QI: Involving the Primary Care Provider in Improving Rescreen Rates

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ABSTRACT

EHDI best practice guidelines state that infants should complete the newborn hearing screening (NHS) process by one month of age. In North Carolina, NHS is a two-stage process. Infants who do not pass the inpatient screen are referred for a follow-up outpatient rescreen, unless a direct referral for diagnostic evaluation is indicated due to high risk. In 2015, 2,577 (89%) infants who referred for a rescreen completed one. Of those rescreened, 611 infants (23.7%) did not complete the rescreen by one month of age. Also, 307 infants never received the required rescreen. Based on these findings, the NC-EHDI State Quality Improvement (QI) team initiated a QI test of change in 2016 aimed at improving rescreen rates. Baseline data (random sample of 25 infants) showed that 33% of infants that did not pass the inpatient screen were rescreened by one month of age and 45% never received an outpatient rescreen. If an infant did not pass the inpatient hearing screen, the Follow-up Coordinator called the primary care provider before the infant's two-week appointment to notify them that the infant needed a rescreen by one month of age and encouraged the provider to talk with the family about the importance of having the rescreen and making sure the family had an appointment. The Follow-up Coordinator provided information on where to have the infant rescreened, if needed. After three Plan-Do-Study-Act (PDSA) cycles, the percentage of infants rescreened by one month of age increased to 80%. This procedural change also reduced the percentage of babies lost to follow-up at the rescreen to 5%. Based on the data findings, the new procedure was spread statewide in 2017. This presentation will examine the QI test of change including the aim statement, the PDSA cycles, data collected, lessons learned and next steps.

1-3-6

Screening – Diagnosis – Intervention

- Every newborn is screened prior to 1 month of age;

  In North Carolina, newborn hearing screening is a two-stage process. Infants who do not pass the inpatient screen are referred for a follow-up outpatient rescreen, unless a direct referral for diagnostic evaluation is indicated due to high risk.

- infants not passing the screening receive a diagnostic evaluation before 3 months of age;

- Infants found to have hearing loss are enrolled in early intervention services by 6 months of age.

Problem – 2015 Statewide Data

- 67.4% of infants that referred on their initial hearing screening completed a rescreen by one month of age. 20% completed the rescreen after one month of age.

- 340 infants (11.7%) never received the required rescreen and were considered lost to follow-up (LTFU).

- Of those rescreened, 76.3% completed the rescreen by one month of age. 23.7% (610 infants) DID NOT complete the rescreen by one month of age.

The Model for Improvement
Continuous Quality Improvement (CQI) Methodology

Aim: What are we trying to accomplish? Why is it important? Who is the target audience? When will the project be done? How will the project be carried out? What are the measurable goals?

