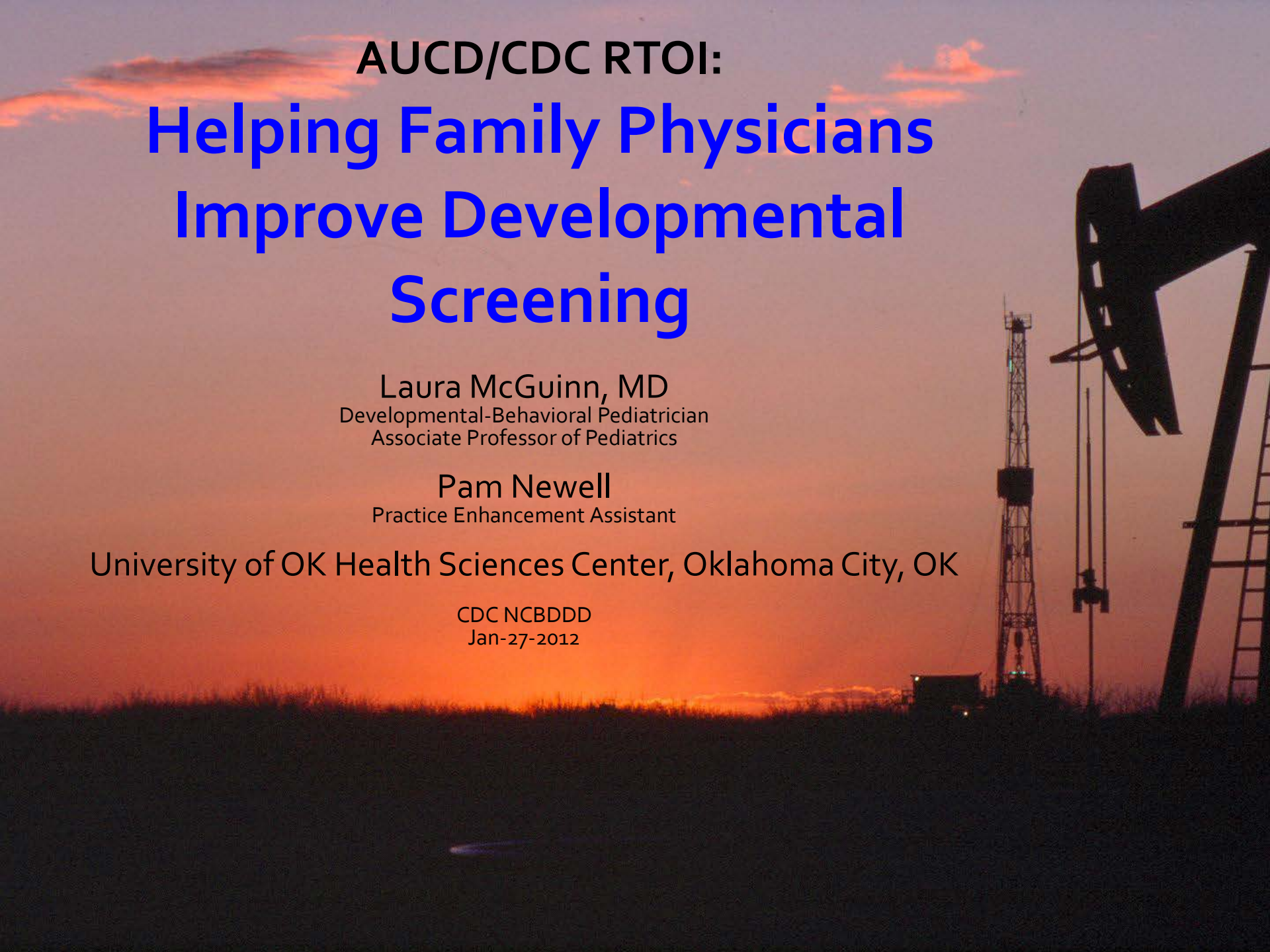

# AUCD/CDC RTOI:

# Helping Family Physicians Improve Developmental Screening


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Practice Enhancement Assistant

University of OK Health Sciences Center, Oklahoma City, OK


CDC NCBDDD
Jan-27-2012

# PROJECT OBJECTIVES

Improve developmental surveillance and screening by PCPs

Enhance communication between PCPs and Early Intervention

Increase referrals to Early Intervention

# Background

- Act Early Campaign Analysis
  - FPs reported less knowledge/skills re: developmt'l screening/referral[3]
- Many children in rural areas see FPs
- Traditional change strategies have limited impact on physician behavior [6-11]
- Solberg's theory of practice change points to multifaceted change strategy[5]

# FPs' Developmental Screening Knowledge/Strategies

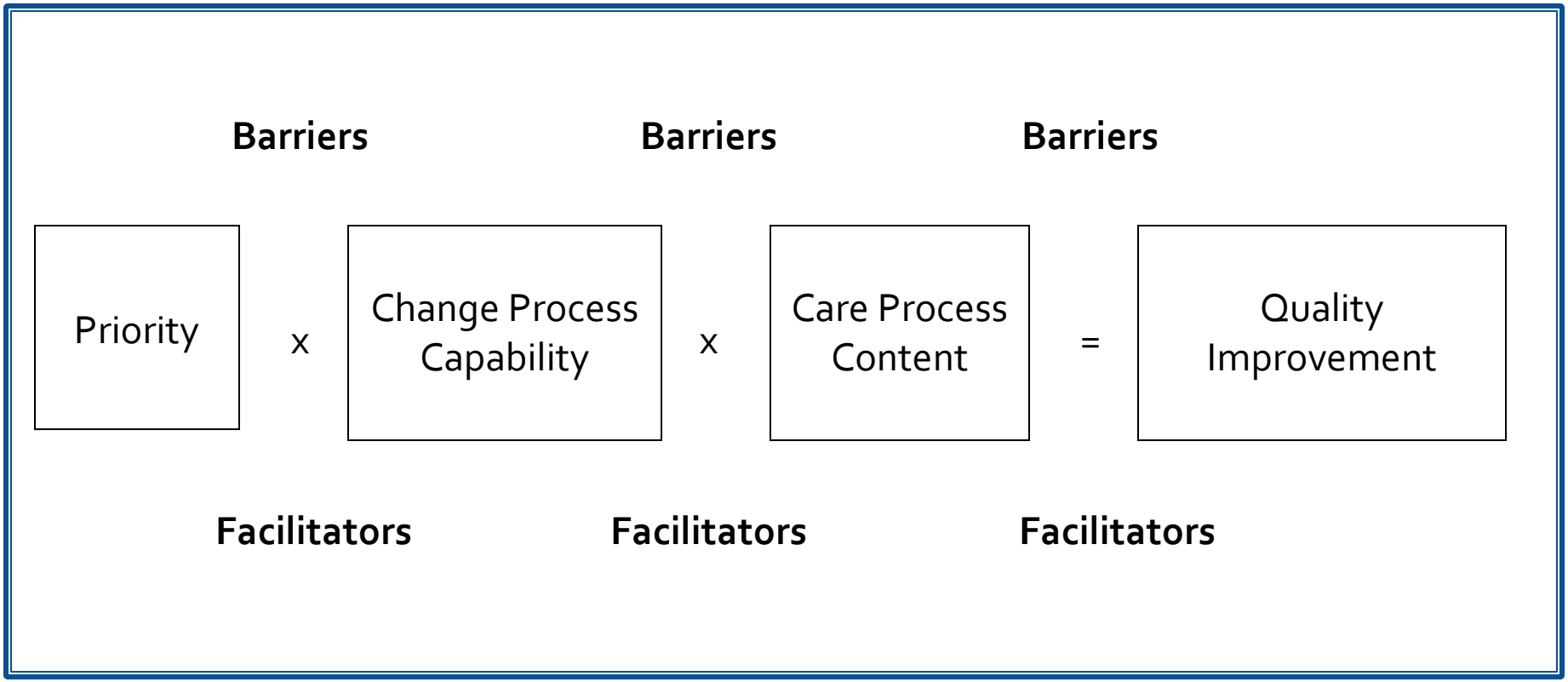
- More FPs:[3]
  - Believe autism can't be diagnosed <18 months
  - Rely on informal checklists not structured tools
  - Are unaware of validated parent- completed screening instruments
  - Advocate a wait-and-see approach
  - Don't know about EI or have misperceptions
- Problems are not unique to FPs![4]

