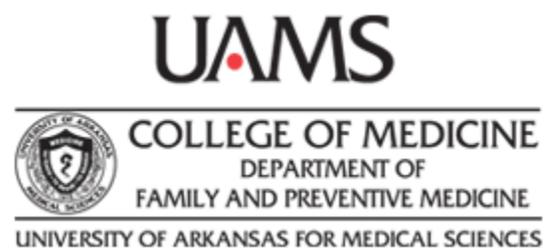




Evaluation for DHS/DCCECE  
Prepared by Department of Family & Preventive Medicine, UAMS



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# Executive Summary

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The ASQ project is a community based program designed to educate and train childcare providers on the importance of developmental screenings. Childcare providers can, in turn, help parents conduct developmental screenings on their own child. In addition, the ASQ project was designed to raise awareness among Medical Home providers (e.g., pediatricians, family medicine doctors, and nurse practitioners) of developmental screenings being conducted and to facilitate quicker referrals to early intervention and early childhood special education providers when indicated. This program differs from other screening programs in the country where the conducting of developmental screenings is mainly the responsibility of the Medical Home. By capitalizing on the on-going relationship between childcare providers and parents, Arkansas has the unique opportunity to improve ChildFind activities and identify children who are in need of early intervention/early childhood special education services in the state. The end goal is to ensure children are receiving appropriate intervention services.

The ASQ project addressed three goals:

1. Increase the knowledge of childcare providers
  - a. Educate many providers
  - b. Educate providers regarding the ASQ and early screening
2. Integrate the ASQ into Early Childcare programs
  - a. Encourage providers to adopt the ASQ to screen routinely
  - b. Engage parents to support use of ASQ
  - c. Educate providers to make program changes based on ASQ
3. Identify provider and address physician barriers to on-going use of the ASQ

## **Increased Knowledge**

Results indicate that:

- in Phase III, 66 facilities in 26 counties received training on the ASQ/ASQ-SE.
- a total of 184 childcare staff were trained.
- 78% of childcare providers thought screening with the ASQ/ASQ-SE was a good idea, and 81% reported after receiving the training they were comfortable to very comfortable administering the ASQ/ASQ-SE.

## **Integration**

Childcare providers successfully integrated the ASQ into their programs.

- A total of 268 initial ASQ screenings were reported. Of those, 19% were classified as “monitor” and 7% as “refer”.
- A total of 230 initial ASQ-SE screenings were reported. Of those, 9% were classified as “monitor” and 7% as “refer”.
- Only thirty-nine percent of the facilities trained during Phase III reported their screening results; therefore the actual number of screenings conducted in Phase III may be higher.

## **Barrier Identification**

The post assessment survey, administered after training, indicated that childcare providers were concerned about getting parents to cooperate in conducting the screenings. Most Resource and Referral agents (R&Rs) felt that the childcare providers were likely to implement the ASQ/ASQ-SE protocol, with 4 of the 6 R&Rs rating their providers over 4.0. In order to address the

physician barriers identified in Phase II, a statewide live continuing medical education event was conducted on July 17, 2012. Dr. Eldon Schulz presented the material to a live audience at UAMS and was telecast across the state using the Rural Health System. The information covered included the importance of early intervention, a description of the ASQ project, the role of physicians and who to contact if a referral needs to be made. The presentation was recorded and will be offered as an enduring CME opportunity for at least one year. Physicians, Physician Assistants, Nurse Practitioners and medical office staff attended the training.

## **Recommendations**

This project identified several recommendations that would lead to improvements in the early identification and service delivery for children. These include recommendations for continued use of the ASQ and its long term integration into early childhood programs.

1. The findings from this study suggest implementing screening in childcare settings is a cost effective means for reducing later use of special education services; therefore, it is important to facilitate the use of developmental screenings in quality early childhood programs. Implementing ASQ at the lowest levels of Better Beginnings as deemed financially feasible for the state would have the greatest impact on child outcomes.
2. Continue the system of R&R training for the use of the ASQ as a screening tool. The R&R staff has been successful in training programs to use and understand the value of screening tools like the ASQ.
3. R&R programs may need support and advice in the ongoing use of the ASQ, specifically related to the initial recruitment of childcare providers. There was significant variation across the regions of the state in the success of the R&R to engage and entice childcare providers to attend ASQ trainings and implement the screening tool in their centers. This is likely driven by the expertise of the R&R staff but may also be impacted by the capacity of the providers in the area and the number of programs at higher levels of Better Beginnings.
4. There is an ongoing need to increase awareness of the ASQ program and the system of referrals for medical providers. It is important to continue to promote the CME enduring material developed by this project to healthcare providers across the state. This is best done by working with the UAMS Department of Family and Preventive Medicine CME group and the Medical Home group to continue to advertise the enduring material.
5. To streamline the process of referrals to early intervention/early childhood special education, the Division should sponsor presentations conducted in each R&R area to educate childcare providers on making referrals to First Connections (Part C) and Early Childhood Special Education (Part B).
6. To monitor and evaluate the system, a routine data collection system should be considered. By continuing to collect and track the data on screening results, this information can help the state know where different types of providers are needed. Consider developing a central repository where data can be entered and analyzed. This information can be conveyed to Part C/Part B as well as university training programs to possibly address staffing needs. Based on the rate of return during Phase III, it appears when the R&Rs have contact with the childcare providers and are requesting the information on a weekly/monthly basis, the rate of return is higher than having the childcare providers enter the data themselves. It may be possible to include the reporting of the ASQ results of the initial child screening into the current reporting systems used by providers.

