Welcome and introductions (~ 5 mins)

Presentation: *Sentinel Indicators: A Systems-Based Approach to Monitoring and Evaluation* – Travis Mayo, USAID (~ 35 mins)

Q&A (~ 20 minutes)
AEA 2015
Sentinel Indicators:
A Systems-Based Approach to Monitoring and Evaluation

Travis Mayo
United States Agency for International Development (USAID)
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A **sentinel indicator:**

- Is a type of proxy indicator used not to measure a result, but rather as a bellwether for indicating that greater changes are occurring within a complex system.
- Is easily communicated.
- Signals the need for further analysis and investigation.
- Has no targets set.

*Sentinel indicators are placed at critical points in a system map to help monitor and inform the mutually influencing relationship between the program and its context.*
Ag Inputs - Uganda
Who have you purchased products from? And who have you resold products to?

OTI Stability Programs - Pakistan
Market Activity - composite indicator including: market size; market reinvestment; market crowds; and market locations
Examples of Sentinel Indicators

**Food for Peace – Haiti**

1. Amount of rainfall (in millimeters) reported monthly from available rain gauge stations

2. Consumer price levels (in Haitian Gourdes [HTG]) for identified key commodities for standardized commodities, reported monthly from regularly surveyed markets

3. Global acute malnutrition (GAM) prevalence (using mid-upper arm circumference [MUAC]) reported monthly from awardees’ community screenings of children 6–59 months of age or underweight prevalence (using weight-for-age measurements) reported monthly from awardee rally posts

Each indicator was paired with a sub-indicator that was used to better understand when changes with the sentinel indicator had reached a point that warranted investigation. The sub-indicators are as follows:

1. One month with more or less than the required rainfall for the dominant crop(s) during the production season, compared with available historical data

2. One or more months of atypical price variance (in HTG) during a specific season compared with month-on-month trends and available historical data

3. Increase in Global Acute Malnutrition prevalence and/or underweight prevalence among children 6–59 months of age, compared with month-on-month trends and area-specific program baselines
The Birth of a Sentinel Indicator

What's happening in my system?
Sentinel Indicators and Adaptive Management

Knowledge of Causation

Fast feedback; rapid response with approaches we know will work (e.g., humanitarian assistance, cash transfers)

Traditional ‘linear’ programming (e.g., vaccines, infrastructure, bed nets)

Knowledge of Context

? Try to get out this quadrant!

Experiment, iterate, learn, adapt (e.g., PDIA)
Sentinel Indicators and Adaptive Management

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The Use of a Sentinel Indicator

Pre-determined processes for analysis and integration into decision making
Designing a Sentinel Indicator
Designing a Sentinel Indicator

- Staff must be comfortable with systems thinking principles
- Must accept that sentinel indicators may be iterative; you will learn as you go
- Must be created in-house
- Collaboration between donor and implementing partner ideal
- Methods experts not required
- Exhaustive system mapping not required
- Intense analysis required
- Staff who are comfortable with complexity and ambiguity
- Means for data collection
- Intense analysis required
- Staff who are comfortable with complexity and ambiguity
- Means for data collection

Notably **not** required
- Proprietary Software (or any software)
- Super-specialized expertise
Sentinel Indicators and Deciding to Act
Challenges

• Low incentive and precedence to spend limited resources on problems that don’t yet exist

• Risk mitigation – credibility of donor and project lost if emergency assistance applied but no shock occurs

• Mismatch in commitment to Sentinel Indicators – easy to “lose” them within a larger M&E plan
Potential Solutions

- Data simulation
- Locally determined context for when action is required
- Historical record of sentinel indicator data and onset of shocks
Bottom line:

• Sentinel Indicators are versatile
• They are an accessible first step to working in complexity
• They are very good at detecting broad changes
• They spark conversations, questions, and analysis to better understand your system
Documented results of what they can do:

- Support adaptive management (i.e., provide the data that allows for improved decision making)
- Reveal previously unknown aspects of your context and system
- Promote appreciation and value of systems thinking within a project team
What they require:

- Understanding that you’re working within a system
- Staff that are comfortable in complexity and ambiguity
- A culture that values learning, asking questions (in practical terms, having space for assessment and analysis)
- Time and staff for analysis
• Thinking about M&E through a systems lens opens new opportunities

• Growing recognition that programs need the services of those who can help them think systemically

• Tackling the hardest M&E challenges may require you to find your inner systems thinker
Thank you

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Is it a Sentinel Indicator? (checklist)

• Is the indicator measuring an intended result of the program?

• Does the indicator have a target assigned to it?

• Is the indicator being used as a trigger for further analysis or investigation?

• Is the indicator being used to gain insight on processes of change or a complex interrelationship?