
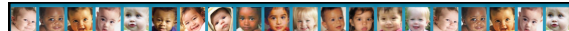


## Webinar 1 of 2

**Reducing Loss to Follow-up after Failure to Pass Newborn Hearing Screening**

*Including Quality Improvement in Your Application* to HRSA-14-006






## Upcoming Webinars

- **Friday, Nov. 15, 2013 at 2:00-3:15 ET:**  
How to include QI in your HRSA proposal
- **Tuesday, Nov. 19, 2013 at 2:30-4:30 ET:**  
Question and answer session

**If you have not already done so, please register for future webinars by going to**


<http://www.infanthearing.org/webinars/qi>





## Questions

Type your questions into the Q & A function in Adobe Connect  
OR  
email [alyson.ward@usu.edu](mailto:alyson.ward@usu.edu)

We will make sure all questions are addressed during one of the webinars






### EXPECTATIONS

**You will be disappointed if you thought these webinars would:**

1. Give you the "plug and play" formula for writing your response to HRSA-14-006
2. Give examples of perfectly written sections to include in your proposal
3. Provide a guarantee that your application to HRSA-14-006 will be funded


“Expectations are resentments in the making. I have learned to have no or low expectations on things that are out of my control (everything). This way, I'm usually pleasantly surprised.”

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## Welcome

**Irene Forsman**  
Program Director  
Newborn Hearing Screening and Intervention  
Health Resources and Services Administration  
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## Agenda

- Where we are and where we are going
- FOA and Improvement Science
- Improvement Context
- Model for Improvement
- Moving from Concept to Practice
- Questions




National CDC Data

- **10% decrease** in Lost-to-follow-up/ Lost-to-documentation! (2009-2011)



National CDC Data

- **10% decrease** in Lost-to-follow-up/ Lost-to-documentation! (2009-2011)
- BUT... **still at 35%**



Project Goal

Get LTFU/LTD **under 20%**  
(**<5% per year**)



Who Am I?




**“Every system is perfectly designed to get the results it gets”**

-Paul Bataldin



Key Elements of **Quality**

- Will to do what it takes to change to a new/improved system
- Ideas on which to base the design of the new/improved system
- Execution of the ideas (know how)





**Have You Heard of...**


- Total Quality Management
- Continuous Quality Improvement
- Six Sigma DMAIC
- Lean
- The Model for Improvement
- Others?



**A Horse of A Different Color**

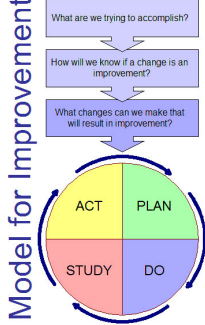

W. Edwards Deming



**Quality Improvement vs. Quality Assurance**




**Model for Improvement**

**What are we trying to accomplish?**

- Aim statement:
  - What?
  - For whom?
  - By when?
  - How much?





<p><b>Aim Statement</b></p> <ul style="list-style-type: none"> <li>• What will you do</li> <li>• How much will you improve</li> <li>• For Who</li> <li>• By When</li> </ul>	<p><b>Smart Goal</b></p> <ul style="list-style-type: none"> <li>• Specific</li> <li>• Measurable</li> <li>• Actionable</li> <li>• Realistic</li> <li>• Timely</li> </ul>
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**Establish Clear Definitions**

- Define the **Who**
  - Exactly who will this work impact
- Define the **What**
  - What do these terms mean specifically for your work
- Ask “**How** might somebody be confused by this statement?”




**Examples of Unclear Definitions**

- Timely completion of the activities
- A complete list
- Positive feedback
- Negative outcome
- Improved communication
- Increased awareness

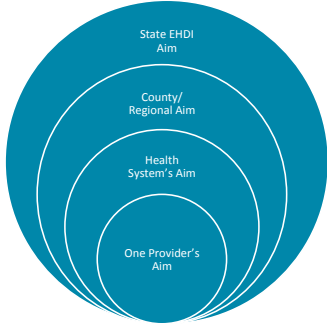




**Establishing the Team’s Aim**

- Involve senior leaders
  - Align aim with strategic goals of the organization and the grant
- Focus on issues that are important to your organization
  - Choose appropriate goals
  - Use your pre-work to guide you




The Aim – A Simple and Powerful Tool

**WI Example: EHDl State Aims**


By April 1, 2012, the Wisconsin Sound Beginnings Program will improve hearing screening, diagnosis and early intervention so that:

- 97% or more of newborns are documented to have received an initial hearing screening by 1 month of age (30 days)
- 90% or more of infants who do not pass their initial screen are documented to have received an audiological evaluation by 3 months of age (91 days).
- 80% or more of children who have a diagnosed permanent hearing loss are documented to have an IFSP date (enrolled in early intervention) by 6 months of age (180 days).