# The DHS/DCCECE Ages & Stages Project

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## Project Goals

1. Increase the knowledge of childcare providers
  - a. Educate many providers
  - b. Educate providers regarding the ASQ and early screening
2. Integrate the ASQ into Early Childcare programs
  - a. Encourage providers to adopt the ASQ to screen routinely
  - b. Engage parents to support use of ASQ
  - c. Educate providers to make program changes based on ASQ
3. Identify provider and address physician barriers to on-going use of the ASQ

## Background and Significance

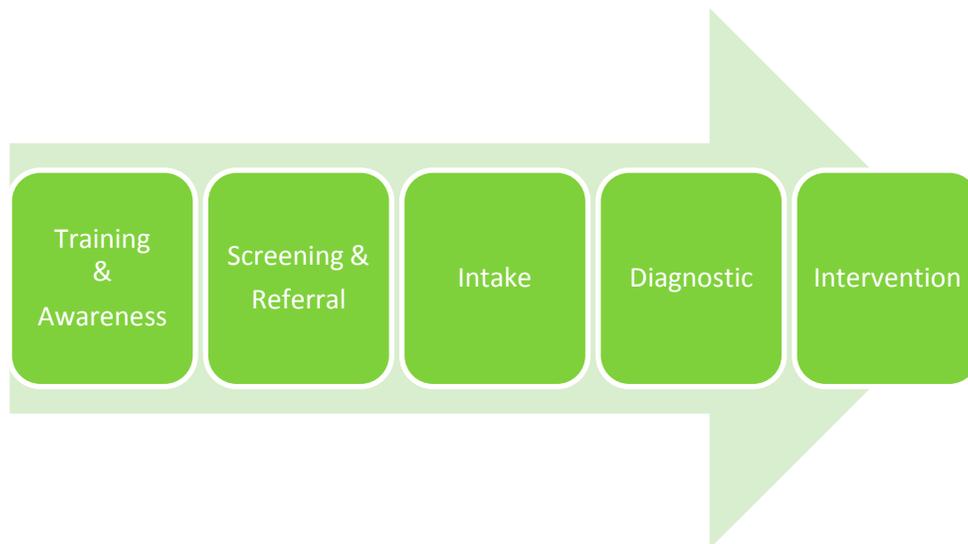
There is a critical developmental period between birth and age five. During the first three years, children experience rapid cognitive, linguistic, social emotional and motor development. Children begin to develop the ability to identify and regulate emotions in themselves and others. The amount of language they are exposed to early in life is strongly associated with later language and cognitive development (Chapman, 2000; Hart & Risley, 1995; Huttenlocher, 1998; Zimmerman et al., 2009). Vocabulary growth has also been correlated with the amount of adult input, the amount of child vocalizations and the responsiveness of adults to the child's communication efforts (Warren et al., 2010). Between three and five years of age, children develop increasingly complex social behaviors, emotional capacities, problem-solving abilities and pre-literacy skills.

When children are not exposed to adequate stimulation or do not have opportunities for early educational experiences, it can lead to early disparities in capability that generally persist in the absence of effective intervention (Center on the Developing Child at Harvard University, 2007). As a result, children who live in families with lower income and less parent education score lower on standardized developmental tests as early as 18 months, and the differences typically increase into the school-age years (Center on the Developing Child at Harvard University, 2007). Additionally, children living in poverty are more likely to have poor health and chronic health conditions than those who do not live in poverty. Poor prenatal care, maternal substance abuse and poor nutrition during pregnancy contribute to these increased risks (U.S. Department of Health and Human Services, 2000). Infants born into poverty are more likely to be born prematurely, at low birth weight, with a disability or with fetal alcohol syndrome (Bradley, 2002). Additional risks for children living in poverty have been documented in the preschool years and include developmental disabilities (Brooks-Gunn & Duncan, 1997), respiratory illnesses (Cohen, 1999; Rosenbaum, 1992), and sensory impairments (Wilson, 1993). The consequences of these health problems are often more severe for children living in poverty than children with the same health issues who do not have the added risk factor of living in poverty (Parker, Greer, & Zuckerman, 1988). In Arkansas, 50% (n=76,023) of young white children; 81% (n=34,301) of young black children and 76% (n=22,349) of young Hispanic children live in poverty (National Center for Children in Poverty, 2012).

Research indicates that policy makers can achieve greater return on investments in early childhood education for children from families with low incomes and limited parent education than from remedial programs for adults with limited workforce skills. Long-term studies show that model programs for three- and four-year-olds living in poverty can produce benefit-cost ratios as high as 17:1 and annualized internal rates of return of 18% over 35 years, with most of the benefits from these investments accruing to the general public. While it is not realistic to assume that all scaled-up early childhood programs will provide such returns, it is likely that benefit-cost ratios still will be considerably greater than 1:1 (Center on the Developing Child at Harvard University, 2007).

