



Under-referrals for Developmental Delays by Pediatricians: A Systematic Review

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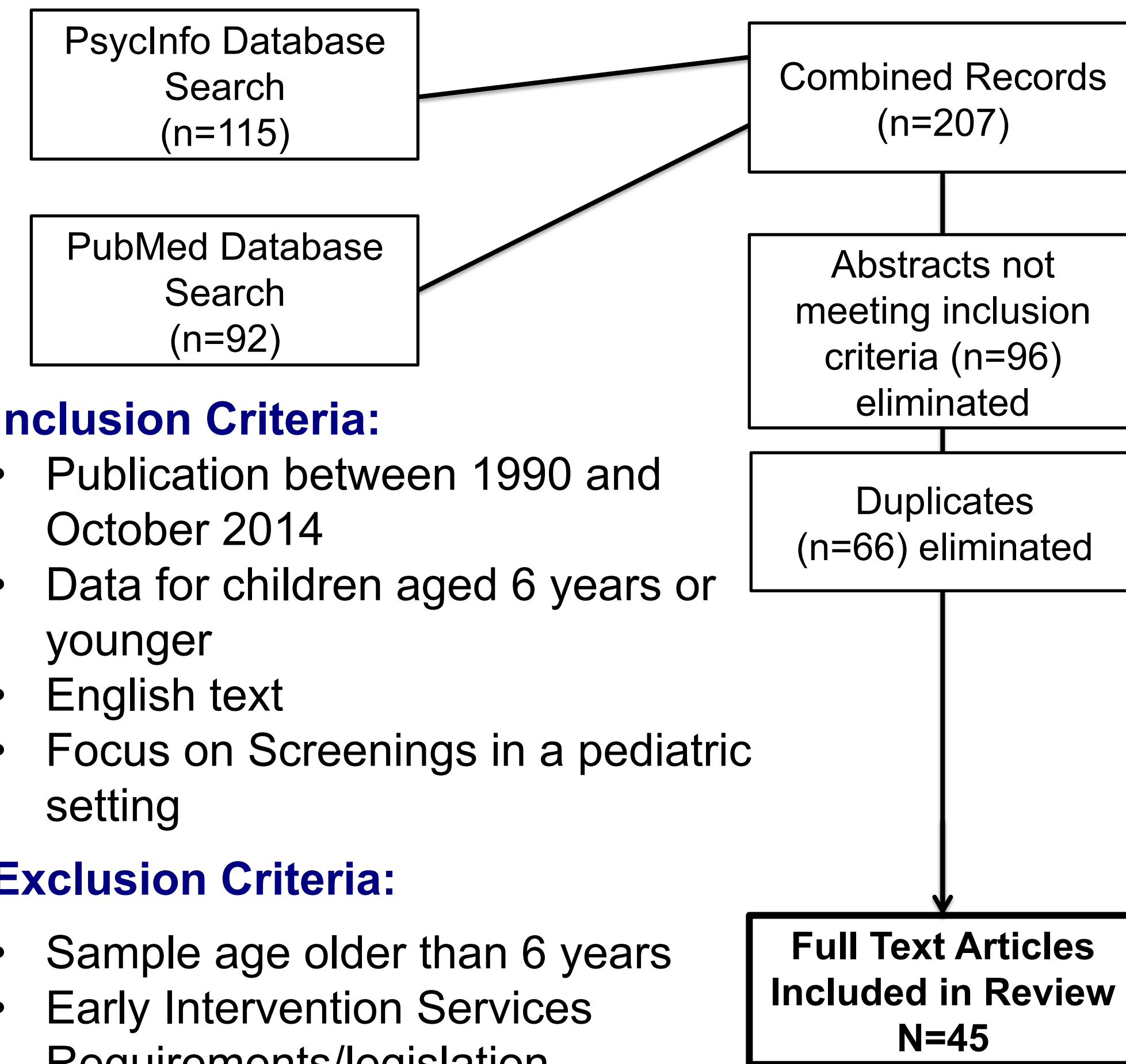
Introduction

- 12% to 16% of children have a developmental disorder (Guevara et al., 2013)
- There is an increase of under-referrals, resulting in many children not receiving services. (Sices, Feundtner, McLaughlin, Drotar & Williams, 2003)
- The American Academy of Pediatrics (AAP) recommends:
 - Developmental screenings be conducted at 9, 18, 24, or 30 month well care visits
 - Screenings be conducted when concerns are raised (Arunyanart et al., 2012)
 - Developmental surveillance be used at every well-child visit (Noritz et al., 2013)
- However, less than 50% of pediatricians report using standardized developmental screenings (Guevara et al., 2013)

Purpose

The purpose of this study is to systematically review the literature on developmental delays in early childhood and understand the under-referral rate in pediatric settings.