# Traditional Practice Improvement Strategies Don't Work Well

Most traditional change strategies **used alone** have limited effects on changing clinician behavior and improving patient outcomes

| Cochrane-Effective Practice and Organization of Care |
| --- |
| CME[6] |
| Mixed interactive & didactic CME[6] |
| Printed educational materials[7] |
| Audit and Feedback[8] |
| Educational outreach visits (detailing)[9] |
| Tailored interventions[10] |
| Pay-for-performance[11] |

# Solberg's Conceptual Framework for Practice Improvement[5]



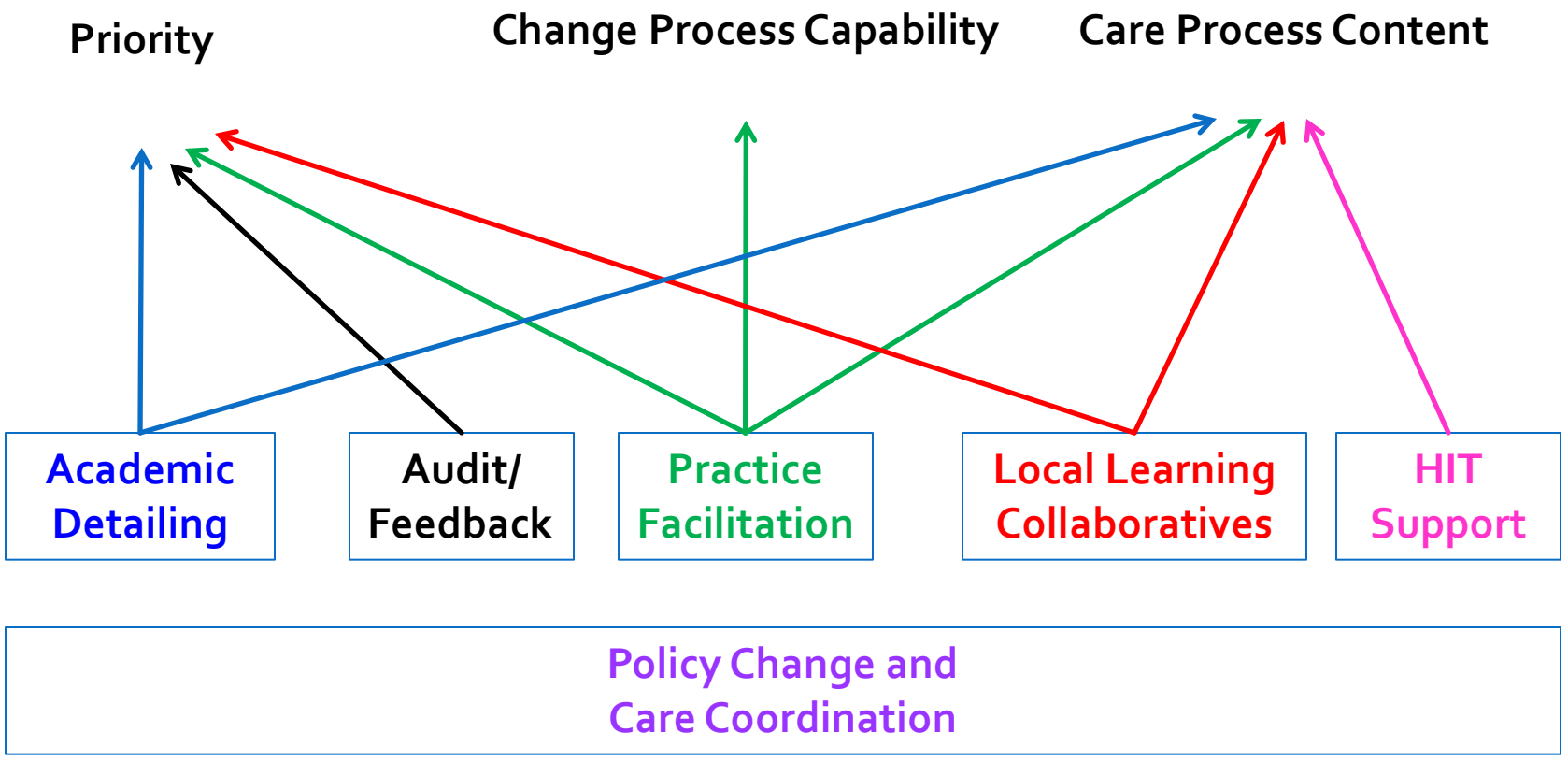
# PROJECT OVERVIEW

| | Phase I (Dec '08 to Dec '09) | Phase II (Mar '09 to Nov '10) |
|---|---|---|
| **Summary** | Needs Assessment | In-Office QI (quasi-experimental) |
| **Participants** | OK-PRN* members | 12 FPs in a rural county** |
| **Recruitment** | Listserve Announcement/ Emails/Faxes/Calls | Word of mouth thru other projects |
| **Strategies** | **Online Questionnaire** re: knowledge, beliefs, barriers, current practices | •**Academic detailing**<br>•**Pre/Post Chart audit/feedback**<br>•**Practice facilitation**<br>•**HIT support**<br>•**Local Learning Collaboratives**<br>•**Policy Change**<br>•**Care Coordination** |

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

**Original plan (see changes in later slides)

# Our Methods Related to Solberg's Change Theory



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2 year project – 10/08 to 11/10;12 practices
With no cost extension and another funding source, went thru 6/11

*OK-PRN-OK Physician Resource & Research Network (~230 FPs across state)
**Original plan (see changes in later slides)

