plan be implemented within available resources? What roles and responsibilities have the stakeholders accepted?*

Questions: What to Evaluate



Methods (Design): How to Evaluate

Pre-post with control	Randomly assign individuals from the same target population to intervention or control, provide one group with training, examine changes
Pre-post with comparison	Deliver the program to one group (called the program group) and not (comparison group) and then measure both groups after.
Pre-post	Measure change by comparing baseline to post-intervention within target group
Post only	Measure outcome after delivering program to target group

Methods: Data Collection Procedures

Method	Advantages	Disadvantages
Surveys	• Anonymous completion possible • Can be effective and cost efficient	• Not as easy to design as many assume • Survey fatigue
Interviews	• Can build rapport • Can gather depth of information	• Time consuming • Expensive • Interviewing styles may affect responses
Focus Groups	• Can get common impressions quickly • Can be an efficient way to get breadth and depth of information	• Need an experienced facilitator • Can be difficulty and costly to schedule • Time consuming analysis

Methods: Data Collection Procedures

Method	Advantages	Disadvantages
Observation	• Can view program operations as they occur	• Difficult to interpret observed behavior • May influence behaviors of program participants • May be expensive and time consuming
Document Review	• Can document historical information about program • Does not interrupt program routine • Information already exists	• May be time consuming • Available information may be incomplete or low quality • Requires a coding scheme
Archival Data Review	• Quick • Inexpensive • A lot available	• Comparisons can be difficult • Quality depends on previous study • May not show change over time

Gather Credible Evidence

- Indicators: How will general concepts regarding the program, its context, and its expected effects be translated into specific measures that can be interpreted?
  - Sources: What sources (i.e., persons, documents, observations) will be accessed to gather evidence?
  - Quality: Is the information trustworthy (i.e., reliable, valid, and informative for the intended uses)?
  - Quantity: What amount of information is sufficient?
  - Logistics: What techniques, timing, and physical infrastructure will be used for gathering and handling evidence?

Logic Model Example: CROPS

Program: CROPS **Logic Model**

Situation: Tractor injury and fatalities in rural farm communities put youth who live and work on farms had high risk for injury and fatality as less than 50% of older model tractors are equipped with life-saving ROPS. With over 8000 Ag Education programs in the US, these education programs have potential to be strong advocates for farm safety and to engage ag students in actually learning to build and install NIOSH approved CROPS plans to reduce exposure to the hazard of an unprotected tractor without a roll over protection system.

Inputs	Outputs		Outcomes -- Impact		
	Activities	*Participation*	*Short*	*Medium*	*Long*
Faculty from ag safety, education Time Money Materials to const CROPS per participating school CROPS plans and related materials provided in a binder and app	Annual Conference App Social media training on doing a Go Fund Me Mentoring relationship between secondary agriculture teacher and student use of an approved curriculum construction and installation of a NIOSH approved CROPS	10-12 teacher trained per week session Students School districts iving CROPS installed funding for more CROPS through Go Fund Me	Behavioral shift among participating secondary agricultural education youth in regards to a) concern of tractor turnover and b) becoming an the installatio approved retr designs. Increase in CROPS installations	Increased awareness in poverty-stricken rural communities, throughout the Southeast, of the importance of CROPS ag co	Reduction of farm hazards Reduction of injury and fatality

Process Indicators

Outcome Indicators

Assumptions Ag ed teacher willing to be a farm safety advocate, teachers work in schools with the infrastructure needed to construct CROPS, CROPS will be installed

External Factors Recent community events, environmental climate

Logic Model Example: CROPS

Outcomes – Impact		
Short	*Medium*	*Long*
Behavioral shift among participating secondary agricultural education youth in regards to a) concern of tractor turnover and b) becoming an activist for the installation of approved retrofit designs. Increase in CROPS installations	Increased awareness in poverty-stricken rural communities, throughout the Southeast, of the importance of CROPS CROPS and farm safety becomes part of ag ed	Reduction of farm hazards Reduction of injury and fatality

Logic Model Example: CROPS

Indicators:

Sources:

Quality:

Quantity:

Logistics:

Evidence:

Outcomes – Impact		
Short	*Medium*	*Long*
Behavioral shift among participating secondary agricultural education youth in regards to a) concern of tractor turnover and b) becoming an activist for the installation of approved retrofit designs. Increase in CROPS installations	Increased awareness in poverty-stricken rural communities, throughout the Southeast, of the importance of CROPS CROPS and farm safety becomes part of ag ed	Reduction of farm hazards Reduction of injury and fatality

Indicator

A specific, observable, and measurable accomplishment or change that shows the progress made toward achieving a specific output or outcome in your logic model or work plan. These indicators were drawn from a Theory of Planned Behavior framework that explains conditions for changes in behavior.