Method

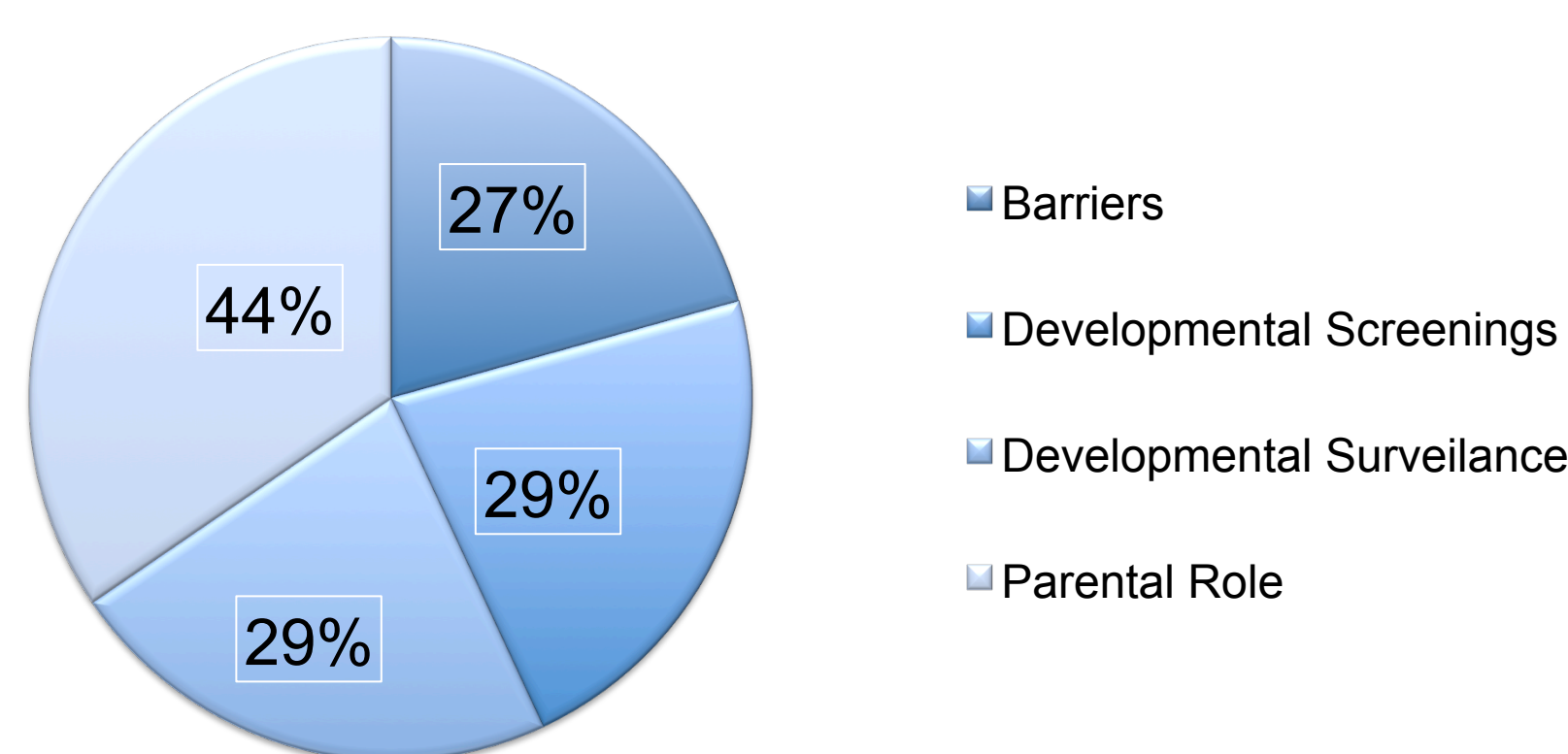


Inclusion Criteria:

