AUCD/CDC RTOI:
Helping Family Physicians Improve Developmental Screening

Laura McGuinn, MD
Developmental-Behavioral Pediatrician
Assistant Professor of Pediatrics

Dee Kessler, BS
Practice Enhancement Assistant

University of OK Health Sciences Center, Oklahoma City, OK

CDC NCBDDD
Jan-30-2010
PROJECT OBJECTIVES

1. Improve developmental surveillance and screening by PCPs
2. Enhance communication between PCPs and Early Intervention
3. Increase referrals to Early Intervention
OUTLINE

- BACKGROUND
  - AAP Screening guidelines
  - Evidence re: current screening practices

- METHODS
  - Phase I-Needs Assessment
  - Phase II-In office QI intervention

- PHASE I RESULTS
  - Needs Assessment responses

- PHASE II RESULTS
  - Practice demographics
  - Preliminary chart audit data
OUTLINE

• AAP Screening guidelines
• Evidence re: current screening practices

PHASE I
• Needs Assessment responses

PHASE II
• Practice demographics
• Preliminary chart audit data
AAP recommends

- Developmental “surveillance” at all well-child visits
- Developmental screening tool at 9, 18, and 30 (or 24) months
- Autism screening tool at 18 and 24 months

1. AAP guidelines
2. Autism screening guidelines
Developmental Surveillance
Developmental (and Autism) Screening

9 months

18 months (including ASD screen)

24 or 30 months (including ASD screen)
Family Physicians Have Lower Rates of Dev Screening Knowledge/Skills

- Greater percentage of FPs:3,4
  - Believe autism cannot be diagnosed <18 months
  - Advocate wait-and-see approach
  - Do not know about EI or have misperceptions
  - Rely only on informal checklists rather than structured tools
  - Are unaware of available validated parent-completed screening instruments
- Problems are not entirely unique to FPs
Most change strategies **used alone** have limited effect sizes on improving physician practice and patient outcomes.
Solberg’s Conceptual Framework for Practice Improvement

\[
\text{Priority} \times \text{Change Process Capability} \times \text{Care Process Content} = \text{Quality Improvement}
\]
We have enough to do already!
I can’t add ONE MORE THING!!!!!!
Poorly Integrated Systems-Silos

Public and Private Health Care
- Hospitals/Long term
- Mental Health Care
- Primary Care Offices

Community Services
- Early Intervention
- Health Dept
- Transportation
Expecting practices to solve the silo problem unilaterally is untenable.
# OUTLINE

<table>
<thead>
<tr>
<th>BACKGROUND</th>
<th>METHODS</th>
<th>PHASE I RESULTS</th>
<th>PHASE II RESULTS</th>
</tr>
</thead>
</table>
| • AAP Screening guidelines  
• Evidence re: current screening practices | • Phase I-Needs Assessment  
• Phase II-In office QI intervention | • Needs Assessment responses | • Practice demographics  
• Preliminary chart audit data |
<table>
<thead>
<tr>
<th></th>
<th>Phase I (Dec ‘08 to Dec ’09)</th>
<th>Phase II (Mar ‘09 to Nov ‘10)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Summary</strong></td>
<td>Needs Assessment</td>
<td>In-Office QI (quasi-experimental)</td>
</tr>
<tr>
<td><strong>Participants</strong></td>
<td>OK-PRN* members</td>
<td>12 FPs in a rural county**</td>
</tr>
<tr>
<td><strong>Recruitment</strong></td>
<td>Listserve Announcement/Emails/Faxes/Calls</td>
<td>Word of mouth thru other projects</td>
</tr>
</tbody>
</table>
| **Strategies**       | Online Questionnaire re: knowledge, beliefs, barriers, current practices | • Academic detailing  
                        |                                                  | • Pre/Post Chart audit/feedback  
                        |                                                  | • Practice facilitation  
                        |                                                  | • Care coordination  
                        |                                                  | • HIT support  
                        |                                                  | • Local Learning Collaboratives                  |

*OK-PRN-OK Physician Resource & Research Network (~230 FPs across state)

**Original plan (see changes in later slides)
Needs Assessment

- **Purpose:** Use results to
  - Tailor content of educational materials
  - Raise FPs’ awareness
  - Advertise in-office phase

- **Methods**
  - Developed & revised questionnaire re: FP’s screening & referral to EI/ECE
  - Recruited from ~200 FP members of OK-PRN with Listserve Announcements/Emails/Faxes/Calls
How our methods relate to Solberg’s Change Theory

Priority

Change Process Capability

Care Process Content

Academic Detailing
Audit/Feedback
Practice Facilitation
Local Learning Collaboratives
HIT Support
Academic Detailing

- **WHO:**
  - University content experts (DB pediatrician & FP)

- **WHEN/HOW:**
  - Physician-to-physician recruitment call
  - Baseline visit to offices in person

- **WHAT:**
  - Present guidelines, payers' policies, exemplar practices
  - Introduce Practice Enhancement Assistant (“PEA”)
  - Sign business associate agreements
Audit/Feedback