## Implementation of the ASQ Project

The ASQ project is a community based program designed to educate and train childcare providers on the importance of developmental screenings. Childcare providers can, in turn, help parents conduct developmental screenings on their own child. In addition, the ASQ project was also designed to raise awareness among Medical Home providers (e.g., pediatricians, family medicine doctors, and nurse practitioners) of developmental screenings being conducted and to facilitate quicker referrals to early intervention and early childhood special education providers when indicated. This program differs from other screening programs in the country where the conducting of developmental screenings is mainly the responsibility of the Medical Home. By capitalizing on the on-going relationship between childcare providers and parents, Arkansas has the unique opportunity to improve ChildFind activities and identify children who are in need of early intervention/early childhood special education services in the state. The end goal is to ensure children are receiving appropriate intervention services. There are five steps to achieving this goal, which include: training and awareness, screening and referral, intake, diagnostic and intervention. The ASQ project directly addresses the first two steps and indirectly addresses the remaining three.



### *Step 1: Training & Awareness*

The six Resource and Referral (R&Rs) Agencies across the state recruit childcare providers to participate in the program. For their participation, the childcare facilities receive complete kits of the ASQ and Ages & Stages-Social Emotional (ASQ-SE). The ASQ-SE assesses children's social

and emotional behaviors, such as self-regulation and interaction with others. Childcare providers attend a free, 1-day training on how to administer the ASQ and ASQ-SE. In return for attending the training, each provider receives Traveling Arkansas' Professional Pathways (TAPP) early childhood professional development hours. The R&Rs also provide ongoing support to childcare providers to help with administering the ASQ/ASQ-SE. In addition, the R&Rs are charged with contacting the Medical Home providers in their region to raise awareness of the program and to alert the Medical Home that the childcare providers will be faxing/ mailing screening results to them. The goal is for the Medical Home to keep the screening results in the child's medical chart in order to either repeat the screening or refer to the results if the Medical Home is contacted by an early intervention/early childhood special education provider about the need for diagnostic testing.

### *Step 2: Screening & Referral*

Once trained on the ASQ/ASQ-SE, childcare providers identify children who need to be screened, either by the recommended state guidelines of 6, 18, 30, 42, and 54 months of age months or by their own screening schedule (e.g., every fall, or every fall and spring). The childcare provider then asks the parent to complete the ASQ/ASQ-SE for their child. Childcare providers review the results with parents and in some instances are able to demonstrate that the child assessed has skills that the parent was unaware. At this point, the childcare providers fax/mail the screening results to the Medical Home. If the results are in the "no need for concern" range, there is nothing more to do. If the results are in the "monitor" range, the childcare provider can provide additional activities for the child to give them a chance to learn/master those skills in the particular developmental areas that are identified. For example, the childcare provider may make available additional opportunities for fine motor activities (e.g., stacking blocks, stringing beads, etc.). If the child is in the "refer" range, then childcare providers encourage the parents to contact their Medical Home, First Connections (i.e., Arkansas' Part C provider) or the Co-operative/School District in their area that provides early childhood special education services (i.e., Arkansas' Part B services).

### *Step 3: Intake*

At this point the parent can take one of two paths to seek services for their child. First, parents can contact the Medical Home directly and have their child rescreened or referred for services. Secondly, parents can directly contact First Connections (i.e., EI provider) or the Co-operative/School District in their area that provides early childhood special education services (i.e., EC provider) and request a rescreen/diagnostic assessment.

### *Step 4: Diagnostic*

Once the early intervention/early childhood special education provider (EI/EC) is contacted by either the Medical Home or the parents, the EI/EC provider will schedule a diagnostic evaluation for the child. If insurance or Medicaid is going to be billed, the EI/EC provider will contact the Medical Home for a prescription for the diagnostic evaluation. There is no cost to the family with the exception of a deductible or co-pay if insurance is billed; however, the parent's insurance will not be billed unless the parents agree. EI/EC providers are considered to be the payer of last resort. Once the diagnostic evaluation has been conducted, the results are reviewed with the parents, and a report is sent to the Medical Home. It is important to note that children do not need to be Medicaid eligible to receive EI/EC services; however, if they are, Medicaid may be billed.

### *Step 5: Intervention*

If the results of the diagnostic evaluation indicate intervention is warranted, the EI/EC provider will contact the Medical Home for a prescription for therapy services if Medicaid or other insurance is to be billed. At this point, intervention services will begin with the child/family.

### *Arkansas EI/EC Providers*

There are five types of EI/EC providers in Arkansas: Part C, Part B, Child Health Management Services (CHMS), Developmental Day Treatment Clinical Services (DDTCS) and private therapists.

First Connections is the Part C provider and connects families with services and interventions to enhance each child's development. First Connections receives federal funding and is required to report on the number of children served using the IDEA database system.

Services provided through the First Connection Program are:

- Free to eligible infants & toddlers and their families
- Voluntary on the part of the family
- Provided by qualified professionals who meet state licensing requirements
- Available to all children even if the child is not Medicaid eligible.

Children ages birth to thirty-six months who:

- Have a 25% delay in one area qualify for early intervention services
- Have a 25% delay in 2 or more areas qualify for DDS (includes DDTCS); or
- Have a medical diagnosis that has a high probability of resulting in developmental delay.

The Arkansas Department of Education provides early childhood special education services for children 3-5 years of age who:

- Because of mental, physical, emotional, or learning disabilities require special education and related services as defined by the federal Individuals with Disabilities Education Act (IDEA).