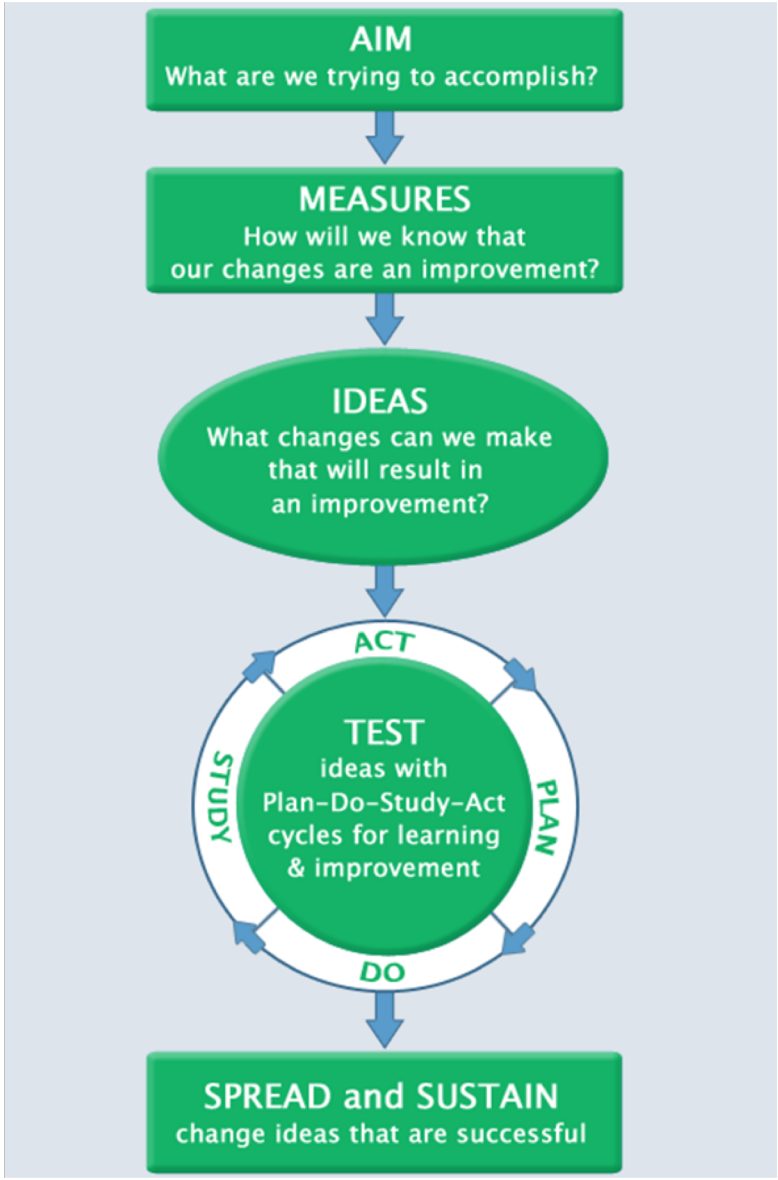
Measure: How will we know that the changes are an improvement? What are the outcome measures? Process measures? Create a measurement plan.

Change Ideas: What changes can be made that will result in an improvement?

Test:

- **Plan** - Plan the test, including a plan for collecting data.
- **Do** - Try out the test on a small scale.
- **Study** - Set aside time to analyze the data and study the results.
- **Act** - Refine the change, based on what was learned from the test.

Spread/Sustain change ideas that are successful.



Source: Population Health Improvement Partners
www.improvepartners.org

Aim Statement

To increase the percentage of babies screened by one month of age from 36% to 85% and decrease the percentage of babies LTFU at the rescreen step. This will be accomplished by contacting the infant's primary care provider (PCP) soon after the infant is discharged to alert them to the need for and the importance of completing the rescreen by one month of age.

Problem - Baseline 2017 Data

- Random sample of 25 infants that did not pass (refer) on initial hearing screening.
- 36% of infants were rescreened by one month of age.
- 14% of infants were rescreened after one month of age.
- 50% never received an outpatient rescreen (LTFU).

Note: data is slightly different from abstract data due to additional data cleaning.

Measures

- Document contact with correct PCP
- Hearing Link data – date of rescreen
- Hearing Link data - no documented rescreen (LTFU)
- Number of days between date of birth and rescreen (calculate rescreen < 30 days, >= 30 days)

PLAN

- Call lists of infants that did not pass (refer) on the initial hearing screening generated each morning (Monday-Friday). Monday's list includes weekend births.

- Contact PCPs of infants before their 2-week appointment. Educate PCP about EHDI goals.

- Request that PCP talk to parents (at 2 week appointment or call parents if appointment already occurred) about the importance of scheduling and keeping the rescreen appointment. Assist with scheduling rescreen appointment or identifying a location for the rescreen, if necessary.

- Standardize protocol and centralize calls.