- **WHO:** PEA
- **WHEN:** Baseline and 9 months
- **HOW:**
  - PEA (or office staff member) pulls charts
  - PEA audits charts (~1-1 ½ days), deidentifies data
  - Project staff compiles data; feeds back to office
- **WHY:**
  - QI is not incentivized-extra data collection unrealistic
  - Offices often lack QI skills
  - Personalizes need for change
Practice Facilitation

- **WHO:** PEA
- **WHEN:** Ongoing (# visits varies widely between practices)
- **HOW:**
  - PEA schedules with office staff
  - PEA builds “back door access” relationships to
    - Understand office microsystem (barriers and facilitators to change)
    - Be credible to use motivational interviewing /adult learning theory-based techniques to foster change
- **WHY:**
  - Objective observer can identify resistance to change areas
  - Translating change skills to office gradually = sustainability
Care Coordination

- WHO: Community Care Coordinator (in another project)
- WHEN: Ongoing (# of visits varies between practices)
- HOW:
  - Coordinator is shared between practices
  - Like PEAs, initial task is trust/relationship building
- WHY:
  - Medical homes tasked with this but lack the resources
  - Daunting task for offices to keep up with ever-changing community resources
HIT Support

- **WHO:** PI and PEA
- **HOW:**
  - Helping implement IT resources (e.g. EHR-, web-, or palm-pilot-versions of DB screening tools, etc.)
  - Building OK mirror site [www.medhomeportal.org](http://www.medhomeportal.org)
  - Creating 2-way communication process (fax-back referral form and “Doc2Doc”)¹²
  - Giving access to OK-PRN’s list-serve discussions
Family Advisory*

- WHO: Families from each practice
- WHEN/WHERE:
  - Ongoing (# of visits will vary between practices)
  - Small group (5) in each office, county-wide meeting
- HOW:
  - County Coordinator and PEA will assist practices to form groups, run meetings
- WHY:
  - Novel to most of the practices, parent-perspective often eye-opening

* not started
Local Learning Collaboratives

- Project staff (PI and PEA) organized monthly to every-other monthly meetings for all participating practitioners to
  - Meet each other
  - Learn process strategies from each other
  - Determine priorities for shared resources
  - Collaboratively design in office QI priorities
OUTLINE

BACKGROUND
- AAP Screening guidelines
- Evidence re: current screening practices

METHODS
- Phase I-Needs Assessment
- Phase II-In office QI intervention

PHASE I RESULTS
- Needs Assessment results

PHASE II RESULTS
- Practice demographics
- Preliminary chart audit data
## Needs Assessment Results

<table>
<thead>
<tr>
<th>Description</th>
<th>N or %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response Rate (96/161)</td>
<td>59.6%</td>
</tr>
<tr>
<td>Total OK-PRN Listserve Members</td>
<td>161</td>
</tr>
<tr>
<td>Total responses</td>
<td>96</td>
</tr>
<tr>
<td>FPs who do not see children under 3</td>
<td>44/96</td>
</tr>
<tr>
<td>Questionnaires with large amount of missing data</td>
<td>2/96</td>
</tr>
<tr>
<td>Questionnaires analyzed</td>
<td>50</td>
</tr>
</tbody>
</table>
## Needs Assessment Results

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>37</td>
<td>73.1</td>
</tr>
<tr>
<td>Male</td>
<td>13</td>
<td>26.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age (yrs)</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 – 40</td>
<td>13</td>
<td>25.8</td>
</tr>
<tr>
<td>41 – 50</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>51 – 60</td>
<td>20</td>
<td>39.3</td>
</tr>
<tr>
<td>61 – 70</td>
<td>7</td>
<td>14.2</td>
</tr>
<tr>
<td>71 – 90</td>
<td>1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specialty</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>FP</td>
<td>42</td>
<td>81.8</td>
</tr>
<tr>
<td>IM</td>
<td>3</td>
<td>6.7</td>
</tr>
<tr>
<td>Peds</td>
<td>3</td>
<td>6.7</td>
</tr>
<tr>
<td>Med-Peds</td>
<td>2</td>
<td>4.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>APRN</td>
<td>2</td>
<td>4.6</td>
</tr>
<tr>
<td>DO</td>
<td>4</td>
<td>8.5</td>
</tr>
<tr>
<td>MD</td>
<td>42</td>
<td>81.5</td>
</tr>
<tr>
<td>PA</td>
<td>1</td>
<td>2.7</td>
</tr>
<tr>
<td>Other *</td>
<td>1</td>
<td>2.7</td>
</tr>
</tbody>
</table>

* MBA, MPH, PhD, MS/MA

<table>
<thead>
<tr>
<th>Setting</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>Clinic</td>
<td>36</td>
<td>72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suburban</td>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td>Urban</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Rural</td>
<td>14</td>
<td>29</td>
</tr>
</tbody>
</table>
Needs Assessment Results