- Attitudes
- Social Norms
- Behavioral Control
- Behavioral Intention
- Knowledge & Skills

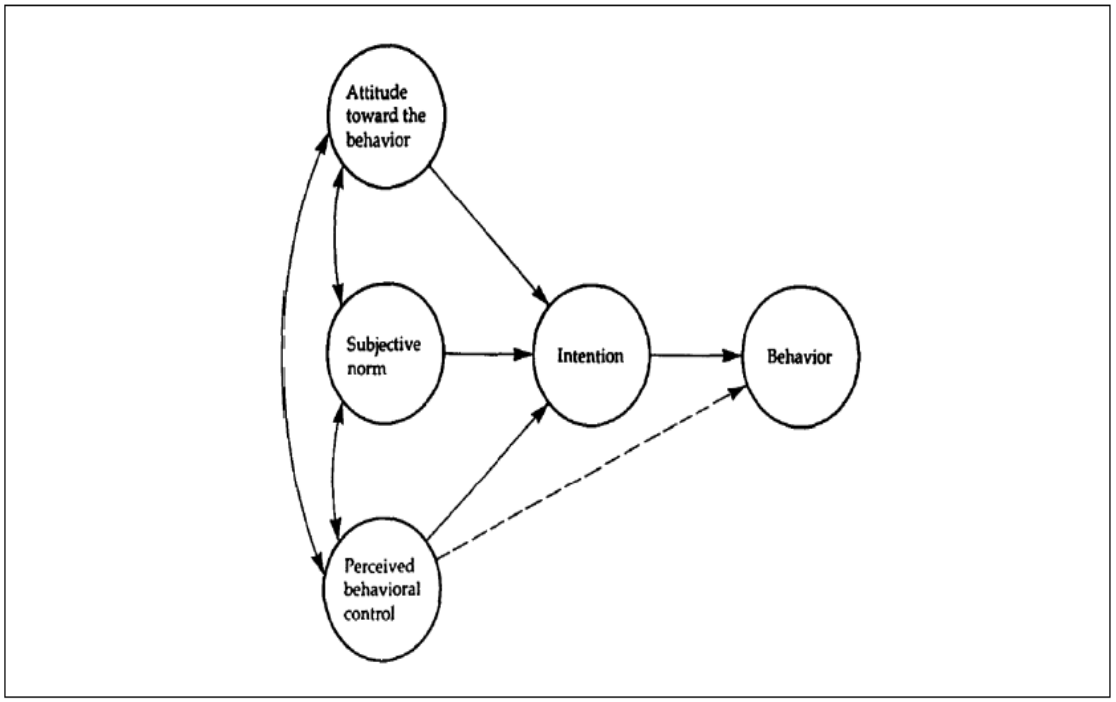


Figure 1. Theory of Planned Behavior (Ajzen, 1991)

CROPS: Assessing TPB Indicators with Questionnaire

- Indicator: (Theory of Planned Behavior) Behavioral Shift in attitude (Ques. #1), perceived social norms (Ques. #2) and intention, control (Ques. #3) and knowledge & skills
- Source: Pre- and post-test CROPS TPB Questionnaire

Please complete this questionnaire. Your answers will help the UK Project Team describe your opinions about farm equipment and farm safety along with those of other students involved in the CROPS project. Please give your best answers on the following questions.

1. Please indicate how you would rate a Rollover Protective System on the scales below.

Rollover Protective systems are…. . .

01.	Not Beneficial	1	2	3	4	5	6	7	Beneficial
02.	Worthless	1	2	3	4	5	6	7	Valuable
03.	Weak	1	2	3	4	5	6	7	Manly
04.	Inconvenient	1	2	3	4	5	6	7	Convenient
05.	Reckless	1	2	3	4	5	6	7	Protective
06.	Unnecessary	1	2	3	4	5	6	7	Necessary

Some of the questions below assume the ownership of a tractor. Please answer what you perceive the correct response would be if a tractor is owned.

2. How much do you agree with the following statements?

[1=strongly disagree, 4=neither agree nor disagree, 7=strongly agree]

01. My family members/relatives are willing to install the Rollover Protective System on their tractor(s).	1	2	3	4	5	6	7
02. My classmates are willing to install the Rollover Protective System on their tractor(s).	1	2	3	4	5	6	7
03. My neighboring farmers are willing to install the Rollover Protective System on their tractor(s).	1	2	3	4	5	6	7

3. How much do you agree with the following statements?

[1=strongly disagree, 4=neither agree nor disagree, 7=strongly agree]

01. I have total control over my decision to install a Rollover Protective Structure on the next tractor I own.	1	2	3	4	5	6	7
02. I have total control over my decision to purchase a tractor with Rollover Protective Structure in the future.	1	2	3	4	5	6	7
03. I expect a Rollover Protective System on the next tractor I own.	1	2	3	4	5	6	7

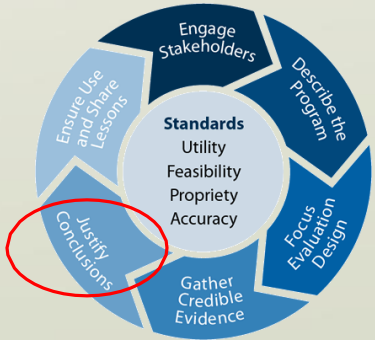
CROPS: Changes in indicators that foreshadow behavioral change: significant attitude and knowledge gains related to CROPS, positive trends in social norms and behavioral control.