DO

Cycle 1: Called PCP only (1 week)

Cycle 2: Called PCP, if not correct, call birth hospital to obtain correct PCP and baby's name (1 week)

Cycle 3: Called PCP nurse triage line/left message. Requested callback within 48 hours. (1 week)

Cycle 4 - SPREAD: Called PCP, if not correct, call birth hospital to obtain correct PCP and baby's name. Added newborn hearing screening education to PCP Script. If unable to identify correct PCP, EHDI Consultant was notified so additional tracking could begin right away. (5 weeks)

Collected measures, recorded notes and updated Hearing Link daily.

STUDY

Summarize PDSA Cycle Data

Outcome	Baseline		PDSA1		PDSA2		PDSA3		Sustain	
	N	%	N	%	N	%	N	%	N	%
Rescreen < 30 days	8	36.4%	15	68.2%	49	80.3%	28	73.7%	208	77.3%
Rescreen >= 30 days	3	13.6%	6	27.3%	15	24.6%	3	7.9%	23	8.6%
No rescreen (LTFU)	11	50.0%	2	9.1%	5	8.2%	7	18.4%	38	14.1%

Table 1

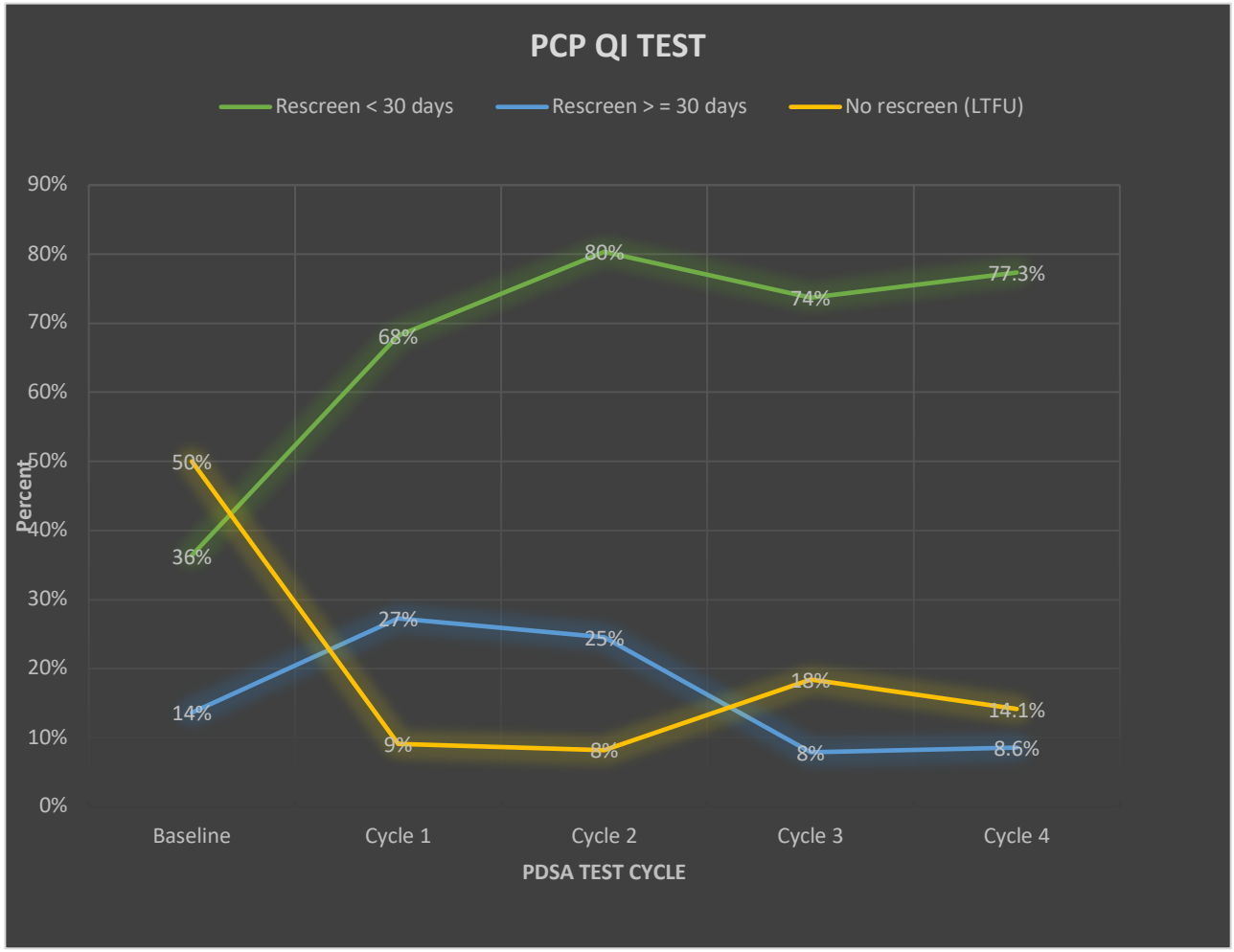

PCP QI TEST
Rescreen < 30 days
Rescreen > = 30 days
No rescreen (LTFU)
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent
36%
68%
80%
74%
77.3%
14%
27%
25%
8%
8.6%
50%
9%
8%
18%
14.1%
Baseline
Cycle 1
Cycle 2
Cycle 3
Cycle 4
PDSA TEST CYCLE

Chart 1

Analyze PDSA test data

- Communicating with the PCP soon after an infant refers on their initial hearing screening results in more babies getting their hearing rescreen completed by one month of age and less babies being LTFU.
  - Overall, there was a 112% increase in the percentage of infants rescreened by one month of age.
  - Of those rescreened, there was a 57.8% decrease in the percentage of babies that did not complete the rescreen by one month of age.
  - The percentage of babies LTFU decreased 72% during this test.

ACT

- Based on data analysis from 3 PDSA cycles, we decided to spread and sustain this improvement change.
- Began August 16, 2017.
- Will continue to collect data and evaluate on a regular basis.

2015 State Data compared to Cycle 4 Data