# Chart Audit/Feedback

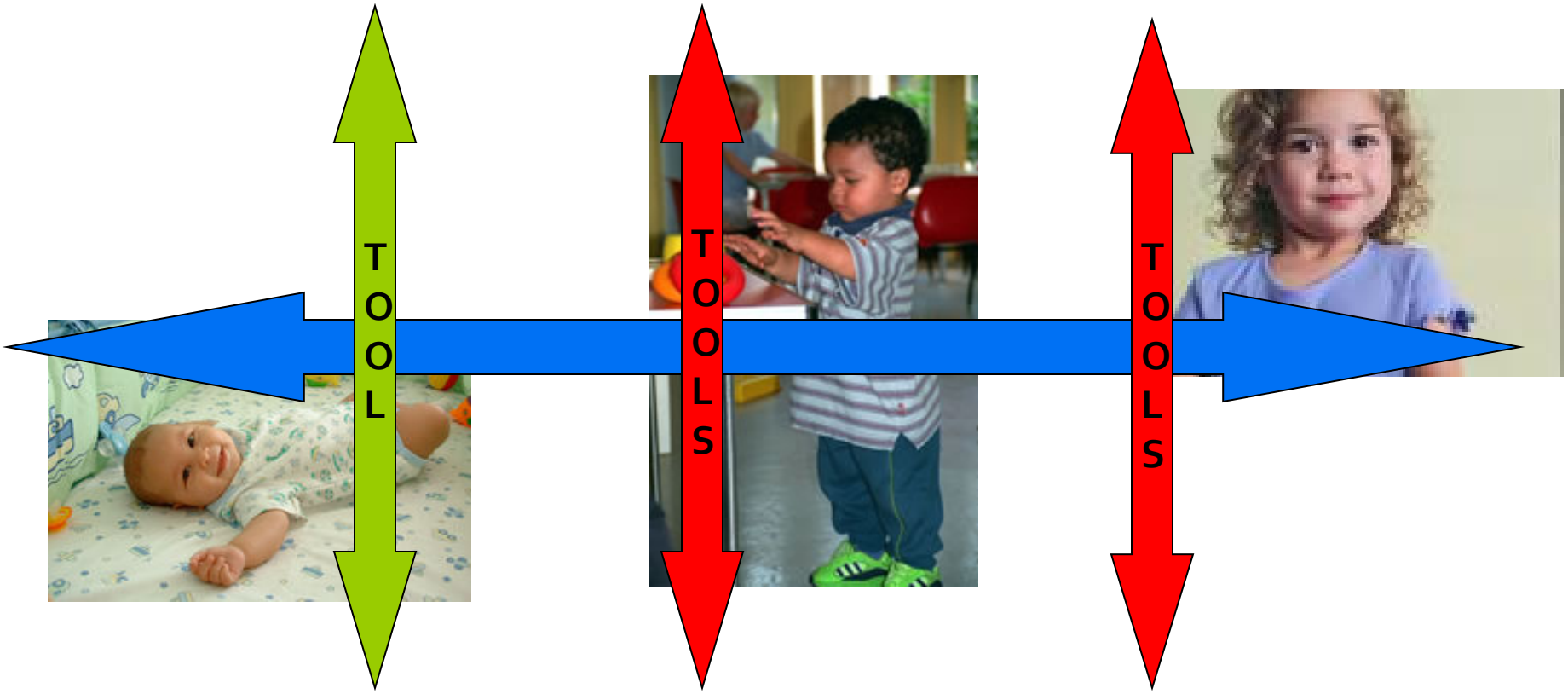
- WHO: PEA
- WHEN: Baseline (pre) and 9 months (post)
- HOW:
  - PEA (or office staff member) pulled charts
  - PEA abstracted charts (~1-1½ days)
  - Project staff compiled data; PEA fed back to office

# Chart Audits

- Pulled all charts of 8-40 mo olds with at least one EPSDT or WCC coded visit in the 3 mos preceding audit day
- Abstracted the first 50 charts in each of 3 age groups: 9, 18, and 30 (or 24) months
- Recorded de-identified data in Excel
- Took no identifiable PHI out of offices

- Next…a note on age ranges

# Developmental Surveillance
# Developmental (and Autism) Screening



# AAP Screening Guidelines Age Definition for Project

| Well Child Check | Age Range Allowed | Screening Instrument |
|---|---|---|
| 9-Month | 8 mos 0 days – 10 mos 31 days | ASQ |
| 18-Month | 17 mos 0 days – 21 mos 31 days | ASQ, MCHAT |
| 24/30-Month | 22 mos 0 days – 33 mos 31 days | ASQ, MCHAT |

# Chart Audit Data Recorded

| Variable | Definition |
|---|---|
| Age in months at most recent WCC | Calculated with Excel |
| Dates of all WCC to age 3y (6-40 mos) | mm/dd/yyyy |
| Surveillance? | 1-4 scale (checked boxes on informal milestone list or noted parent concerns regarding child's development or behavior) |
| Medical referral? | N=0, Y=1 |
| Mental/Developmental referral? | N=0, Y=1 |
| Screening tool (PEDS or ASQ)? | N=0, Y=1 |
| At which WCC did child have ASQ? | 4, 6, 8, 10, 12, 14, 16, 18, 24, 30, 36 mo |
| Child ever id'd as at risk for poor dev? | N=0, Y=1 |
| At what age was the child identified as 'at-risk' for poor developmental outcomes? | At birth=1, Not documented in chart=2<br>Or if other than 1 or 2, age recorded in months in Excel spreadsheet |

# Chart Audit Data Recorded

| Variable | Definition |
|---|---|
| What course of action took place after the child was identified as 'at-risk'? | Planned F/U for 'at-risk' issue at later visit =1<br>Child referred for treatment=2<br>Referral made but parent declined=3<br>Child referred for further assessment=4<br>Child referred to SoonerStart (EI) =5<br>Child referred to the Early Child Education, (Head Start or local school district) =6<br>No F/U care or referral document in chart =7 |
| Was information received from the referral agency and documented in the chart? | N=0, Y=1<br>If Yes, indicate: Rec'd assessment report =1<br>Rec'd treatment report=2<br>Not eligible for services=3<br>Other=4 (specify) _____ |
| M-CHAT according to guidelines? | Age in months screening was conducted |
| M-CHAT follow-up questions? | N=0,Y=1 |

# Practice Facilitation

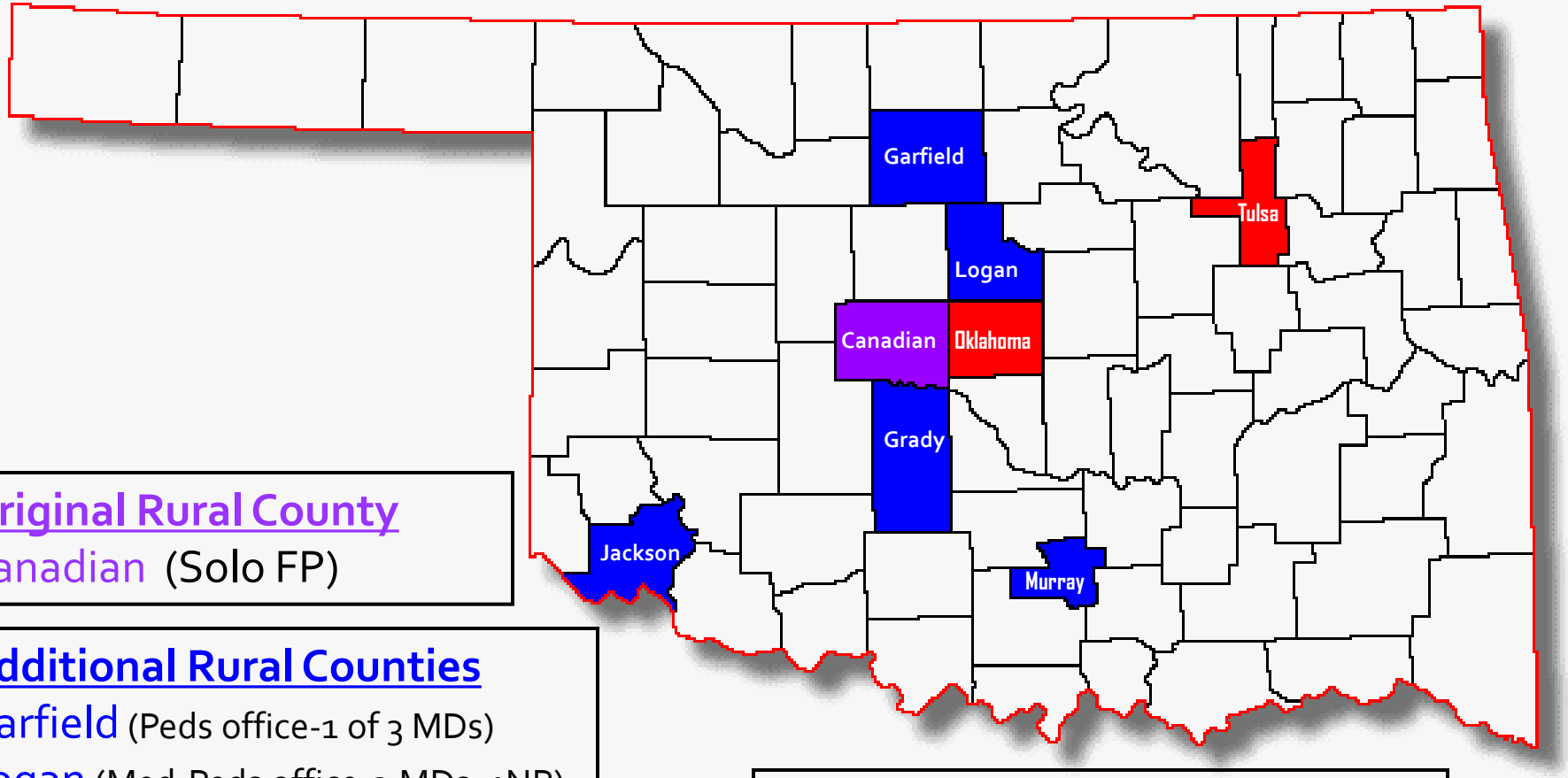
- WHO: PEA
- WHEN: Ongoing (# visits varies widely between practices)
- HOW:
  - PEA scheduled with office staff
  - PEA built "back door access" relationships to
    - Understand office microsystem (change barriers & facilitators)
    - Be credible to use motivational interviewing /adult learning theory-based techniques to foster change
- WHY:
  - Objective observer can identify resistance to change
  - Translating change skills to office gradually = sustainability