Strategies Used to Screen

- History/Physical: 94.2%
- Informal checklist: 13.4%
- Ages & Stages: 17.3%
- Other (Denver, PEDS, etc.): 9.6%
- MCHAT: 36.5%
- MCHAT f/u: 1.9%
### Needs Assessment Results - Beliefs:

<table>
<thead>
<tr>
<th>Agree or Strongly Agree</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCPs receive sufficient training to ID kids 0-5 with:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developmental delay</td>
<td>19</td>
<td>36.5</td>
</tr>
<tr>
<td>• Autism</td>
<td>12</td>
<td>23.1</td>
</tr>
<tr>
<td><strong>PCPs should be expected to ID kids 0-5 with:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developmental delay</td>
<td>37</td>
<td>71.2</td>
</tr>
<tr>
<td>• Autism</td>
<td>36</td>
<td>69.3</td>
</tr>
<tr>
<td><strong>Early ID is important as earlier intervention = better outcomes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developmental delay</td>
<td>37</td>
<td>71.1</td>
</tr>
<tr>
<td>• Autism</td>
<td>34</td>
<td>65.3</td>
</tr>
<tr>
<td><strong>Strategies I now use allow me to recognize __ as early as possible</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Developmental delay</td>
<td>22</td>
<td>42.3</td>
</tr>
<tr>
<td>• Autism</td>
<td>11</td>
<td>21.1</td>
</tr>
</tbody>
</table>
Needs Assessment Results

Percent who *Agree or Strongly Agree* that factor is a barrier to use of standardized screening tool

- Using them increases visit length
- Too much staff time
- Insurance doesn't reimburse use
- Frustrate parents
- No tools feasible for PCPs
- Parent responses unreliable

Percent
Needs Assessment Results

- Routinely refer to SoonerStart EI
- Routinely refer to Child Guidance
Needs Assessment Results

Reasons not referring to Early Intervention/Child Guidance

- Do not receive feedback when I refer pts
- Wait list too long
- Families have had bad experiences
- Referring makes families leave practice
- Not available in our area
- Program too expensive for pts
- Child must have DX first
- Program not medically modeled

SoonerStart El
Child Guidance
BACKGROUND

- AAP Screening guidelines
- Evidence re: current screening practices

METHODS

- Phase I-Needs Assessment
- Phase II-In office QI intervention

PHASE I RESULTS

- Needs Assessment responses

PHASE II RESULTS

- Practice demographics
- Preliminary chart audit data
Practice Locations Relative to Population Centers

**Original Rural County**
Canadian County
(2 solo FPs, 1 FP group, 1 NP grp)

**Additional Rural Counties**
Garfield (1 solo FP, 1 Pedi group)
Logan (1 Med-Peds group)
Grady (3 FPs)
Murray (1 FP group)
Jackson (1 Pedi group)

**Main Population Centers**
Oklahoma County (1 FP group)
Tulsa County (none)
<table>
<thead>
<tr>
<th>Data Collection Proceeding</th>
<th>Type</th>
<th>County</th>
<th>Specialty</th>
<th>Recruited</th>
<th>Pre-Data</th>
<th>Post/Int-Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>Rural</td>
<td>Canadian</td>
<td>FM</td>
<td>Dec ‘08</td>
<td>Dec ‘08</td>
<td>Aug ‘09 (post)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canadian</td>
<td>FM</td>
<td>March ‘09</td>
<td>June ‘09</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Garfield</td>
<td>Peds</td>
<td>April ‘09</td>
<td>June ‘09</td>
<td>Jan ‘10 (int)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Logan</td>
<td>Med-Peds</td>
<td>May ‘09</td>
<td>Aug ‘09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>Oklahoma</td>
<td>FM</td>
<td>Aug ‘09</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Collection Beginning</th>
<th>Type</th>
<th>County</th>
<th>Specialty</th>
<th>Recruited</th>
<th>Pre-Data</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>Rural</td>
<td>Garfield</td>
<td>FM</td>
<td>March ‘09</td>
<td>Sep ‘09</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Canadian</td>
<td>FM (NPs)</td>
<td>May ‘09</td>
<td>Delayed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Murray</td>
<td>FM</td>
<td>Nov ‘09</td>
<td>Feb ‘10</td>
<td>planned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jackson</td>
<td>Peds</td>
<td>Dec ‘09</td>
<td>Jan ‘10</td>
<td>partial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jackson</td>
<td>Peds (NP)</td>
<td>Dec ‘09</td>
<td>Jan ‘10</td>
<td>partial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grady</td>
<td>FM</td>
<td>Dec ‘09</td>
<td>Jan ‘10</td>
<td>partial</td>
</tr>
</tbody>
</table>

Practices and Timeline
All but one practice at baseline was adherent with AAP screening guidelines

Preliminary post results from 2 practices point towards intervention increasing use of standardized tools according to AAP guidelines
Summary

- 2 year project – Oct 2008 through Nov 2010
- Involves 12 practices
- Lessons learned:
  - Recruiting only family medicine in single county has been challenging
  - Plan longer period for recruitment (EHR, flu season, employee turnover, etc.)
  - May need >2 people to accomplish scope of work
References


QUESTIONS?