- Publication between 1990 and October 2014
- Data for children aged 6 years or younger
- English text
- Focus on Screenings in a pediatric setting

Exclusion Criteria:

- Sample age older than 6 years
- Early Intervention Services Requirements/legislation
- Specific developmental screening validity evaluations

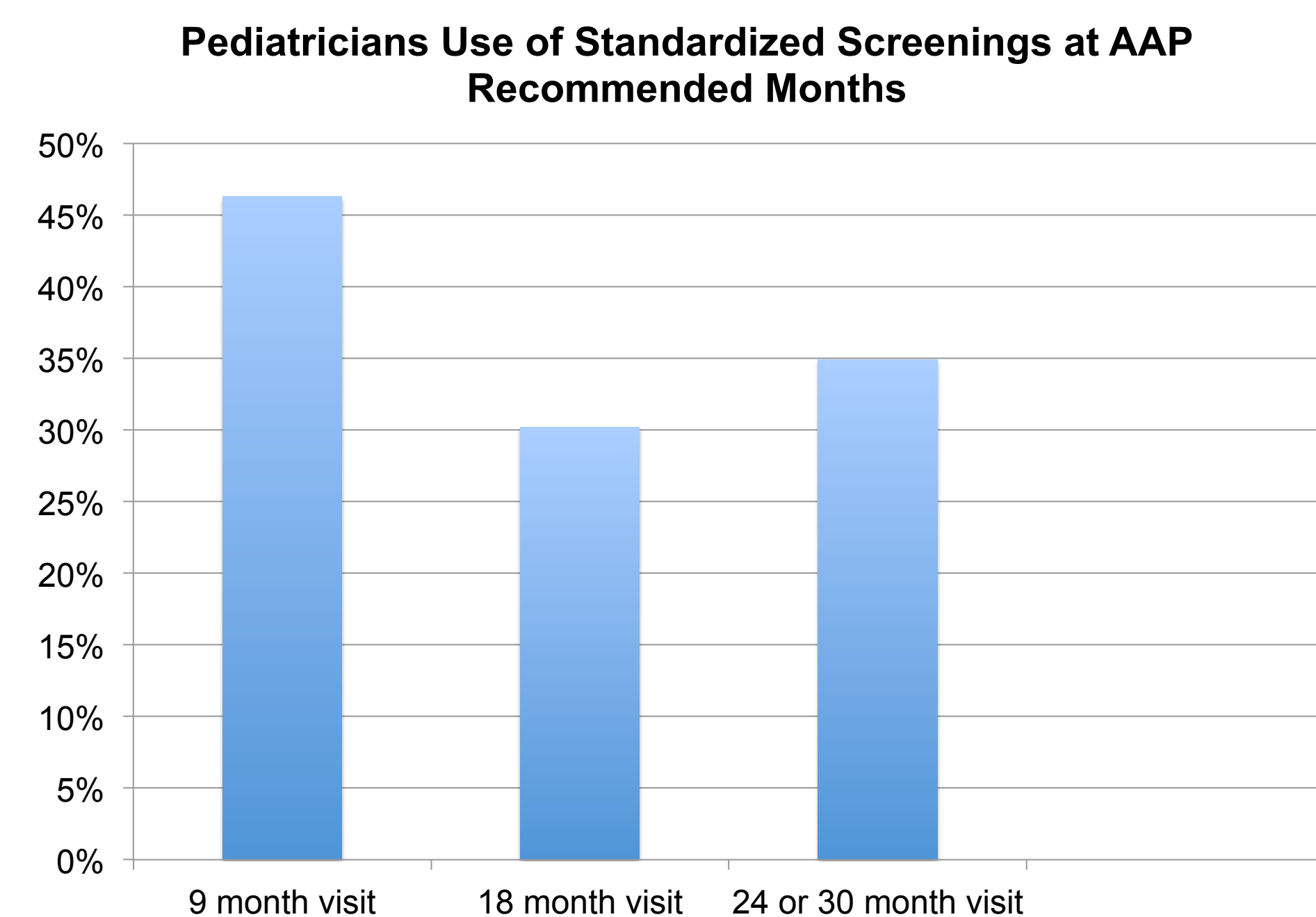


Results

The top four themes emerging were, 1) pediatricians use of developmental screenings (n=13), 2) issues with using developmental surveillance in a pediatric setting alone (n=13), barriers to conducting developmental screenings in a pediatric setting (n=12), and 4) parental role in developmental screenings (n=20).

