Increasing Data Quality and Program Evaluation Capacity

EHDI Conference
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Meuy Swafford, Data Quality Coordinator
Objectives

Show participants ways to:

- Utilize a data quality coordinator and/or program evaluator within an EHDI Program
- Develop an EHDI evaluation plan
- Assess data quality and make recommendations based on data
- Integrate data from two hearing screening data systems during a transition period
EHDI “Extreme Home Makeover” increased data and tracking capabilities. Two additional staff members were added to the team to increase data and evaluation capacity.
Data Quality Coordinator & Evaluator Roles

Data Quality Coordinator

- Implement data management activities
- Assist in system developments
- Develop reports/queries

Evaluator

- Refine and track evaluation plan
- Link with Assessment and Evaluation Unit
- Assist with grant applications and reports
- Monitor implementation and trainings

- Data quality control
- Updates to advisory board
- CDC reports
- Data driven recommendations
Data Management Activities

- Data quality assessments
  - Identify problems and solutions for each milestone
- Data quality checks
  - Monitor data for consistency
  - Assure accuracy
  - Validate through Unit and Regression Testing
- Data dictionary
Integrating systems

• Benefits
  • Data warehouse
    • Historical data, supports decisions
  • Operation data stores (ODS)
    • Near real time data
    • Integrate data from multiple data systems
    • Link data for 1, 3, and 6 milestone

• Challenges
  • Cross-system consistency
  • Duplicated client data
  • Unable to link data between systems
Emails will be sent to Early Intervention to notify of referred babies. EI will access the system and view only those babies referred.
EHDI ODS

- Customize Reports/Queries
- Letter Generation for Follow-up
- Program Evaluation
- Feed into other data systems
Customize Reports/Queries

- State
  - CDC Survey
  - Scorecard
- Hospital
  - Screening rates
  - Diagnostic follow-up/loss to follow-up rates
  - Summary reports
  - Time: Max, Min, and average time completion for each milestone.
Loss to Follow-up Report

- Birth Facility/Geographical Region
- Placement of Diagnostic Equipments

<table>
<thead>
<tr>
<th>Name</th>
<th>Medical ID</th>
<th>DOB</th>
<th>Inpatient</th>
<th>Outpatient</th>
<th>DX</th>
<th>DX Test Facility</th>
<th># of Days between</th>
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## Hospital Summary Report

- Aggregate data
- Numbers and percentages

### OVERS Hospital Summary Report - Goals Met

**Birth Date From:** 7/1/2010 **To:** 12/31/2010
**Birth Facility:**

### Summary - Goals Met

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Screened</th>
<th>Total Not Screened</th>
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<tbody>
<tr>
<td>Total Clients</td>
<td>2873</td>
<td></td>
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<tr>
<td>Total Screened</td>
<td>2804</td>
<td>69</td>
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<tr>
<td>Pass</td>
<td>2760</td>
<td>0</td>
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<tr>
<td>Refer</td>
<td>44</td>
<td>58</td>
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<tr>
<td>Screened by 1M</td>
<td>2784</td>
<td>8</td>
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<tr>
<td>Refused</td>
<td></td>
<td>1</td>
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<tr>
<td>Unable to Test</td>
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</table>

### Goals: Screened by 1 Month

- 2007 JCIH Position Statement - 95%
- CDC National Goals - 98%
- State Goal by 2015 - 100%
Letter Module

- Individual/massing mailing
- Track follow-up activities
  - Out-of-hospital births (OOH)
  - “Referred” for further audiological evaluation

![Referral Letter](image_url)
Data Quality Coordinator & Evaluator Roles

Data Quality Coordinator
- Implement data management
- Assist in system developments
- Develop reports/queries

Evaluator
- Evaluation plan
- Link with Assessment and Evaluation Unit
- Assist with grant applications and reports
- Monitor implementation and trainings

- Data quality control
- Updates to advisory board
- CDC reports
- Data driven recommendations
Evaluator Role: Refine and track evaluation plan