# HIT Support


- WHO: PI and PEA
- HOW:
  - Helped implement IT resources (e.g. EHR-, or web-versions of DB screening tools, etc.)
  - Built OK info site www.medhomeportal.org
  - Worked to create a 2-way communication process (fax-back referral form and ABCD3 project…more later)[12]
  - Gave access to OK-PRN's list-serve discussions

# RESULTS

# Practice Locations Relative to Population Centers




**Original Rural County**

Canadian (Solo FP)

**Additional Rural Counties**

Garfield (Peds office-1 of 3 MDs)

Logan (Med-Peds office-2 MDs, 1NP)

Grady (FP office-2 FPs, 1 PA)

Murray (Solo FP)

Jackson (Peds office-1 MD, 1 NP)

**Main Population Centers**

Oklahoma County (Solo Pedi)

Tulsa County (none)

# Participating PCPs

| Recruit'g Wave | County | Hospital/ Self Own | Practice Type | Clinicians in office | PCPs in project | Study # | PEA Support Intensity |
|---|---|---|---|---|---|---|---|
| 0-1 | Canadian | Hospital | FM | 1MD, 1 PA | 1 FM MD | 11 | * |
| 0-2 | Canadian | Self | Peds | 2 MDs | 2 Peds MDs | 12 | * |
| 0-2 | Canadian | Self | Peds | 1 MD, 1 NP | 1 Peds MD | 13 | * |
| 1 | Canadian | Self | FM | 1 MD | 1 FM MD | 1 | ***** |
| 2 | Garfield | Self | Peds | 3 MDs | 1 Peds MD | 2 | ***** |
| 2 | Logan | Self | Med-Peds | 2 MDs, 1 NP | 2 MP MDs<br>1 MP NP | 3<br>(Analyzed as 1) | ***** |
| 2 | Grady | Self | Mullti specialty | 5 FP, 1Card, 1Surg, 1OB, 1IM, 1Ophth, 2 Ortho, 1 PMR, 2 Ped, 1 Ped NP | 2 Peds MDs<br>1 Peds NP | 4, 5<br>6 | ** |
| 2 | Jackson | Hospital | Peds | 1 MD, 1 NP | 1 Peds MD<br>1 Peds NP | 7<br>8 | ** |
| 2 | Murray | Self | FM | 1 DO | 1 FM DO | 9 | ** |
| 2 | Oklahoma | Self | Peds | 1 MD | 1 Peds MD | 10 | ****** |

# Participating PCPs

| Recruit'g Wave | County | Hospital/ Self Own | Practice Type | Clinicians in office | PCPs in project | Study # | PEA Support Intensity |
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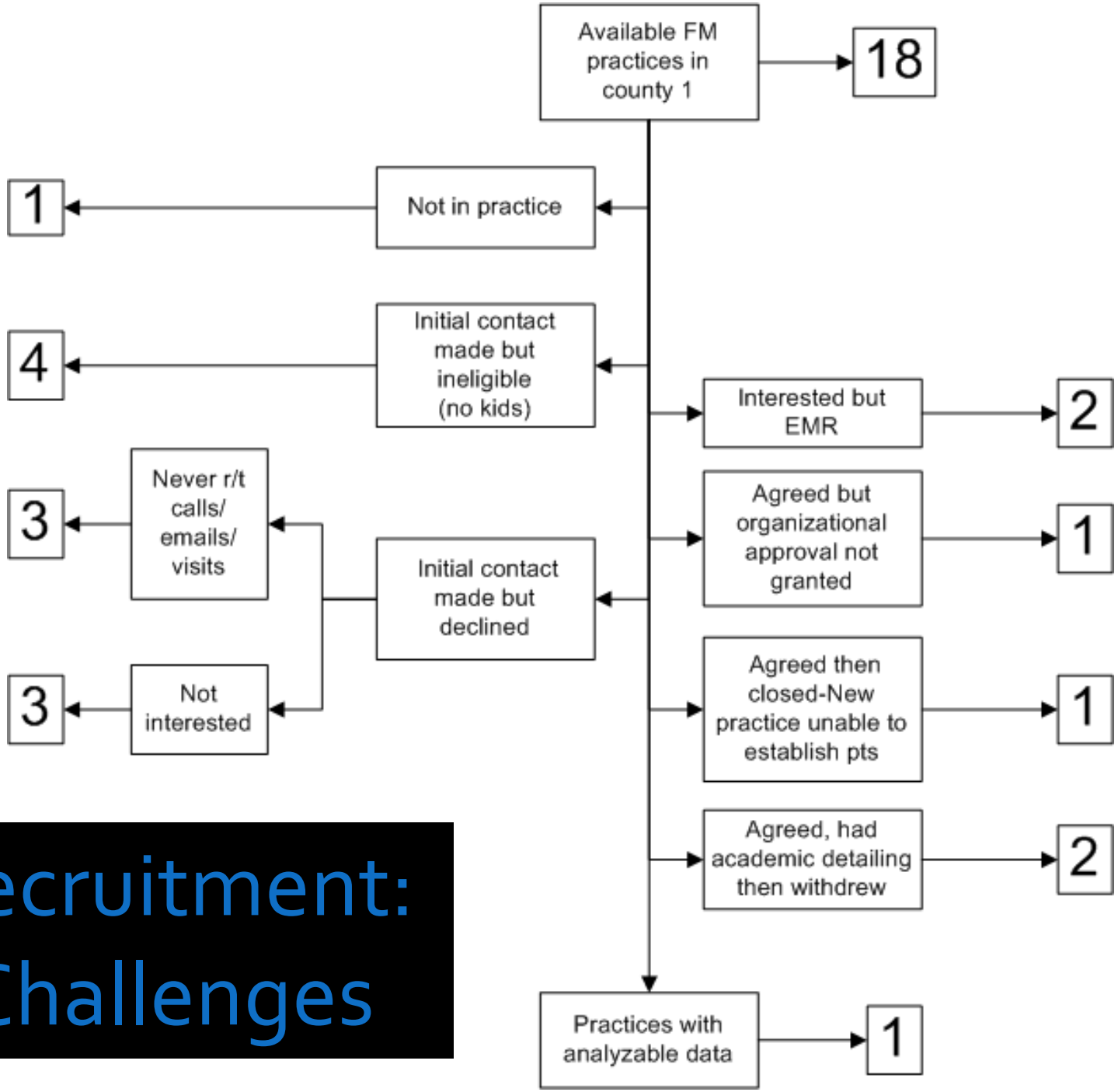
# Recruitment: Challenges