Pediatricians Use of Developmental Screenings

- 50% of pediatricians implement developmental screenings (Rydz, Shevell, Majnemer & Oskoui, 2005)
- 17.8% of pediatricians reported that they follow the American Academy of Pediatrics (AAP) recommendations (Arunyanart et al., 2012)
- 30% to 45% of pediatricians reported inconsistency in following AAP recommended visits or when concerns were raised (Arunyanart et al., 2012)
- Physicians reported using standardized screenings in less than half of patient visits, or never (Arunyanart et al., 2012)

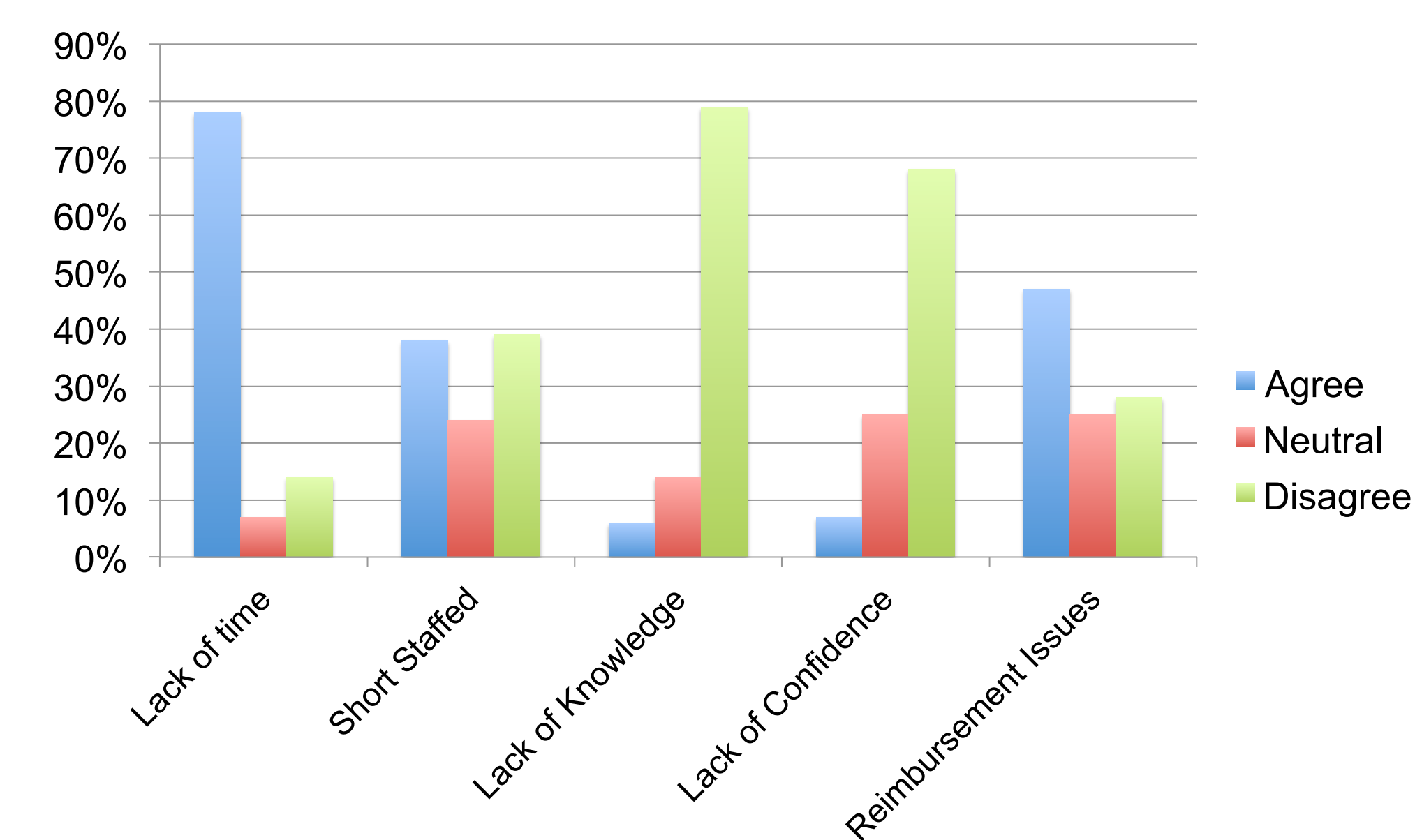


Using Developmental Surveillance

- Developmental Surveillance is the most common strategy used by pediatricians (Rydz, Shevell, Majnemer & Oskoui, 2005)
 - Developmental surveillance is especially useful for children at-risk
 - Includes obtaining a developmental history, utilizing parental concerns, keeping track of observations, and discussing concerns with relevant professionals
 - The "wait and see" approach is most commonly used as concerns arise
- Missed opportunities for referrals increase when only using developmental surveillance