- Indicators: Participants' positive attitudes improved as well as Knowledge and Skills*
- Sources: CROPS TPB Questionnaire (19 item)
- Quality: Anonymous
- Quantity: Two time periods (pre, post) to assess changes in attitudes
- Logistics: Pre test before training, post test after
- Evidence: Difference in reported TPB scores

Vincent, S., Mazur, J.M.,Summey T.,Namkoong, K., Byrd, A. (2019). *Journal of Agricultural Safety and Health.* 25(1): 25-36.

Justify Conclusions

- Making claims regarding the program that are warranted on the basis of data that have been compared against pertinent and defensible ideas of merit, value, or significance (i.e., against standards of values); conclusions are justified when they are linked to the evidence gathered and consistent with the agreed on values or standards of stakeholders.



Methods to Justify Conclusions

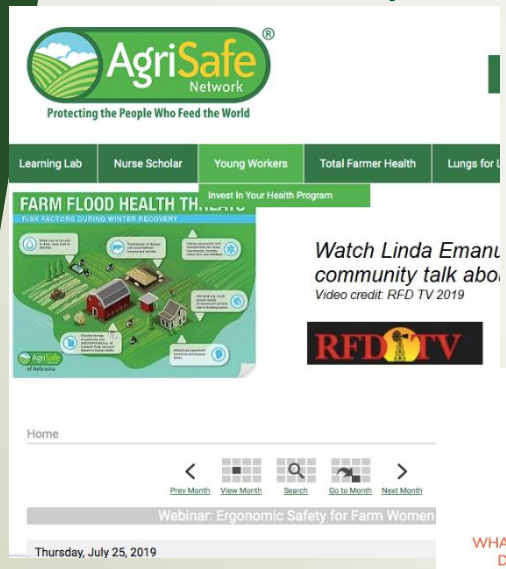
- Using appropriate methods of analysis and synthesis to summarize findings;
- Interpreting the significance of results for deciding what the findings mean;
- Making judgments according to clearly stated values that classify a result (e.g., as positive or negative and high or low);
- Considering alternative ways to compare results (e.g., compared with program objectives, a comparison group, national norms, past performance, or needs);
- Generating alternative explanations for findings and indicating why these explanations should be discounted; and
- Recommending actions or decisions that are consistent with the conclusions

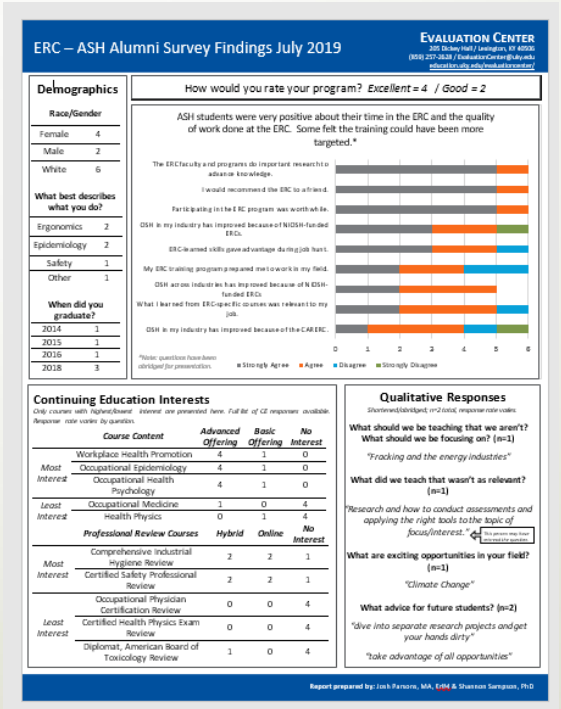
Ensuring Use and Lessons Learned

- Prepare stakeholders for eventual use by rehearsing throughout the project how different kinds of conclusions would affect program operations; then involve them in interpreting findings
- Design the evaluation to achieve intended use by intended users
- Provide continuous feedback to stakeholders regarding interim findings, provisional interpretations, and decisions to be made
- Schedule follow-up meetings with intended users to facilitate the transfer of evaluation conclusions into appropriate actions or decisions; and
- Disseminate both the procedures used and the lessons learned from the evaluation to stakeholders, using tailored communications strategies that meet their particular needs.
- Limit conclusions to situations, time periods, persons, contexts, and purposes for which the findings are applicable.

How to disseminate?

- How could you ensure stakeholders and the public are aware of your program results and lessons learned?





- Brief reports, infographics, slide decks, webinars, social media, interactive dashboards, manuscripts…

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Questions?

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