These services may be offered through an early childhood co-operative or a local school district depending on the region in the state. Children between the ages of 3–5 years who qualify for services under the non-categorical label must have a delay of:

- 2 standard deviations in one domains
- Or 1 ½ standard deviation in two domains.

The billing and eligibility requirements for the other types of providers vary and do not necessarily follow mandated federal or state criteria.

## **Overview of Evaluation Activities**

In Phase III, the following aspects of the ASQ project were evaluated. A copy of all data collection instruments can be found in the appendix of this report. The key components were:

### **Resource and Referral Link**

- An action plan that thoroughly explained the implementation process was developed by the R&R staff and was provided to participants at the ASQ training workshops.
- R&R staff continued to offer retraining for Phase I and II providers. The on-going support that R&R staff provides the childcare facilities during implementation of the ASQ project is essential for their success and was continued during Phase III. The number of childcare providers added during Phase III was reduced from Phase II levels due to funding.

### **Childcare Provider Link**

- A new process for reporting ASQ screening information was developed by the University of Arkansas for Medical Sciences (UAMS). An on-line form was created to allow participants to record each screening. Alternatives to this reporting system were provided through fax, email, and phone contacts.
- In-depth parent interviews were planned for a limited number of parents whose children scored in the “monitor” and “refer” areas.
- Evaluation of the R&R training of providers at target facilities and use of the provider-parent survey were continued.
- A phone survey of Phase I and II childcare providers was conducted during the fall to determine who was continuing to use the ASQ screening process.

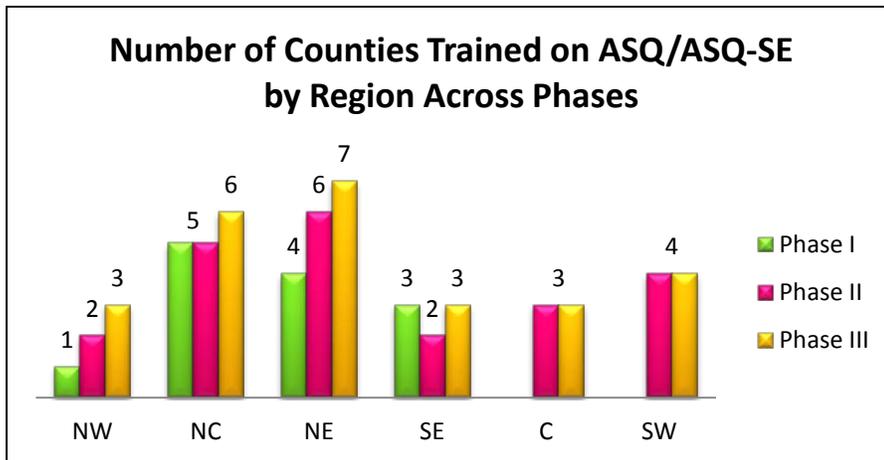
### **Physician Link**

- With DHS/DCCECE, UAMS facilitated the development of a Continuing Medical Education training (CME) for Arkansas physicians to raise awareness of the use of the ASQ screening project with childcare providers. The CME training expanded efforts to raise physician awareness of the ASQ project and engage them as partners in the early intervention process. CME training was available to all professional staff across the state and in target clinics. Pre/Post tests were included in the CME training to assess knowledge gained.
- R&R staff continued to contact local physicians to make them aware that local childcare providers were conducting the ASQ screenings. After screening, childcare providers sent screening results to the physician identified by the parent as the child’s medical home.

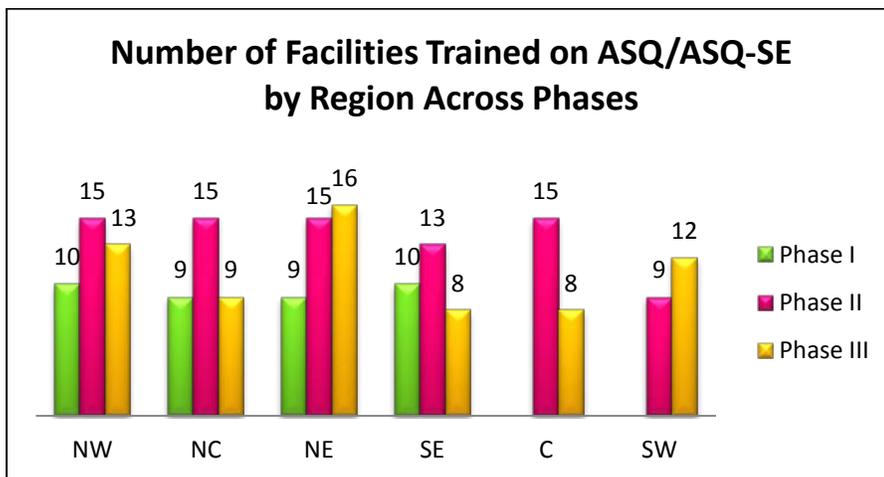
Data from these sources were used to evaluate each of the three goals. Results are described in subsequent sections.