 - Surveillance alone would have missed 45% of children that have developmental delays (Mackrides & Ryherd, 2011)
 - Children who received developmental surveillance alone were slower to be identified than children that received both developmental surveillance and developmental screenings (Guevara et al., 2013)
- Developmental surveillance should be used throughout childhood, but in combination with screenings (Noritz et al., 2013)

Barriers to Conducting Developmental Screenings

In an AAP survey, pediatricians reported the following barriers when screening for developmental delays (Honigfeld & McKay, 2006)



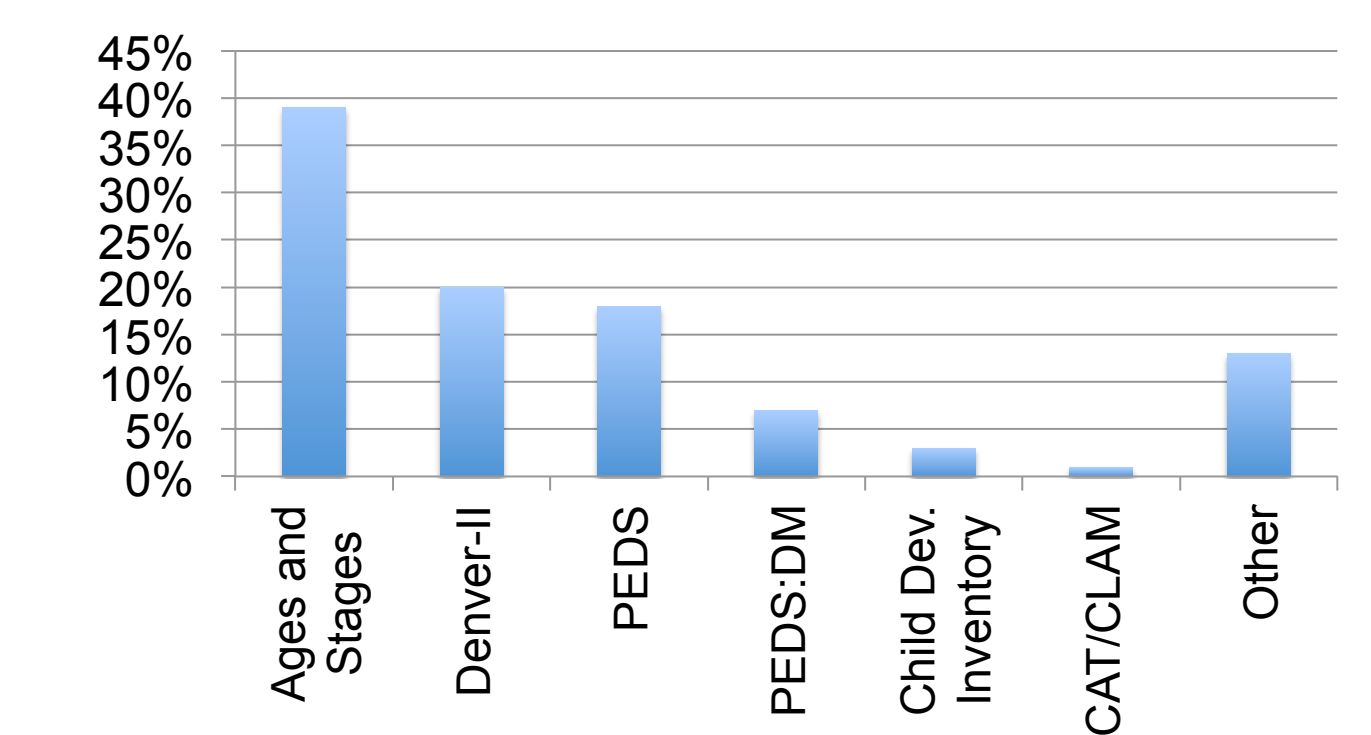
- However, in other surveys, lack of knowledge and lack of confidence were considered significant barriers. (Allen, Berry, Brewster, Chalasani, & Mack, 2010; Mackrides & Ryherd, 2011)
- Additional barriers such as child population, unfamiliarity with screening tools, and cost were reported by pediatricians. (Sices, Feundtner, McLaughlin, Drotar & Williams, 2003; Johnson, Wolke & Marlow, 2008; Mackrides & Ryherd, 2011; Morelli, Pati, Butler, Blum, Gerdes, Pinto-Marvin & Guevara, 2014)