**WI Example: An Introduction to Aspirus Community of Practice**


- **Obstacle identified:** significant no-show rate at the audiology clinics for babies who did not pass newborn screening. Leads to delayed evaluation.
- **Hypothesis:** hospital is depending on families or PCP to schedule follow-up appointment. Follow-up will increase if families are assisted in making the appointment prior to hospital discharge.
- Birth hospital, Audiology clinic and PCP office must all be engaged in improvement planning.



**WI Example: Health System Aim**  
**Aspirus Community of Practice**


Aim Statement: By January 1, 2012 Aspirus Health System will improve the care provided to families who deliver at our hospital by assuring that:

- 99% of well babies are screened before hospital discharge
- 100% of infants who DO NOT PASS and 95% of infants who PASS will have the results reported to and received by PCPs
- 90% of well babies born in the Aspirus Health System who DO NOT PASS their hearing screening receive an audiologic evaluation by 3 months of age (90 days)



**What is HRSA-14-006 trying to accomplish?**

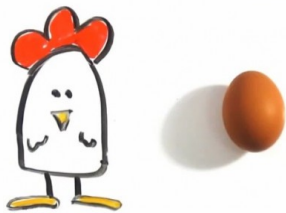

By April 1, 2017, awardees of HRSA-14-006 will utilize quality improvement strategies to improve the number of infants who receive appropriate and timely follow up so that the LTFU/LTD as reported through the CDC annual EHDI survey decreases from a national average of 35% (2011 annual data) to 20% (2016 annual data).



**How Will we Know if a Change is an Improvement?**




*THE measures -OR- changes*


**How Do We Know That a Change is an Improvement?**

- Quality Improvement is about changing and improving care provided to infants and their parents
- It is not about measurement.
- However .....



**Measurement Assumptions**



- The purpose of measurement in QI is for *learning* not judgment
- All measures have limitations, but the limitations do not negate their value
- Measures are one voice of the system. Hearing the voice of the system gives us information on how to act within the system
- Measures tell a story, goals give a reference point



Performance Measurement in 3 Worlds			
Aspect	Improvement	Accountability	Research
<b>Aim</b>	Improve care	Compare, reassure, spur change	New knowledge
<b>Methods Test Observable</b>	Yes	Evaluate current performance	Test blind or controlled
<b>Bias</b>	Accept stable bias	Adjust data to reduce bias	Design to eliminate
<b>Sample Size</b>	Just enough data, small sequential samples	Report 100%	Just in case data
<b>Hypothesis Flexible</b>	Yes. Revised as learn and test	No hypothesis	Fixed hypothesis
<b>How to determine improvement</b>	Run or Shewhart charts	No focus on change	Hypothesis, Statistical tests: F-test, t-test, chi square, p value
<b>Testing Strategy</b>	Small sequential tests	No tests	1 large test
<b>Data confidential</b>	Data used only by those involved in improvement	No subjects. Data is for public	Subjects protected

## Types of Measures

- Outcome Measures
- Process Measures
- Balancing Measures
- Counting Measures


## A Closer Look

**Process Measures**

- Data collection may be time limited
- Are within our control
- Are linked to your ideas (changes)
- Are a means to the ends – not the ends


**Outcome Measures**

- Are patient/family focused
- Reflect how care is experienced differently by a patient/family
- Sometimes it takes longer to move the marker
- Are in your aim!




## Aspirus Measure Examples

- Outcome Measures
  - % of well babies that receive an audiologic evaluation by 3 months of age (90 days).
  - Mean age at evaluation.
- Process Measures
  - Number of babies that did not pass screen
  - Number of babies scheduled for appointment before hospital discharge.
  - Number of babies scheduled that showed for the first appointment.




## Measurement Guidelines

- Need a balanced set of measures to assure that the system is improved.
- These measures should reflect your aim statement & make it specific
- Collaborative and team specific measures
- Measures are used to guide improvement and test changes
- Integrate measurement into daily routine




## Tips for Effective Measurement

1. Plot data over time
2. Seek usefulness – Not perfection
3. Use sampling
4. Integrate measurement into the daily routine
5. Use both qualitative and quantitative data





## Using your Data

- Now that you have collected data it is important to show it off!
- How you graph your data has a major impact on what you can do with it.