# GOAL ONE: Increase Knowledge of Childcare Providers

The evaluation of Phase II of the ASQ project revealed that the Resource and Referral (R&Rs) agencies are critical to the success of the childcare providers implementing the screenings. Therefore, a decision was made at the outset of Phase III that the R&Rs would decrease the number of facilities trained from 15 in Phase II to 8 in Phase III in order to provide better support to the facilities and their staff. The total number of R&Rs remained at 6, as it was at the end of Phase II. These regions included: Northwest, Northcentral, Northeast, Southeast, Central and Southwest. None of the R&Rs reported retraining any of the Phase I or Phase II providers during Phase III. The facilities that were trained during Phase III were located in 26 counties across the state. Across all phases, 41 of the 75 counties in Arkansas have had at least one childcare facility trained on the ASQ/ASQ-SE.

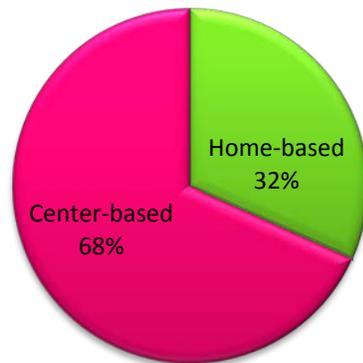


In Phase III, a total of 66 facilities received training. This represents a decrease from the 82 sites trained in Phase II but was to be expected, as the goal for each R&R was to train a minimum of 8 facilities. A total of 186 facilities received training across all three phases of the ASQ project.

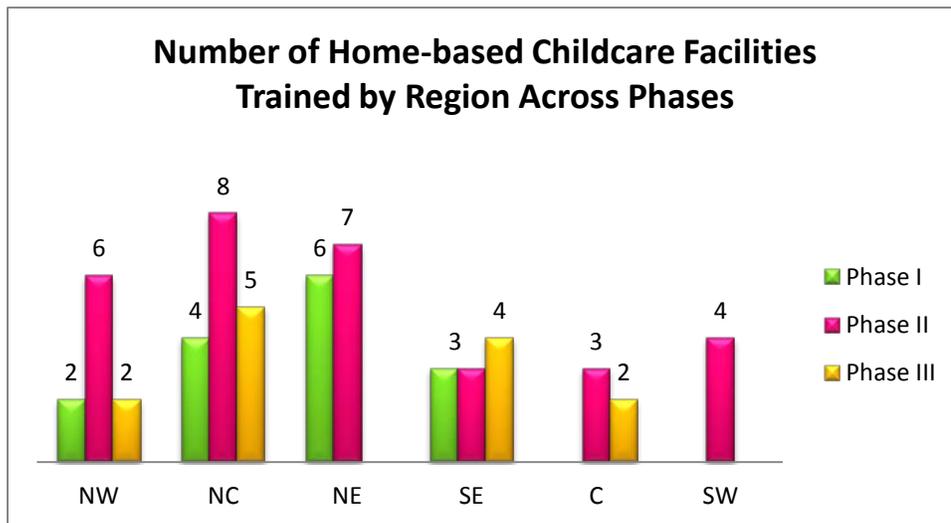


Both center- and home-based childcare providers continue to be represented in the ASQ project. Center-based programs included large and small capacities, and home-based facilities included providers offering care in their homes, as well as home visitation programs. During Phase III, home-based providers comprised 32% of the ASQ facilities, and center-based comprised 68%. In Phase III, the number of center-based facilities receiving training increased by 6% and the home-based facilities decreased by 6% as compared to Phase II.

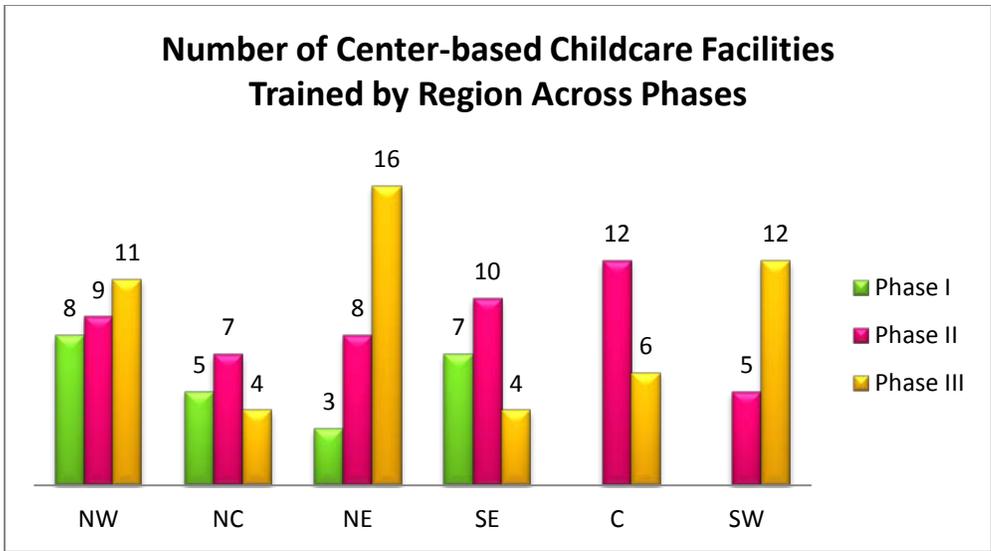
**Percentage of Home- And Center-Based Provider Facilities Across all Phases**



The number of home-based providers who received training in Phase III decreased from 31 in Phase II to 13 in Phase III. The Northcentral and Southeast provided training to 9 of the 13 home-based facilities participating Phase III.

