Mapping Your Way to Success - Program Evaluation for the Infection Preventionist

APIC Chicago Fall Conference 2017
October 27, 2017
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Financial Disclosures

• I have no financial relationships to disclose.
Learning Objectives

• Describe how formal program evaluation can improve process improvement projects and lead to better outcomes

• Demonstrate how to create S.M.A.R.T. objectives that can later be evaluated for effectiveness

• List the steps that need to be followed to effectively evaluate a program for efficacy
What is Evaluation?

- **Evaluation**: “to determine the significance, worth, or condition of, usually by careful appraisal and study” (Merriam-Webster dictionary definition)

- **Program evaluation**: “the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future program development.” (CDC)
Why Evaluate?

To better understand if the actions you are taking and resources you are using are leading to the outcomes you desire to achieve.
Why Don’t We Evaluate?

- It is unnecessary and just an extra component of any initiative
- If the results aren’t good, we may “look bad”
- It takes too much time and we already have too many things to do
- It’s too complicated for us to do

• Self-esteem and resistance program against drugs

The program was **ineffective** in reducing drug use amongst kids

- Evaluations showed kids who went through the DARE program were more likely to use drugs and alcohol

- In 2000, the Department of Education announced drug education programs needed to be **evidence-based** to receive funding.
- The program was receiving $200 million annually in government funding.
- DARE revised program to use evidence-based strategies.
Evaluation Example: Initiatives in the IP World

How often do we *evaluate the effectiveness* of these practices and/or their impact?

- CAUTI/CLABSI Bundle Compliance
- Isolation Precautions Rounding
Basic Plan of Attack

Problem Identified

Actions Taken

Outcomes
Mapping Your Way to Success – Where to Start?

In order to evaluate a program, you need to have a good understanding of what it is you did and/or are planning to do.

LOGYIC MODELS
Creating your Map: Logic Models

Example: National Forum on Youth Violence Prevention Logic Model

Situations

Youth violence is a complex social problem that requires a multifaceted response built from prevention, intervention, enforcement, and reentry.

Priorities

- Maximize the use of city-wide partnerships and strategic planning to reduce violence.
- Increase the effectiveness of federal agencies in supporting local efforts to reduce youth violence.
- Support local partnerships and city-wide strategic plans through TA, structured peer-to-peer learning, and “match-making.”
- Once plan is in place, identify existing federal and private resources to help address unmet needs.
- Identify options for modifying federal policies and practices to better support local anti-violence efforts.
- Assemble or enhance local partnerships including full range of partners involved in violence prevention, intervention, enforcement, and reentry.
- Develop or enhance comprehensive, city-wide violence reduction strategy.
- Implement strategy using data-driven and evidence-based practices.

Inputs

Federal Outputs/Activities

Federal Local

Support local partnerships and city-wide strategic plans through TA, structured peer-to-peer learning, and “match-making.”

Assemble or enhance local partnership including full range of partners involved in violence prevention, intervention, enforcement, and reentry.

Assessment of local capacity to access federal and private resources to complement local investments in city-wide youth violence strategy.

Sustained city-wide “living” strategy and partnerships to address youth violence.

Short Term

Medium Term

Long Term

Outcomes/Impact

Wider and more frequent local involvement in violence reduction partnerships.

Improved coordination among partners implementing different strategies (e.g., enforcement & intervention).

Improved access to opportunities for positive youth development.

Assumptions

- Multi-disciplinary partnerships using data-driven strategies and evidence-based programs have demonstrated the ability to effectively reduce youth violence.
- Multiple city networks provide opportunities for peer-to-peer information sharing that can increase the use of effective approaches.

External Factors

- Local and national events that impact youth crime trends or the capacity to prioritize response to youth violence.
- Shifting political leadership at local or federal levels.
- Structural, sociological, economic, and demographic changes that may influence root causes of violence.

Northwestern Medicine
What is a Logic Model?

• A roadmap of a program, initiative, intervention that you are implementing in response to a specific situation

• Shows relationships among the resources that we have invested, the actions we are taking, and the outcomes of that work

• Important: it’s visual!

• Lastly, it’s a valuable tool for program planning and evaluation
Step 1: S.M.A.R.T. Objectives
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- Once you have determined what it is you want to focus on (i.e., your problem), you will want to set your S.M.A.R.T. objective/s.

- These are what you aim to achieve from the initiative.
S.M.A.R.T. Objectives

S – specific (significant)
M – measurable (meaningful)
A – attainable (achievable)
R – relevant (reasonable)
T – timely (time-based, time-oriented)
S.M.A.R.T. Objectives
S.M.A.R.T. Objectives: **S**

Objectives should be **specific**

- With specific objectives, you should be able to answer the 5 W's
  - Who
  - What
  - Where
  - When
  - Which
S.M.A.R.T. Objectives: **M**

Objectives should be **measureable**

- If your objective is *specific*, it will help allow it be *measurable*

- Ask yourself – how will you know your objective has been accomplished?
S.M.A.R.T. Objectives: A

Objectives should be **attainable**

- Is what you are trying to accomplish even possible?
- Do you have the resources that are needed to accomplish your objective?
S.M.A.R.T. Objectives: R

Objectives should be **relevant**

- Is this the right time to be trying to accomplish your objective?