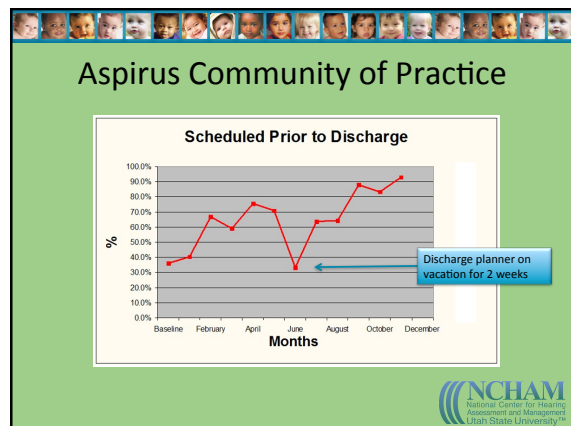
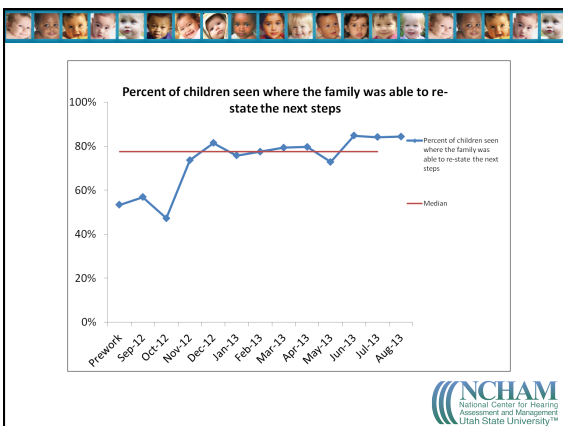
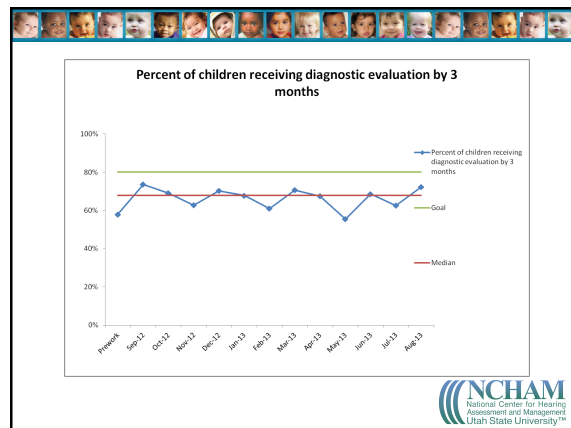
## Run Charts

Run charts are graphs of data over time and are one of the single most important tools in performance improvement.


## Benefits of Run Charts

- They help improvement teams formulate aims by depicting how well (or poorly) a process is performing.
- They help in determining when changes are truly improvements by displaying a pattern of data that you can observe as you make changes.
- They give direction as you work on improvement and information about the value of particular changes.

### Key Elements of Data Collection

- If you aren't using it don't collect it
- Look at your data often – be excited
- Have a measurement “package” – keep it balanced
- Make data collection reasonable/practical
- Give data back to those who give it to you

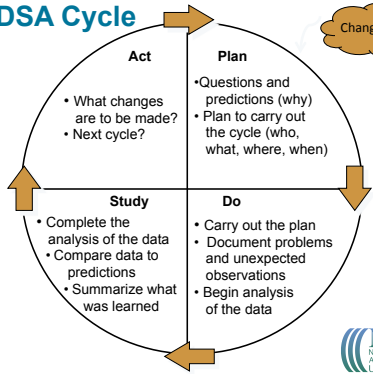



### WHAT CHANGES CAN WE MAKE THAT WILL RESULT IN IMPROVEMENT?



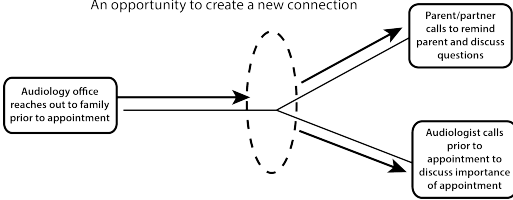




### The PDSA Cycle

### Change Concept: A general notion or approach to change that has been found to be useful in developing specific ideas for changes that lead to improvement.


**Concept**  
An opportunity to create a new connection

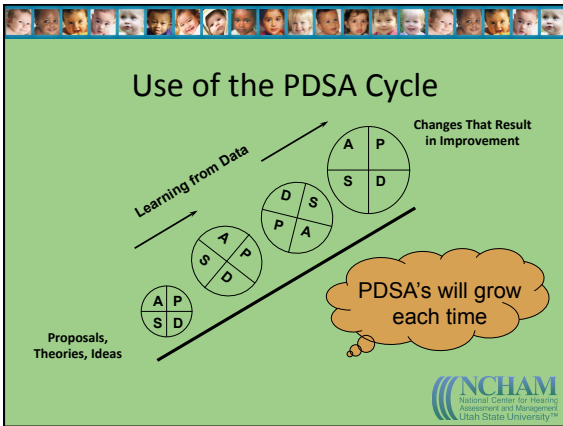
### Previously Tested Strategies or Changes

- Scripting the screener's message to parents
- Using F...
- Ascertain...
- Identify...
- Making hospital...
- Telepho...
- Schedul...
- Streaml...
- Improvi...