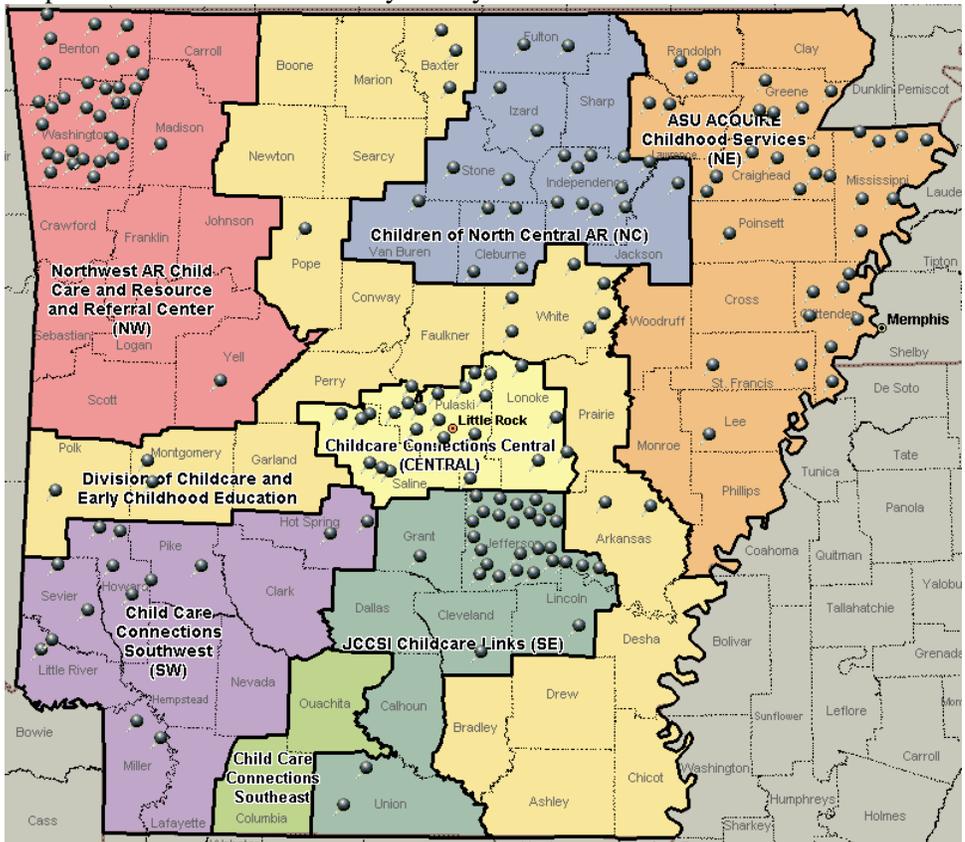


The number of center-based facilities increased from 51 in Phase II to 53 in Phase III. The Northwest, Northeast and Southwest regions provided training to 39 of the 51 center-based facilities that received training in Phase III.



### Location of ASQ Facilities

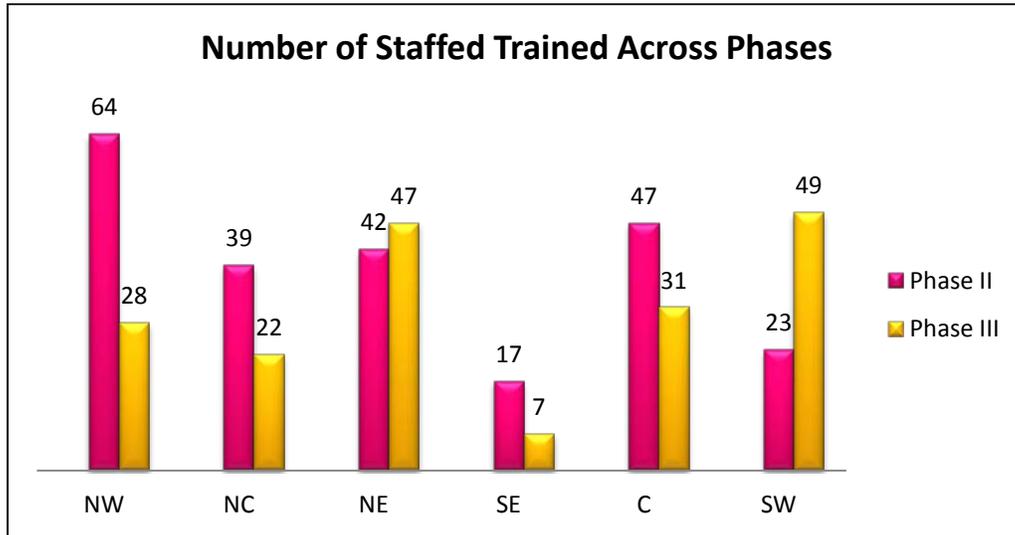
The map below shows the location by county across all Phases.



