

Evaluating Health IT Projects: A Primer for Medicaid and SCHIP

Presented by:

Caitlin M. Cusack – MD, MPH, National Opinion Research
Center (NORC) – University of Chicago

Overview

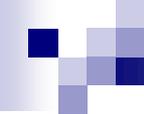
- **Welcome** – Erin M. Grace, MHA, Senior Manager, Health IT, Agency for Healthcare Research and Quality (AHRQ)/National Resource Center
- **Before We Begin** – Erin M. Grace, MHA
- **Introductions** – Jessica Kahn, MPH, Medicaid Transformation Grants Project Officer, Centers for Medicare and Medicaid Services (CMS)
- **Presentations**
 - ***Evaluation of Medicaid/SCHIP HIT Activities: Introduction***
 - Presented by Jessica Kahn, MPH, Medicaid Transformation Grants Project Officer, Centers for Medicare and Medicaid Services (CMS)
 - ***Evaluating Health IT Projects: A Primer for Medicaid and SCHIP***
 - Presented by Caitlin M. Cusack, MD, MPH, National Opinion Research Center (NORC) – University of Chicago
- **Question and Answer** – Erin M. Grace, MHA
- **Closing Remarks** – Erin M. Grace, MHA

Before we begin...

- Please note all participants will be placed on mute once the presentation begins.
- If you wish to be un-muted, choose the “raise hand” option to notify the host.
- If you have a question during the presentation, please send your question to *all participants* through the chat. At the end of the presentation, there will be a question and answer period.
- If you would like a copy of the presentation slides please e-mail nbuchholz@rti.org

■ Listserv Registration

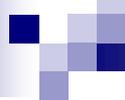
- Please register for the listserv to receive announcements about program updates
- To register go to <http://healthit.ahrq.gov/Medicaid-SCHIP>
- Click on “Medicaid-SCHIP Fast Facts” on the left-hand side of the screen
- There are two ways to register for the listserv:
 - 1. Click the link “[Click here to subscribe to the listserv](#)” which will open a pre-filled email message, enter your name after the text in the body of the message and send.
 - 2. Send an E-mail message to: listserv@list.ahrq.gov.
On the subject line, type: **Subscribe**.
In the body of the message type: **sub Medicaid-SCHIP-HIT** and **your full name**. For example: sub Medicaid-SCHIP-HIT John Doe.
You will receive a message asking you to confirm your intent to sign up.



Evaluation of Medicaid/SCHIP HIT Activities: Introduction

Jessica Kahn, MPH

Medicaid Transformation Grants Project Officer
Centers for Medicare and Medicaid Services (CMS)



The CMS Perspective

- For the Medicaid Transformation Grants, evaluation of the impact of the grant project must look at 1) cost savings and 2) clinical outcomes, as well as describing specifically how the funds were used
- Equally important to evaluate is the implementation process in order to be instructive to other states pursuing similar projects

Grantee or Not...

- Whether your state has a Medicaid Transformation Grant or not, thinking about evaluation of HIT activities is critical from the CMS viewpoint because:
 - Local stakeholder buy-in
 - Future CMS funding through MMIS matching funds requires an outcomes-based/service-oriented approach
 - Future CMS funds through new grant programs would likely include an evaluation requirement with an outcomes-based approach

Admitting the Mismatch

- The timing of the Medicaid Transformation Grant final evaluation report, six months after completion of the grant, may not allow for optimal reporting on project outcomes:
 - Not enough time has elapsed
 - Key measures not immediately time-sensitive
 - HIT project may be “tweaked” after a few months of implementation

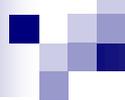
But still do it!

- Interim measures that can be reported on for final evaluation report plus discussion of the impact outcome measures that will continue to be tracked and evaluated as the HIT project continues on past the grant period
- And now Caitlin will elaborate on the why, what and how of HIT evaluation...



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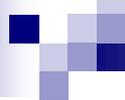


Agenda

- Why Evaluate?
- How to approach evaluation in Health IT:
Defining project evaluation goals, metrics,
methods
- Developing a plan for evaluating your
Health IT project
- Barriers and pitfalls to Health IT evaluation



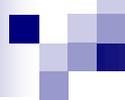
Why Evaluate?