- Does your objective help you achieve your end-goal?
S.M.A.R.T. Objectives: T

Objectives should be *timely*

- Do you know by when you want to accomplish your objective?
- What is the start date/end date?
Step 2: Determining Your Inputs

- **Inputs** = resources that are needed to carry out your objectives
  - Examples: people, time, money, materials, equipment, technology etc

What we *input* is what allows us to create *outputs*
Outputs

S.M.A.R.T. GOALS/OBJECTIVES

INPUTS

OUTPUTS

ACTIVITIES

PARTICIPATION

OUTCOMES — IMPACT

SHORT

MEDIUM

LONG

ASSUMPTIONS

EXTERNAL FACTORS
Step 3: Determining Your Outputs

- Outputs are the activities, services, etc. that reach the people who are being targeted
- What we do or what we offer (the activities) and who they impact (participation)
- Evidence-based practices, theory, etc.

*Outputs* lead to specific *outcomes*
Outcomes

S.M.A.R.T. GOALS/OBJECTIVES

INPUTS

OUTPUTS
ACTIVITIES
PARTICIPATION

OUTCOMES — IMPACT
SHORT
MEDIUM
LONG

ASSUMPTIONS

EXTERNAL FACTORS
Step 4: Determining Your Outcomes

- Specific, attainable and measurable changes that are likely to occur as a result of activities performed
- These are the direct results of your outputs and can be separated into:
  - **Short term**
    - Knowledge changes
  - **Medium term**
    - Action changes
  - **Long term**
    - Culture changes
- Outcomes are not always positive
Outputs vs Outcomes

It is easy to confuse outputs and outcomes

Remember:

• *outputs* are what you are doing;

• *outcomes* are the result of those actions – what difference was made
Does Anything Else Make An Impact?
Things to Consider

Assumptions

• The beliefs we have about the program, the people involved, and the resources we have
• Assumptions influence how we approach our projects and the decisions we make

External Factors

• These are things that influence the program’s success that have to do with the environment the program is in
  – Participant attitudes, media influence, societal issues, etc.
• These factors influence the initiative and are influenced by the initiative
A good logic model helps set you up to do a good evaluation.

- What we want to do
- What resources we have
- What we’re going to do
- What happens
- Impactful variables to keep in mind

So now what?
Next Steps

• You have the map (i.e.: logic model), but how do you know what you planned actually has the desired impact?

• This is the piece that we often fail to do

Time to evaluate!
Step 5: Evaluation
Evaluation

- Process Evaluation
- Outcome Evaluation
Process and Outcome Measures

- **Inputs** and **outputs** can further be summarized as “process measures” – these describe how it is done.

- **Outcomes** can also be referred to as “outcome measures” – these describe the results.
Process Evaluation

- Focus is on the **left side** of the logic model
  - Whether program activities have been implemented as you intended for them to be

- Helps you **improve** your program
  - Reviews the program activities and short-term outcomes – did they actually happen?
  - Are there issues with your implementation strategy or with the theory behind the practice?

Intent is to monitor progress and make tweaks/corrections in the middle of the program
Outcome Evaluation

- Focus is on the **right side** of the logic model
  
  - Whether your program worked the way you planned

- Focus is on intermediate outcomes and impact – the *effect* of the program

Intent is to determine if the program as a whole is working or not
Power of Process Evaluation

• Issues with the process can cause less than desired outcomes
• Process evaluation should be taking place during outcome evaluation – it helps save time and effort
How Do You Evaluate?

- Keep clear records
- Audit tools
- Data collection!
- Remember those S.M.A.R.T. objectives?
  - Did you meet them?
How to be Successful

• Evaluation plans must be **dynamic** – constantly review what you are investing your time in
  – If it doesn’t work, then do something else

*If it works, keep it up!*  
*If it doesn’t, change it up!*
Putting Your Map to Work

• Staff Influenza Vaccination
Putting Your Map to Work

BACKGROUND:

- Staff influenza vaccination rates have been lower than the Healthy People 2020 goal of 90%, with last year’s flu season being 70%
- Joint Commission expects organizations to establish a vaccination program and incrementally reach a 90% goal by 2020
Putting Your Map to Work

BACKGROUND:

• On the declination forms, staff designate a “reason” for why they are declining from a pre-determined set of choices. The most commonly marked reasons for declination include:
  – the belief that the vaccine will cause the flu
  – it is inconvenient to get a flu shot and people don’t have time
  – Influenza is not that serious of an illness
Step 1: S.M.A.R.T. Objectives

S.M.A.R.T. Objective:

Staff influenza vaccination rates will increase to 80% by the conclusion of the 2017-2018 influenza season, in order to be on track to achieve the Healthy People 2020 goal of 90% vaccination compliance by 2020.
Inputs

S.M.A.R.T. GOALS/OBJECTIVES

INPUTS

OUTPUTS
ACTIVITIES
PARTICIPATION

OUTCOMES — IMPACT
SHORT
MEDIUM
LONG

ASSUMPTIONS

EXTERNAL FACTORS
Step 2: Determining Your Inputs

- Influenza vaccinations
- RNs/pharmacists (staff to administer shot)
- Supplies to bring flu shots to staff
- Posters (for education)
- Time
- Money
Outputs

S.M.A.R.T. GOALS/OBJECTIVES

INPUTS

OUTPUTS
ACTIVITIES PARTICIPATION

OUTCOMES — IMPACT
SHORT MEDIUM LONG

ASSUMPTIONS

EXTERNAL FACTORS
Step 3: Determining Your Outputs

- We do a literature review and find that hospitals that have implemented effective influenza vaccination programs have done the following:
  - Offer vaccines at multiple locations/times
  - Mobile vaccination carts
  - Implemented education programs addressing common misconceptions and beliefs
We determine the people we want to participate in this initiative, to achieve the objective (i.e., increase vaccination rates to 80%) are:

- **All staff**
- **Volunteers**

Specifically, we want to target the people who keep declining vaccination.
Early on, we project some of the outcomes to be that staff have a better understanding of what influenza is, and that we debunk some of the myths.

Medium term outcomes include staff vaccinating earlier on in the season (vaccine is more accessible).

Long term outcomes include staff belief that they can directly protect patients from influenza (vaccination rates increasing).
Assumptions

• Staff will be more willing to get their flu shot if we take it to them
• Staff who decline vaccination will be open to changing their mind
• Increasing vaccination is a priority to the entire organization
• There will be support from senior leadership

External Factors

• Last year’s vaccine poorly matched the strain type circulating
• There are new vaccines out on the market that are being heavily marketed
Step 5: Evaluation

S.M.A.R.T. OBJECTIVE:
Staff influenza vaccination rates will increase by 10% to 80% by the conclusion of the 2017-2018 influenza season, in order to be on track to achieve the Healthy People 2020 goal of 90% vaccination compliance by 2020.

INPUTS
- Influenza vaccinations
- RNs/Pharmacists
- Supplies to bring flu shots to staff
- Posters
- Time
- Money

OUTPUTS
ACTIVITIES
- Offer vaccine at multiple times and locations on units
- Implement mobile vaccination cart
- Offer influenza vaccine at mandatory meetings, trainings, etc
- Develop educational material addressing common misconceptions about influenza

PARTICIPATION
- All staff
- Staff who decline vaccination

OUTCOMES — IMPACT
SHORT
- Staff have better understanding of influenza
- Debunk myths that flu shots cause flu

MEDIUM
- Staff are completing vaccination requirement earlier in season
- Less staff are declining

LONG
- Vaccination rates increase
- Staff understand their role in protecting patients from influenza

ASSUMPTIONS:
- Staff will be willing to get their flu shot if we take it to them
- Staff who decline vaccination are willing to change their mind
- Increasing vaccination is a priority to everyone
- There will be support from senior leadership

EXTERNAL FACTORS
- Last year's vaccine poorly matched the strain type circulating
- There are new vaccines out on the market that are being heavily marketed
Process Evaluation

What we find out:

- Not many staff are attending the educational sessions you are holding every week
- Senior leaders are not all equally engaged and/or holding their staff accountable
- Flu vaccine is running out on Mobile Flu Shot days
- You send out a short survey and find out staff rate their knowledge of influenza to have increased from before
- People are confused on what flu shot is safe to take, especially since last year wasn’t a good match
Outcome Evaluation

• Data is collected to determine how many staff members have become vaccinated this season, and it’s compared to previous years to see if compliance is occurring faster

• A list of individuals who have declined vaccination in previous years is compared to compliance this year to determine if there is a change in individuals taking the vaccination

• Declination forms are reviewed to see if reasons for declining are changing, and if less people are marking common myths as reasons
• Keep evaluating your processes and outcomes until the time frame for your initiative is up
Review, Reflect, Repeat

Did staff influenza vaccination increase by 10% in that time frame?

- If yes, great! From your evaluation, what strategies worked best? What didn't work?
- If no: what did you find from your evaluation? What do you think was the main pitfall? Was it avoidable?
Mapping Your Way to Success

• Identify your problem/issue
• Develop S.M.A.R.T. objectives
• Construct your logic model – map out your inputs, outputs and projected outcomes
• Evaluate your process measures and outcome measures
• Make changes to your inputs and outputs when needed
Mapping Your Way to Success
Nothing Changes if Nothing Changes

“What if we don’t change at all... and something magical just happens?”

http://www.torbenrick.eu/blog/change-management/change-management-comic-strips/
Resources


Questions?
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Thank You