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| 2 | Murray | Self | FM | 1 DO | 1 FM DO | 9 | ** |
| 2 | Oklahoma | Self | Peds | 1 MD | 1 Peds MD | 10 | ****** |

# Results

| Group A N=3<br>Intensive PEA support | Baseline<br>N (%) | 9 months<br>N (%) | Significance |
|---|---|---|---|
| Developmental Surveillance | (90.5) | (97.7) | p <0.0001** |
| ASQ or PEDS @ 3 ages | (0) | 149/250 (50) | p <0.0001** |
| MCHAT @ 2 ages | (0) | (0) | N/A |

| Group B N=3<br>Limited PEA support | Baseline<br>N (%) | 9 months<br>N (%) | Significance |
|---|---|---|---|
| Developmental Surveillance | 55/349 (15.8) | 121/363 (34.2) | 0.0022* |
| ASQ or PEDS @ 3 ages | 0/349 (0) | 4/363 (1.7) | ns** |
| MCHAT @ 2 ages | (0) | (0) | N/A |

*$X^2$ (parametric)
**Fisher Exact Test (non-parametric)

# Results

- At baseline, no practices adhered to AAP screening guidelines
- Practices with > PEA support in 9-mo period increased use of surveillance and tools
- Practices were unable to implement > 1 tool in 9-month intervention period
- PEA support was not associated with a change in referral documentation/results rec'd

# Discussion

- Lessons learned:
  - Recruiting FPs in 1 county was challenging
  - Need to plan longer period for recruitment (EHR, flu season, employee turnover, etc.)
  - Needed >2 people to accomplish scope of work
  - Intent does not always equal capacity to change; need a measure of practice readiness

# Discussion

- Limitations:
  - Quasi-experimental, possible that other factors besides PEA is reason improvement occurred
  - We planned to include a family advisory component but ultimately had to not do so as our our  capacity was exceeded

# Recommendations for Future Direction

- ABCD-3 Project (Commonwealth/NASHP)
  - In last year of 3-year project
  - OK is one of 5 grantees (IL, AK, OR, MN)
  - Created Web Portal used to send referrals from PCPs to EI and EI info back to PCP
  - 4 county teams, 1 state-level team
    - Medicaid, EI, Child Guidance (at risk EI), Sooner SUCCESS (care coordinators/navigators), Family-to-Family, PEAs, PCPs

# References


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12. Akbari A, Mayhew A, Al-Alawi MA, Grimshaw J, Winkens R, Glidewell E, Pritchard C, Thomas R, Fraser C. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD005471.

# THANKS

- Sue Linn
- Adriane Griffen
- Georgina Peacock
- Dee Kessler
- Brianna Bright
- Michael Anderson
- Erin Davis
- Pam Newell
- Elaine Stageberg

- My new "short bosses"


QUESTIONS?

# OUTLINE

| | |
|---|---|
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| METHODS | • Phase I-Needs Assessment<br>• Phase II-In office QI intervention |
| PHASE I RESULTS | • Needs Assessment results |
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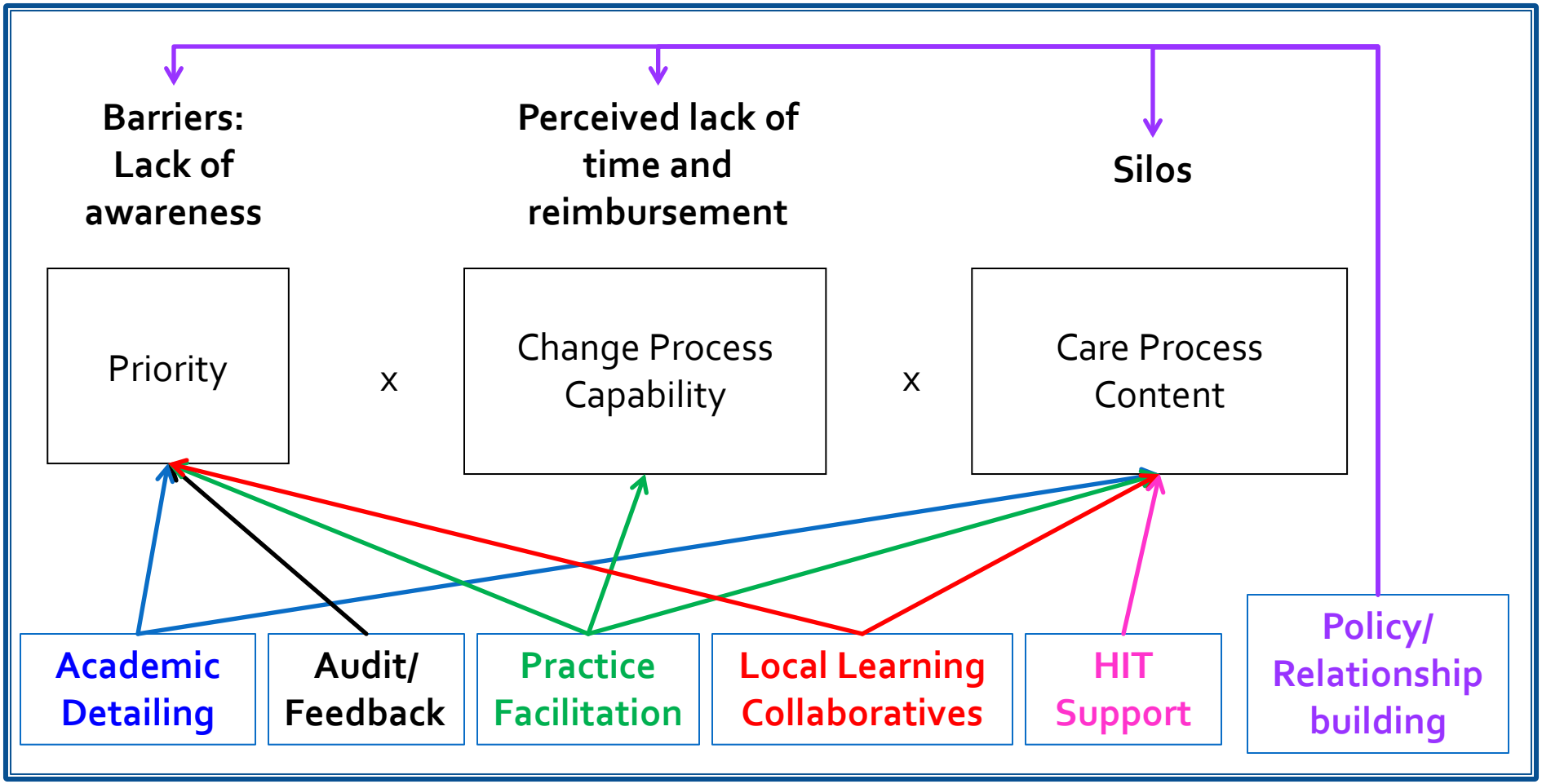
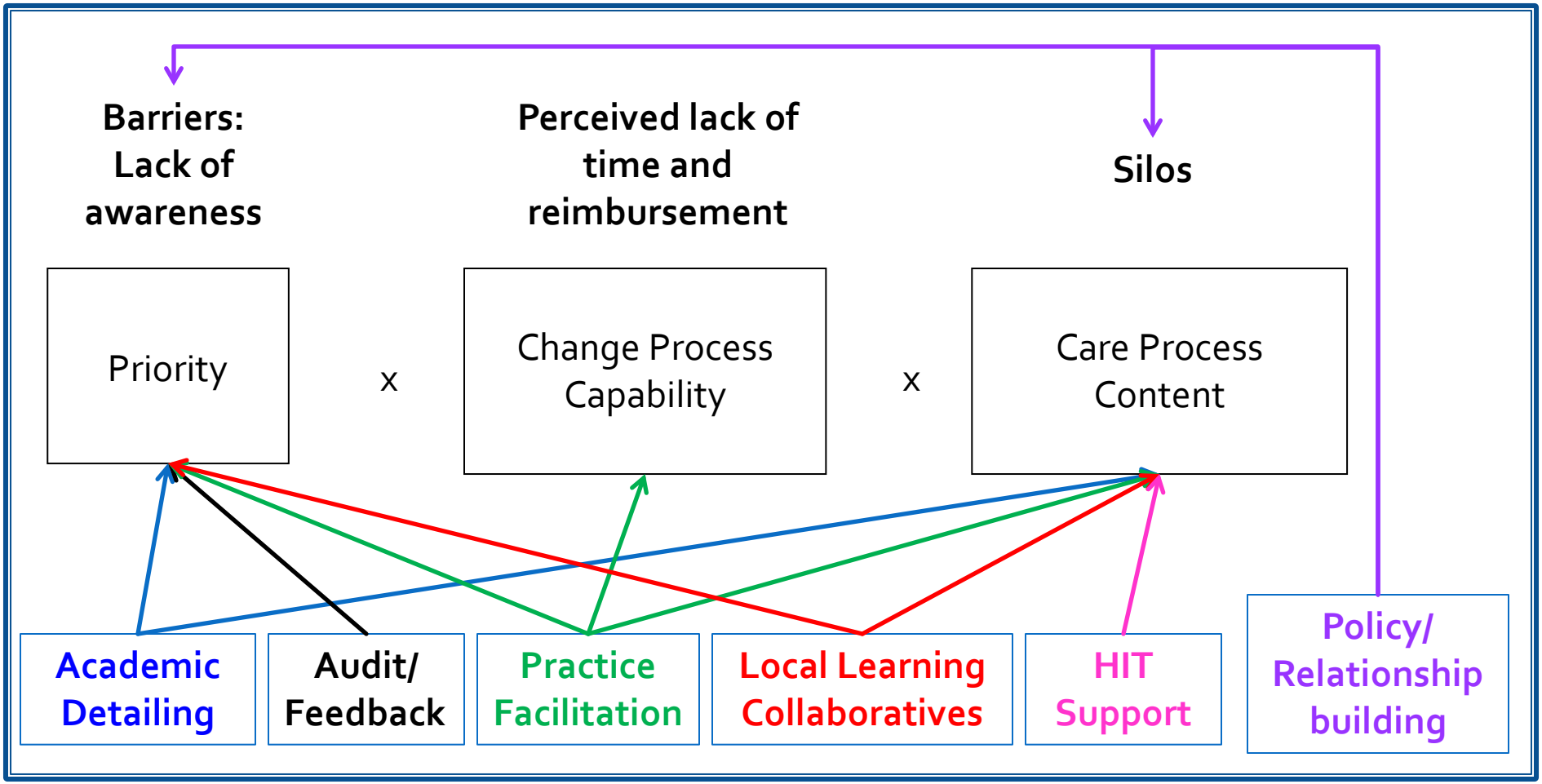
# Poorly Integrated Systems-Silos