Why Evaluate?

Historically, early adopters have implemented Health IT under the assumption that there would be:

- Improvements in clinical processes
- Improvements in quality of care
- Improvements in patient safety
- Improvements in efficiencies
- Reduction in costs



Why Evaluate?

- Evaluation has long taken a back seat to implementation, frequently not even addressed.
- Implementations have proven to be difficult and costly.
- Once implemented, adoption has been an issue.



The primary focus has been on just getting systems up and running, and working to increase adoption of these systems...not on evaluation!

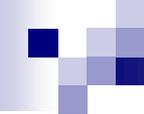


Why Evaluate?

- The loss to the field of Health IT due to lack of evaluation is immeasurable
- Questions abound around:
 - Costs
 - Financial/clinical impact
 - Implementation best practices

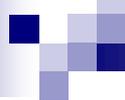
Why Evaluate?

- We must evaluate in order to understand:
 - What has worked well?
 - What hasn't worked?
 - What are the true costs of these systems?
 - What is the true clinical impact of these systems?
 - Is there an ideal way to roll these systems out?
 - Is there one model for all? Or is the model different for a large versus small?



What can evaluation do for your individual project?

- Facilitate Implementation
 - What is going well?
 - What is going badly?
 - What can be done differently?
- Win over late adopters
 - Share early wins
- Guidance and support for future projects
 - Build best practices
 - Build off of lessons learned



What can evaluation do for your individual project?

- Publicity
- Share lessons learned about common barriers and facilitators
- Accountability and credibility
- Sustainability



*How to approach evaluation in health
IT: Defining project evaluation goals,
metrics, methods*

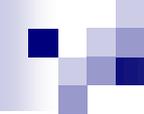


Gather your team!

- Your team
- Evaluators
- IT
- Stakeholders

- Others?

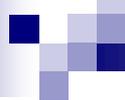
- 
- Even if you will have others conduct your evaluation, you must stay involved
 - Conduct your first meeting as a brainstorming session to clearly define WHAT you want to measure
 - Your evaluation plan and design will flow from this



Project Description

Begin by describing your project

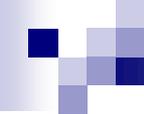
- Likely this is information you already have in your project proposal
- Upfront make sure everyone has a solid understanding of the project



Project Goals

Next, identify your project goals

- Again make sure it is clear to the team what the goal of the project is.
- Consider what your stakeholders hope is achieved by the project.
- What would need to happen in order for your project goals to have been met and the project deemed a success?



Goals of the Evaluation

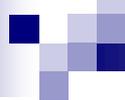
Identify your goals around evaluation

- Yes, this is a different goal from your project
- Be clear on why you are evaluating so that you know what needs to occur to deem your evaluation a success



- Why do you want to do an evaluation?

- To fulfill requirement of your funders?
- To show the value of your project?
- To share lessons learned with others?
- To publish your experience?
- To demonstrate a ROI?



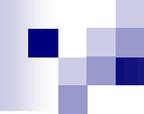
Choose what you want to measure

- Based on the goals you have outlined, choose metrics which will help you determine whether those goals have been met
- At the outset, don't consider what is feasible, but rather concentrate on everything that could be measured to demonstrate your success



Categories of Measures

- Clinical Outcomes Measure
- Clinical Processes Measures
- Provider Adoption and Attitudes Measures
- Patient Knowledge and Attitudes Measures
- Workflow Impact Measures
- Financial Impact Measures



Clinical Impacts

- Reduction in errors
- Reduction in length of stay
- Improvement in HbA1C
- Reduction in LDL



Clinical Processes

- Increase in vaccine rates
- Increase in mammogram rates
- Increase in foot exam rates in diabetics
- Improvements in documentation
 - Allergies, med list, med reconciliation



Provider Adoption and Attitudes

- Provider usage trends
- Percent orders entered by provider
- Percent outpatient prescriptions ordered electronically
- Percent of notes entered electronically
- Provider satisfaction trends



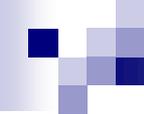
Patient Knowledge and Attitudes

- Patient satisfaction
- Patient knowledge
 - Medication and how used
 - Knowledge of conditions
 - Knowledge of treatment plans