**ASQ sites  
Across all three Phases**  
 6 R&R Areas  
 41 Counties  
 186 Facilities

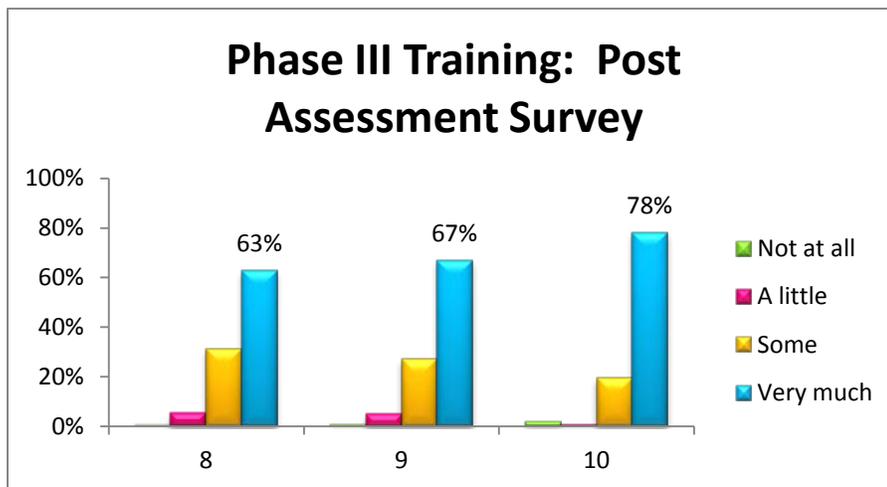
## Quality of Training: Knowledge Change

The R&Rs were responsible for conducting one-day training sessions for providers in their area. The goal was to increase the knowledge of the ASQ/ASQ-SE screening protocol for the childcare providers participating in the ASQ project. During Phase III, a total of 184 childcare staff were trained across the state on the ASQ/ASQ-SE. Across all three phases, a total of 416 providers were trained.



\*Note: This evaluation team began in Phase II and did not have this specific data for Phase I providers.

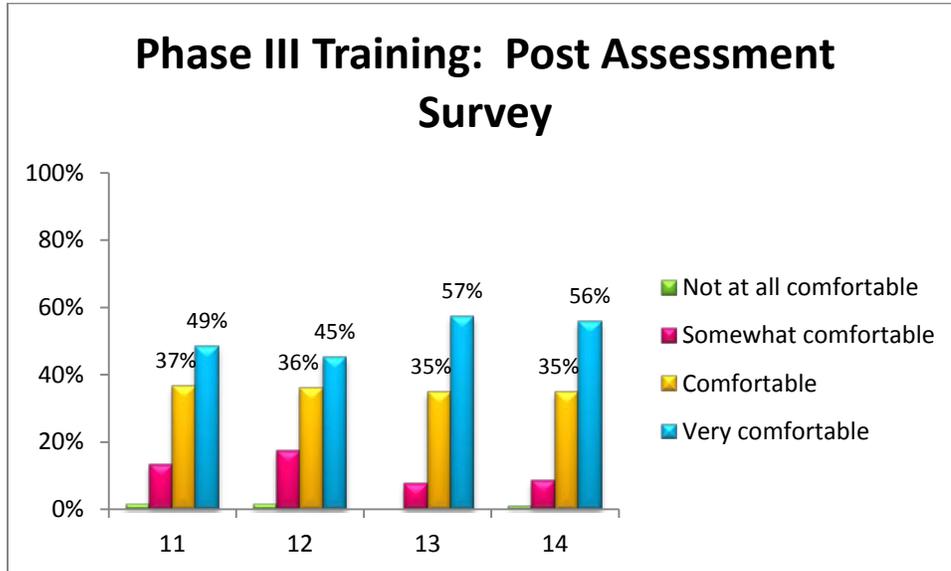
Providers who attended the training were asked to fill out pre- and post-training assessment surveys. In the post assessment survey, 63% of the participants said they learned a lot at the training, and the information they had learned would help them serve children with developmental needs (67%). Seventy-eight percent thought screening with the ASQ was a good idea.



### Questions

8. I learned a lot in the training session.
9. The information I learned will help me work with families & children with developmental needs.
10. Overall, I think screening with the ASQ is a good idea.

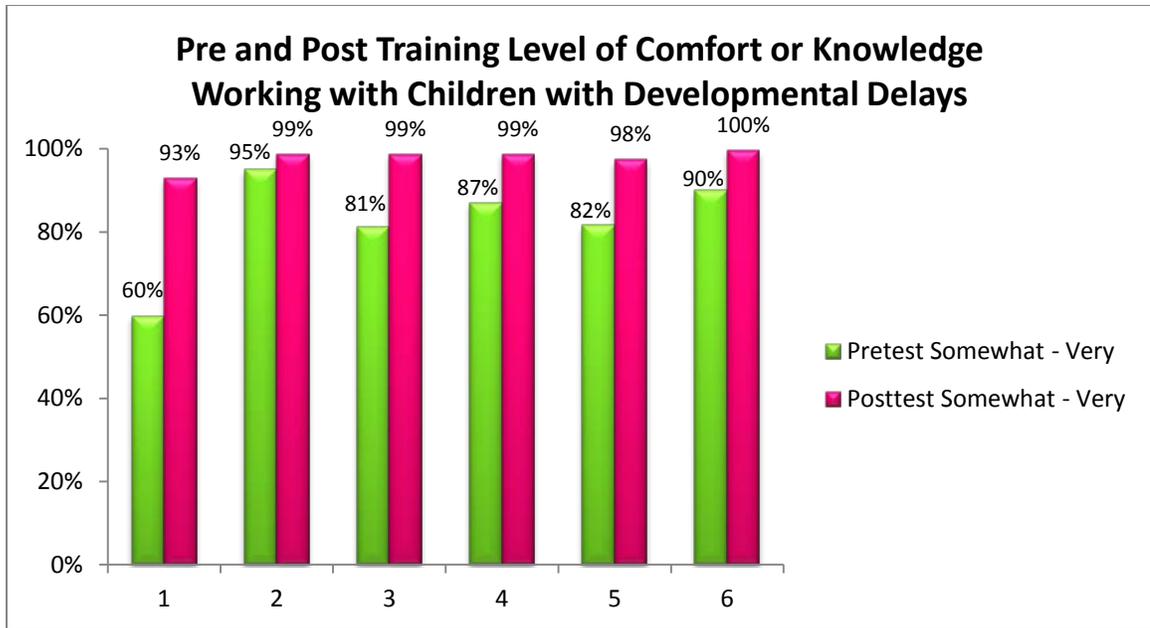
In the post assessment survey, 86% and 81% of providers rated that they were **comfortable** to **very comfortable** administering the ASQ and ASQ-SE, respectively, after completing the training. More than 90% of the providers said they were **comfortable** to **very comfortable** understanding the goal of the ASQ and ASQ-SE.