- Staff person dedicated to evaluation plan
  - Developing and Refining
  - Tracking
  - Reporting: Formal & Informal
<table>
<thead>
<tr>
<th>Process Measure(s)</th>
<th>Grant Target(s)</th>
<th>Data to Collect</th>
<th>Data Collection Methods/Source</th>
<th>Frequency of Reporting/Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The EI status for all infants with a diagnosed hearing loss.</td>
<td>100% of infants with a hearing loss will have a known EI status by 2012. (HRSA)</td>
<td>For all infants with a diagnosed hearing loss: EI status- enrolled, not enrolled, or LFU. If not enrolled, reason not enrolled.</td>
<td>-Audiology assessments -EI referral and enrollment data</td>
<td>Monthly</td>
</tr>
<tr>
<td>2. The number and type of LFU cases between the hearing screening and the audiology assessment.</td>
<td></td>
<td>For all infants with a failed hearing screening: track their geographic location and reason for the lack of assessment.</td>
<td>-Screening data -Audiology assessments</td>
<td>Monthly</td>
</tr>
<tr>
<td>3. The number and type of LFU cases between the audiology assessment and EI enrollment.</td>
<td></td>
<td>For all infants with a diagnosed hearing loss: track their EI status (see above), their geographic location and the reason for the lack of EI enrollment.</td>
<td>-Audiology assessments -EI referral and enrollment data</td>
<td>Monthly</td>
</tr>
<tr>
<td>4. The ongoing success rate for each follow-up method.</td>
<td></td>
<td>Develop a list of follow-up methods. Track the success rate of each method on a monthly basis (% of follow-ups that result in the recommended action being taken).</td>
<td>Tracking log for each follow-up method. Audiology assessments and EI records.</td>
<td>Monthly</td>
</tr>
<tr>
<td>5. The average length of time for completion of each milestone (screening, assessment, and enrollment) among cases in which these milestones are completed.</td>
<td></td>
<td>For all infants who were screened- what is the average length of time between birth and screening? For all infants who received a diagnostic assessment, what is the average length of time between screening and assessment? For all infants who enroll in EI, what is the average length of time between assessment and enrollment?</td>
<td>-Screening, assessment, and enrollment data</td>
<td></td>
</tr>
</tbody>
</table>
Evaluator Role: Evaluation plan reports

774 births with no screening information:

- 332 from out-of-hospital births
- 213 from EHDI hospitals with >5% LFU
- 154 from EHDI hospitals with <5% LFU
- 75 from volunteer and non-mandated screening hospitals

[Pie chart showing the distribution of births by LFU category: OOH, EHDI >5%, EHDI <5%, Non-EHDI]
Evaluator Role: Link to Assmt. and Evaluation Unit

- Evaluator works within a larger “Assessment and Evaluation” Unit
- Collaboration around evaluation methods and strategies
- Connections with Vital Stats and PRAMS staff
- Connections with other MCH programs
Evaluator Role: Assist with Grants

- Refine evaluation plans for specific grants
- Write evaluation section of grant application (15% of upcoming CDC grant)
- Write evaluation section of grant reports
Evaluator Role: Monitor Implementation and Trainings

- Survey training participants for knowledge gains
Evaluator Role: Monitor Implementation and Trainings

- Monitor transition to new screening and audiology reporting system

![Bar chart showing the percentage of survey respondents experiencing different levels of difficulty with the transition to OVERS and using OVERS.](chart)

- The transition to OVERS was... 83.9%
  - More difficult than expected: 4.8%
  - About as difficult as expected: 11.3%
  - Easier than expected: 83.9%

- Using OVERS has been... 85.5%
  - More difficult than expected: 3.2%
  - About as difficult as expected: 11.3%
  - Easier than expected: 85.5%
Data/Evaluation Team: Shared Roles

- Quality control: Checks and balances
- CDC reporting
- Updates to advisory board
- Data-driven recommendations
Data/Evaluation Team: Data-driven recommendations

1. Increase focus on OOH births and follow-up methods
2. Increased focus on clarity and follow-up for diagnostic assessments
3. Electronic Early Intervention referrals

Both a data coordinator and an evaluator can be useful in an EHDI program!
Thank You!

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