Workflow Impact

- Pharmacy call back rates
- Patient wait times
- Time to administer medications
- Time spent per patient



Financial Impact

- Decrease in claims denials
- P4P payments from payors
- Increase in prescriptions for generic medications
- Reduction in transcription costs
- Reduction in costs to manage paper
- Reduction in FTE



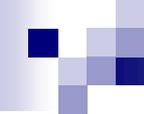
Data Exchange

- Outpatient providers and laboratories
- Outpatient providers and pharmacies
- Providers and providers
- Providers and radiology centers
- Providers and public health departments



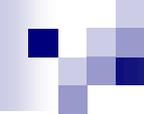
Data Exchange

- The number of transactions
- The number of registered users, first time actual users, repeat users
- Reduction in duplicate tests
- Savings due to reduction in duplicate tests



Be sure to add qualitative measures

- Resist the temptation to only look at numbers!
- Ignoring qualitative data risks not seeing the big picture of your project.



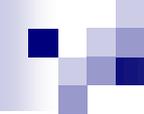
Qualitative Studies

- Give the big picture of what is occurring
- Allows the evaluators to understand how the users are interacting with the new system
- Often the data is easier to understand and thus available to a larger audience
- Often generate stories/anecdotes which resonate with stakeholders/audiences



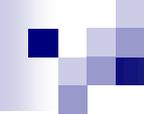
Consider On-Going Evaluation

- Consider looking at barriers, facilitators and lessons learned through-out the project
- Frequently the information people have the most interest in
- Barriers may be organizational in nature, financial, legal, etc.
- Facilitators might include strong leadership, training, and community buy-in

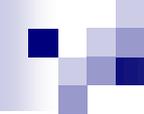


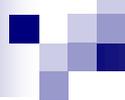
Search for Other Easily Measured Metrics

- Find out what data is already being measured in your office or organization
- Would any of these metrics add to your evaluation?



*Choose Final Metrics for Your
Evaluation*

- 
- Now that you have a long list of potential metrics, begin to narrow that list to a few which you will focus on
 - Consider again your goals of your project and of your evaluation and ensure that the measures on your list will help you to declare success



Consider the Project's Impact on Potential Metrics

- Impacts of a particular project vary based on where in the organization it is implemented and who will be using the new technology.
- Ensure that the metrics you choose to measure will actually be impacted by your project.

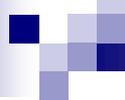
Determine which metrics are most important to measure

- Look to your goals yet again-which measures are the most important to help you meet your goals?
- Rate the importance of each measure by importance
 - 1 = Very Important
 - 2 = Moderately Important
 - 3 = Not Important
- This will help you to think which measures are not important to pursue



Feasibility

- Up front consider which metrics are actually feasible to measure
- Consider your available resources: people, money, space, time
- Again, use a scale to rank your measures
 - 1 = Feasible
 - 2 = Feasible with Moderate Effort
 - 3 = Not Feasible.

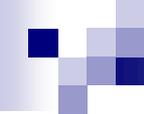


Determine Sample Size

- Sample size is an important facet of feasibility
- Evaluation efforts can hinge on the number of observations planned or on the frequency of events to be observed. The less frequently the event occurs, the less feasible the planned metric becomes

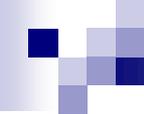
Rank Your Choices on Both Importance and Feasibility

		Feasibility Scale		
		<i>1-Feasible</i>	<i>2-Moderate Effort</i>	<i>3-Not Feasible</i>
Importance Scale	<i>1-Very Important</i>	(1)	(2)	
	<i>2-Moderately Important</i>	(3)	(4)	
	<i>3-Not Important</i>	(5)		



Choose Your Final Metrics

- You now have a list of metrics ranked by importance and feasibility
- Narrow the list down to three to five primary metrics
- Keep a list of secondary metrics that you can use if you have the time/people/financial resources to conduct

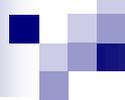


*Developing a plan for evaluating
your Health IT project*

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- Now that you have chosen WHAT you will measure, you need to determine the HOW, WHO, WHEN, of measuring those measures