# Expecting practices to solve the silo problem unilaterally is untenable

# Our Intervention Mapped to Solberg's Change Theory



# How our methods relate to Solberg's Change Theory



# 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

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# Needs Assessment Results

| | N or % |
|---|---|
| **Response Rate (96/161)** | **59.6%** |
| | |
| Total OK-PRN Listserve Members | 161 |
| Total responses | 96 |
| FPs who do not see children under 3 | 44/96 |
| Questionnaires with large amount of missing data | 2/96 |
| | |
| **Questionnaires analyzed** | **50** |

# Needs Assessment Results

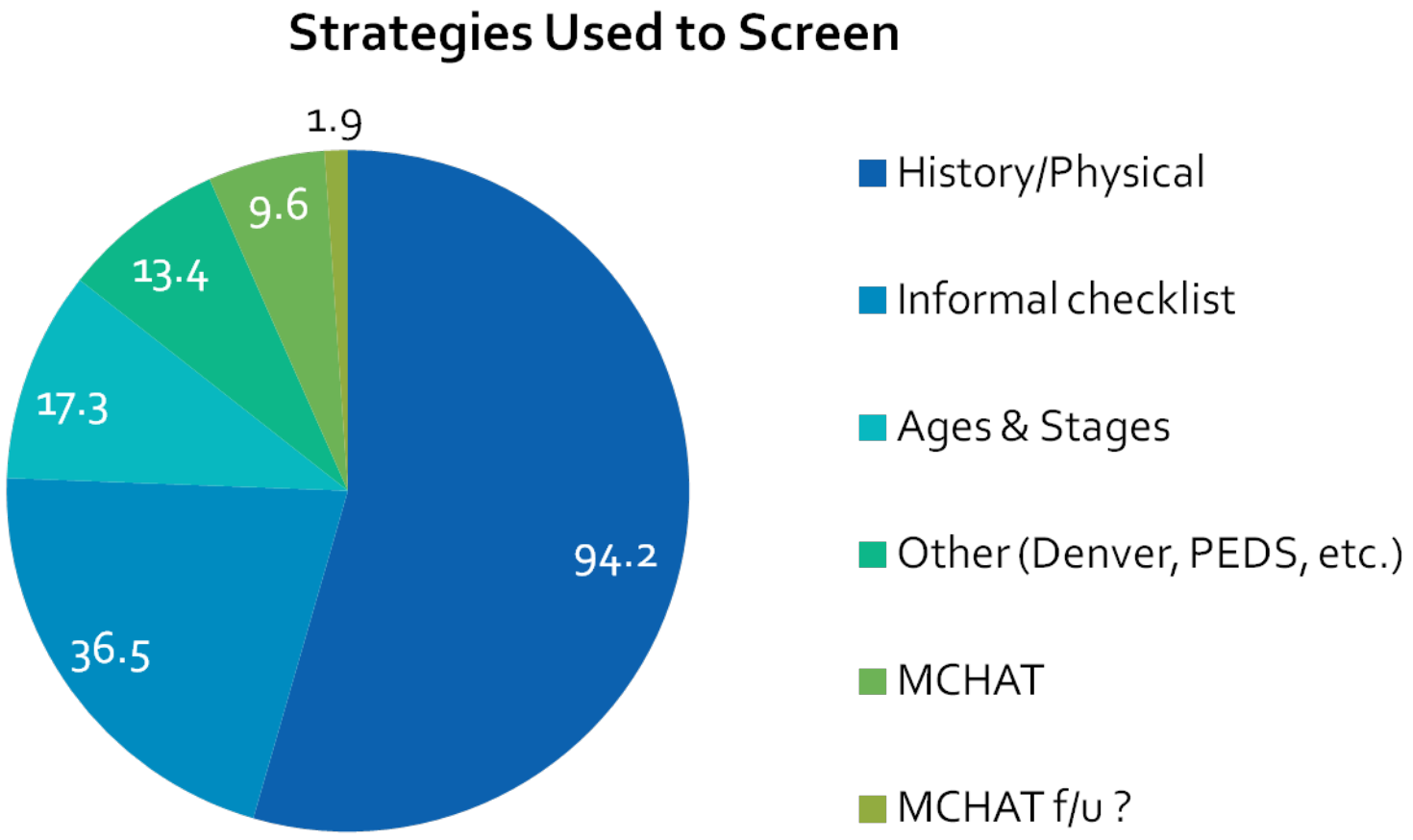
| Gender | N | % |
|---|---|---|
| Female | 37 | 73.1 |
| Male | 13 | 26.9 |
| **Age (yrs)** | **N** | **%** |
| 31 – 40 | 13 | 25.8 |
| 41 – 50 | 9 | 18.0 |
| 51 – 60 | 20 | 39.3 |
| 61 – 70 | 7 | 14.2 |
| 71 – 90 | 1 | 2.7 |

| Specialty | N | % |
|---|---|---|
| FP | 42 | 81.8 |
| IM | 3 | 6.7 |
| Peds | 3 | 6.7 |
| Med-Peds | 2 | 4.8 |
| **Degree** | **N** | **%** |
| APRN | 2 | 4.6 |
| DO | 4 | 8.5 |
| MD | 42 | 81.5 |
| PA | 1 | 2.7 |
| Other * | 1 | 2.7 |