	2015 Statewide Data		Cycle 4 (Sustain)		% Change
	#	%	#	%	
infants refer for rescreen	2916		269		
infants had a rescreen	2576	88.3%	231	85.9%	-2.7%
infants LTFU	340	11.7%	38	14.1%	20.5%
infants refer for rescreen	2916		269		
Rescreen <30 days	1966	67.4%	208	77.3%	14.7%
Rescreen >= 30 days	610	20.9%	23	8.6%	-58.6%
LTFU	340	11.7%	38	14.1%	20.5%
Of those infants rescreened:	2576		231		
Rescreen < 30 days	1966	76.3%	208	90.0%	18.0%
Rescreen >= 30 days	610	23.7%	23	10.0%	-57.8%

Table 2

Table 2 shows that there was not a large change in the overall rescreen rate but there was significant improvement in the number of babies rescreened by one month of age.

Lessons Learned

- Knowing the infant's name and having the correct PCP on initial call led to greater success.
- Notifying the birth hospital about the QI test was essential for obtaining information. HIPAA concerns can delay getting the baby's name and the PCP information.
- Hospitals that conduct their own rescreens had better results.
- Some hospitals were not scheduling rescreen appointment before one month of age. Technical assistance will be provided.
- Leaving a message led to longer wait times and unnecessary call backs. Talking directly with the PCP office was more efficient and successful.
- Having a standardized script and protocol made for an efficient call and ensured that all PCPs received the same information.
- Inconsistencies in the Hearing Link data input slows the tracking down process.

Next Steps

- Send EHDI fact sheet/Clinical Management Tool to PCP office when only a message is left.
- Conduct additional Hearing Link user training and provide technical assistance on use of correct screening outcome codes, entering baby's name and identifying correct PCP before discharge.
- Continue to educate stakeholders about the PCP calls to alleviate HIPAA concerns.
- Continue to monitor and evaluate rescreen data.

HRSA Disclaimer

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