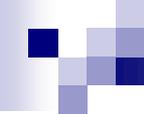
Identify the 'how'

- For each measure consider the following:
 - How will you design your study?
 - What will be your sample size?
 - What will be your control or comparison group?
 - For a qualitative studies will you:
 - Conduct a survey?
 - Conduct focus groups?
 - Interview users?
 - Consider what types of statistical analysis you will perform on your measurements



Identify the 'who' for each metric:

- Who will take the lead on the project?
- Who will take the lead on the data collection?
- Who will analyze the data?
- Who will present the findings?
- Who will take the lead in writing the report/paper?



Determine the 'when'

- When will you target to begin your measurements?
- How long will your collection period last?
- How long will you plan for your analysis phase?
- When will you target completing a report?



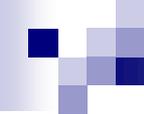
Pull together your plan

- Short Description of the Project
- Goals of the Project
- Questions to be answered by the Evaluation Effort



- **First Measure to be Evaluated - Quantitative**

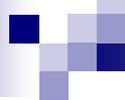
- Overview – General Considerations
- Timeframe
- Study Design/Comparison Group
- Data Collection Plan
- Analysis Plan
- Power/Sample Size Calculations



■ Second Measure to be Evaluated - Qualitative

- Overview – General Considerations
- Timeframe
- Study Design
- Data Collection Plan
- Analysis Plan

■ Subsequent Measures to be Evaluated in Same Format



Statement of Work

- If you are developing a SOW so that others can conduct the work use this plan as your SOW
- You will need to make very clear timelines, deliverables, resources, finances, individuals to be involved
- Someone with intimate knowledge of the goals of the project and evaluation must remain involved in evaluation efforts



Statement of Work

- If your partner in evaluation is responsible for developing the plan your statement of work should still include the measures you want measured
- Asking others to conduct an evaluation without the ongoing involvement of your team is risky

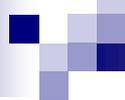


Barriers and Pitfalls to Health IT Evaluation



Common Barriers

- Resistance from those with resources to consider evaluation
- Bringing together evaluators, implementers, technical people
- Limited resources
- Easy to concentrate on implementation, putting evaluation aside
- Balancing operational and evaluation needs can be tough



Common Pitfalls

- Trying to evaluate too many things
- Making assumptions on data sources – you may not be able to get the data back out of your system
- Lack of control group or baseline may make results difficult to interpret
- Failing to adequately plan: People, Money, Space, Time

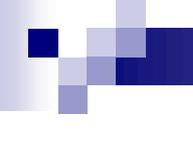


Common Pitfalls

- Failing to define goals
- Not having enough power
- Ignoring the quality of the data
- Confusing institutional goals with evaluation goals



Tools to help you evaluate



The Evaluation Toolkit

- Designed as a workbook to help your team work through a process to determine measures to evaluate
- Example measures
 - By category
 - Relative cost
 - Data source
 - Potential pitfalls
- Example Projects: Pharmacy, Barcoding, ACPOE, Telemedicine



Data Exchange Toolkit

- Similar workbook format, with focus on evaluation of projects involving data exchange
- Data Exchange Metrics
- Data Exchange Examples



Health IT Survey Compendium

- A collection of surveys in the public domain
- Search on:
 - Survey Type
 - Technology
 - Care Setting
 - Respondent Type



Links

- [Evaluation Toolkit](#)
- [Data Exchange Toolkit](#)
- [Health IT Survey Compendium](#)
- [The National Resource Center for Health IT](#)



Thank-You!

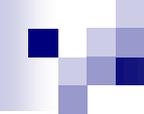
CUSACK-CAITLIN@NORC.ORG



Comments and Recommendations for Future Sessions

- Please send your comments and recommendations for future sessions to the project's e-mail address:

Medicaid-SCHIP-HIT@ahrq.hhs.gov



Project Information

Please send comments and recommendations to:

Medicaid-SCHIP-HIT@ahrq.hhs.gov

or call toll-free:

1-866-253-1627

Medicaid-SCHIP-HIT@ahrq.hhs.gov

<http://healthit.ahrq.gov>