*MBA, MPH, PhD, MS/MA

| Setting | N | % |
|---|---|---|
| Academic | 14 | 28 |
| Clinic | 36 | 72 |
| **Location** | **N** | **%** |
| Suburban | 19 | 37 |
| Urban | 17 | 34 |
| Rural | 14 | 29 |

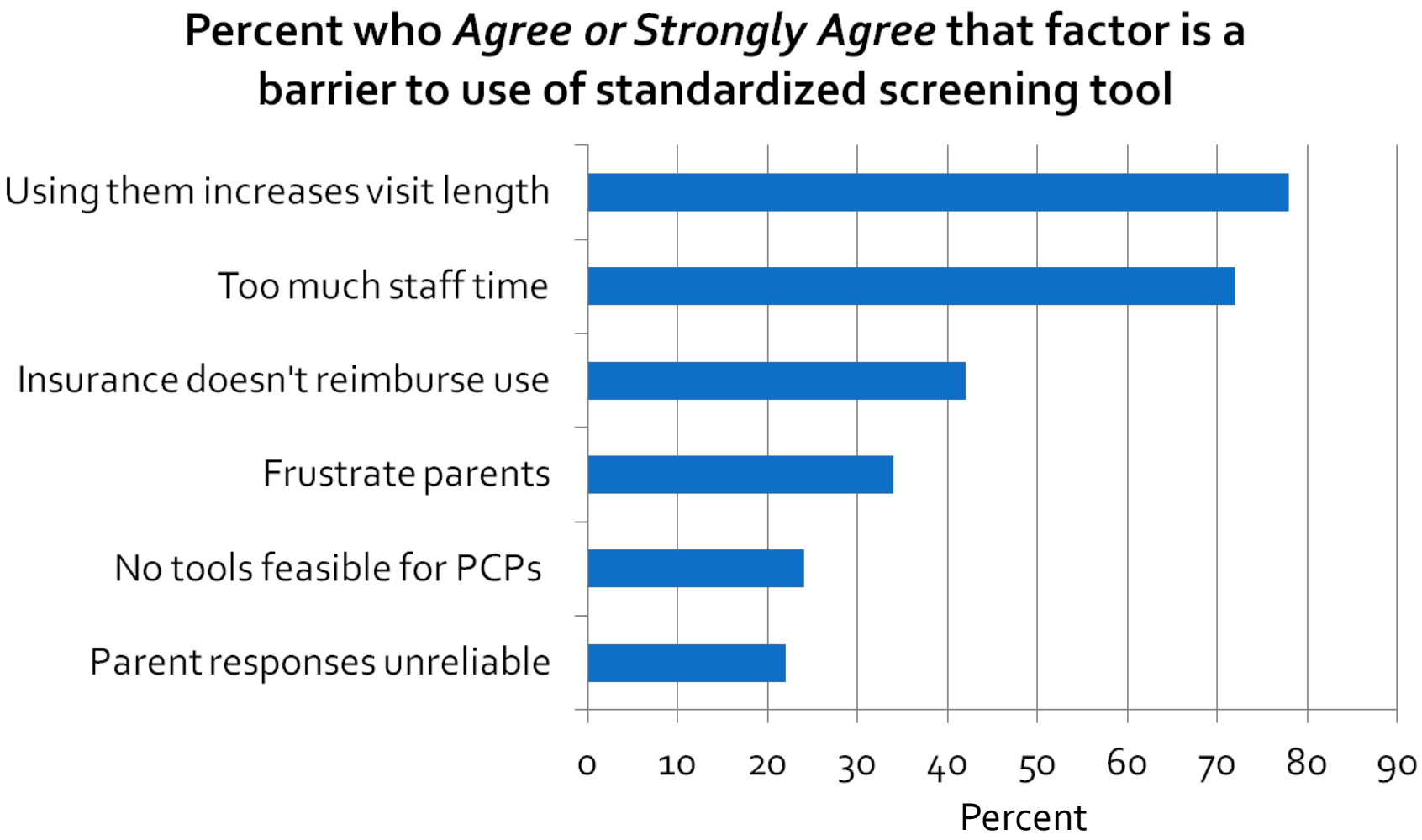
# Needs Assessment Results



# Needs Assessment Results-Beliefs:

| Agree or Strongly Agree | N | % |
|---|---|---|
| PCPs receive sufficient training to identify kids 0-5 with: | | |
| •Developmental delay | 19 | 36.5 |
| •Autism | 12 | 23.1 |
| PCPs should be expected to identify kids 0-5 with: | | |
| •Developmental delay | 37 | 71.2 |
| •Autism | 36 | 69.3 |
| Early ID is important b/c earlier intervention = better outcomes | | |
| •Developmental delay | 37 | 71.1 |
| •Autism | 34 | 65.3 |
| Strategies I now use allow me to recognize __ as early as possible | | |
| •Developmental delay | 22 | 42.3 |
| •Autism | 11 | 21.1 |