Parental Role in Developmental Screenings

- Pediatricians use parent questionnaires to gather information about their patient as well as any concerns that the parents may have; however only 15% use them (Sices, Feundtner, McLaughlin, Drotar & Williams, 2003)
- Pediatricians often fail to address parental concerns because they think parents may be over-concerned
- However, parental scoring on questionnaires is comparable to the results of standardized developmental tests (Sices, Feundtner, McLaughlin, Drotar & Williams, 2003)
- Parental concerns are not a substitute for formal evaluation, but should be used as an additional tool
 - Regardless of educational background and socioeconomic status, parents can give valid information about their child (Rydz, Shevell, Majnemer & Oskoui, 2005)
 - However, parents need to feel comfortable with raising concerns (Smith, Akai, Klerman & Keltner, 2010)
 - Furthermore, communication is needed among parents, extended family, schools, and community agencies (First & Palfrey, 1994)
 - Different caregivers may have varying answers regarding the child's development (Cepanex, Lice & Simlesa, 2012)

Most Common Screenings Used

Pediatrician (n=227) Reported Common Screenings



(Arunyanart et al., 2012)

Ages and Stages Questionnaire: parent-questionnaire and the most common screening used in a pediatric setting (Arunyanart et al., 2012)

- Helps resolve the time and cost barrier
- Quick, completed before patient visit

Early Detection & Early Intervention

- Benefits of early detection for families
 - Having information about child's development (Bailey et al., 2005)
 - Early Intervention services and support
 - Detecting delays early can help improve child's development (Oberklaid & Drever, 2011)
 - Change developmental trajectory (Goode, Diefendorf & Colgan, 2011)
 - Increase likelihood of successful future (Shapiro-Mendoza et al., 2013)
 - Increase of high school graduation rates and decrease in crime rate (Karoly, Killburn & Cannon, 2005)
- Early Intervention Services Offered
 - Child Specific developmental services
 - Trainings and services that support families
 - Give additional information regarding schools, therapy, plans, etc.
 - Good investment
 - Benefits can be compared or equalled to the program costs (Karoly, Killburn & Cannon, 2005)

Conclusion

- Despite established recommendations by AAP, pediatricians are not meeting these recommendations for conducting developmental screenings.
- Attention needs to be placed on how to assist pediatricians in overcoming barriers
- Routine visits with a pediatrician are possibly the only opportunity for children to be detected for developmental delays and for families to receive resources on obtaining Early Intervention services
- Early detection and services give support, services, and trainings to families
- Collaboration between pediatricians and parents can help detect developmental delays earlier and reduce the amount of under-referrals.
- Parental questionnaires and concerns are as reliable as standardized screening scores