## Other Strategies or Change Ideas?







**WI Example: An Introduction to Aspirus Community of Practice**

- **Obstacle identified:** significant no-show rate at the audiology clinics for babies who did not pass newborn screening. Leads to delayed evaluation.
- **Hypothesis:** hospital is depending on families or PCP to schedule follow-up appointment. Follow-up will increase if families are assisted in making the appointment prior to hospital discharge.
- Birth hospital, Audiology clinic and PCP office must all be engaged in improvement planning.

**PDSA #1: PLAN**

To decrease audiology no-show rate and reduce age at evaluation:

- PCP partner will discuss the creation of standing orders that will allow well baby nursing staff to make the follow-up audiology appointment prior to the next team huddle.
- Audiology partner will notify the scheduling staff that the birth hospital will be calling to schedule appointments for babies that refer on the Newborn Hearing Screening.

**PDSA #1: DO / STUDY**

Hospital Results: 3/5 babies were scheduled for appointment before hospital discharge.

**Study Observations:** 2 infants that were not scheduled were weekend discharges and the audiology office was closed. Next PDSA needs to address this issue.

- Appointment was written on the discharge summary. May want to consider a better way to give families the appointment information.

**PDSA #1: DO / STUDY (Continued)**

**PCP Results:** Pending results of PDSA a policy could be changed in favor of standing orders. Peds expressed no concerns with standing orders.

**Audiology Results:** 3/3 families with appointments scheduled showed for the appointment.

**Study Observations:** Scheduler made the wrong kind of appointment. Appointment was written on the discharge summary. May want to consider a better way to give families the appointment info. GBYS Follow-through Card?


**PDSA # 2: PLAN**

- Expand on original PDSA with new plan for weekend discharge.
- Birth hospital will schedule the follow-up appointment for the next 5 babies that refer on the Newborn Hearing Screening and the next baby that refers and is discharged on a weekend.
- Audiologists will remind schedulers to use 30 minute appointment slot for infants who refer and will hold 1 Friday morning slot for weekend discharges.

**PDSA #2: DO / STUDY**

- Birth hospital results: 7/7 babies scheduled. DNP Results added to the discharge summary and appointment written on GBYS Follow-through Card.
- 2/7 were weekend discharges. Friday appointment slots assigned. Appointment referral faxed Monday morning by BU manager to Audiology schedulers. Both confirmations were faxed back.
- 7/7 babies showed for their appointment. Schedulers reported the weekend protocol worked smoothly without much impact on their time.

**Recommend expansion and continued testing!**



**SUCCESS!**




**Implemented and tested throughout the Aspirus system**



**Why Test?**

- Increase the belief that the change will result in improvement
- Predict how much improvement can be expected from the change
- Learn how to adapt the change to conditions in the local environment
- Evaluate costs and side-effects of the change
- Minimize resistance upon implementation




**Time Frame – Cut it in Half**

***If you think you can do it in a quarter...***


***What can you do in a month?***

***What can you do in two weeks?***

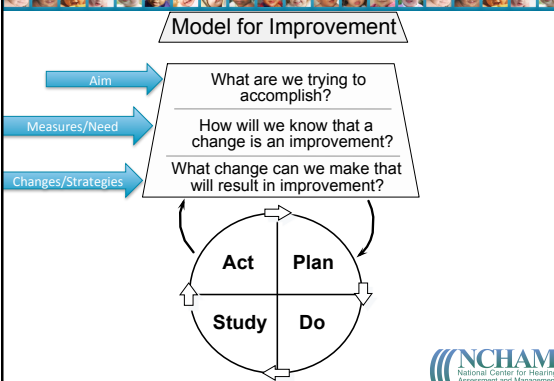



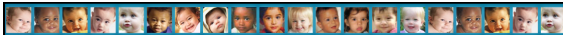
**Successful Cycles to Test Changes**

- Plan multiple cycles for a test of a change
- Think a couple of cycles ahead
- Scale down size of test (# of patients, location)
- Test with volunteers
- Do not try to get buy-in, consensus, etc.
- Be innovative to make test feasible
- Collect useful data during each test
- Test over a wide range of conditions



**Model for Improvement**

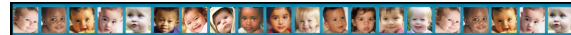







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