# Needs Assessment Results



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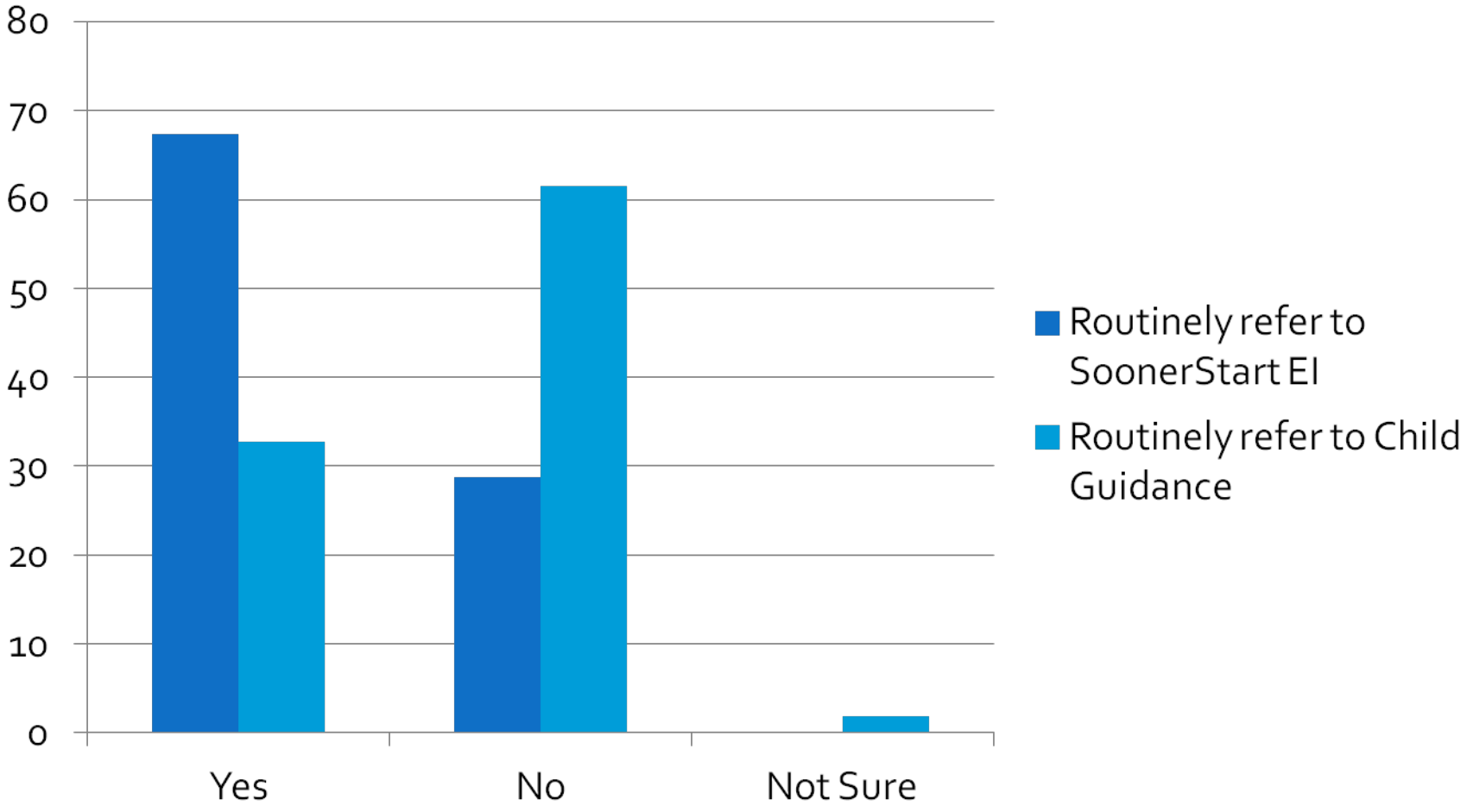
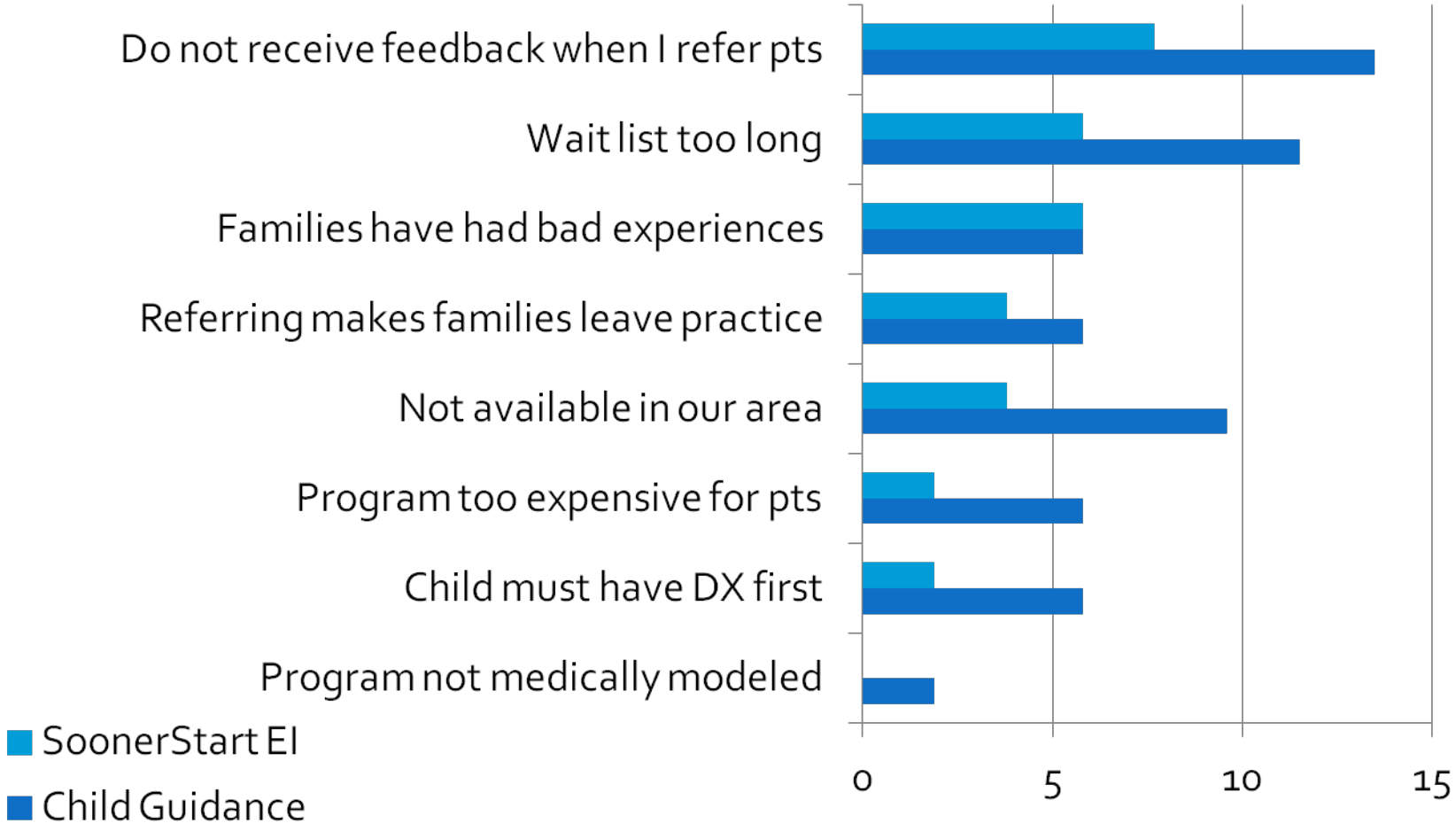


# Needs Assessment Results

## Reasons not referring to Early Intervention/Child Guidance



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# AAP Practice Guidelines

- AAP recommends
  - **Developmental "surveillance"**

    at all well-child visits[1]
  - **Developmental screening tool**

    9, 18, and 30 (or 24) months [1]
  - **Autism screening tool**

    18 and 24 months[2]

# Practices and Timeline

| | Type | County | Specialty | Recruited | Pre-Data | Post/Int-Data |
|---|---|---|---|---|---|---|
| Data Collection Proceeding | Rural | Canadian | FM | Dec '08 | Dec '08 | Aug '09 (post) |
| | | Canadian | FM | March '09 | June '09 | |
| | | Garfield | Peds | April '09 | June '09 | Jan '10 (int) |
| | | Logan | Med-Peds | May '09 | Aug '09 | |
| | Urban | Oklahoma | FM | Aug '09 | N/A | |
| Data Collection Beginning | **Type** | **County** | **Specialty** | **Recruited** | **Pre-Data** | **Progress** |
| | Rural | Garfield | FM | March '09 | Sep '09 | |
| | | Canadian | FM (NPs) | May '09 | Delayed | |
| | | Murray | FM | Nov '09 | Feb '10 | planned |
| | | Jackson | Peds | Dec '09 | Jan '10 | partial |
| | | Jackson | Peds (NP) | Dec '09 | Jan '10 | partial |
| | | Grady | FM | Dec '09 | Jan '10 | partial |

# Care Coordination

- WHO: Community Care Coordinator (in another project)
- WHEN: Throughout (# 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