**Questions**

- 11. I am comfortable I can administer the ASQ.
- 12. I am comfortable I can administer the ASQ-SE.
- 13. I understand the goal of the ASQ.
- 14. I understand the goal of the ASQ-SE.

On the pre and post training surveys, participants were asked about their comfort and knowledge in working with children with developmental delays. After the training, over 90% were **somewhat** to **very comfortable** they could identify children with developmental needs, were knowledgeable about social and emotional development in children, could talk with parents, make referrals, and intervene during their work with children who screened with developmental delays. Responses showed an increase of 30% in childcare providers' ability to identify children with developmental needs. After the training, 100% of the childcare providers reported they felt comfortable intervening with a child with developmental concerns during their work day.



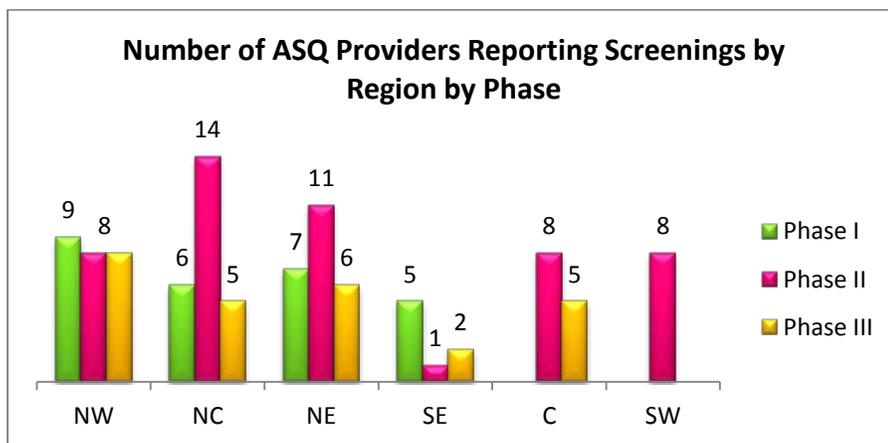
**Questions**

1. I have had enough training to identify children with developmental needs.
2. I am knowledgeable about social and emotional development in children.
3. I am knowledgeable about how to help children with developmental needs.
4. When a child has a developmental concern: I am comfortable talking to the parent about the delay.
5. When a child has a developmental concern: I am comfortable I can make a good referral for children.
6. When a child has a developmental concern: I am comfortable I can intervene with a child during my work with them.

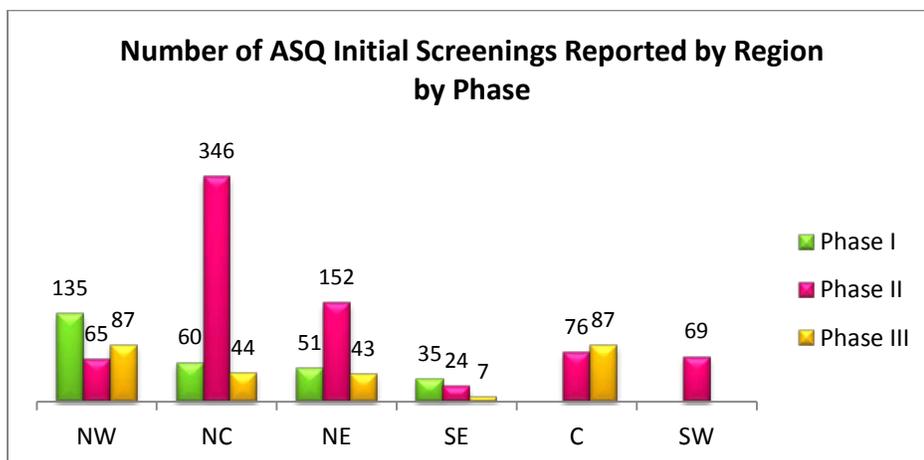
# GOAL TWO: Integrate ASQ into Early Childcare Programs

## Number of Children Screened

In Phase III, only 26 (39%) of the 66 facilities reported screening results using the online or mail-in system, as compared to the 61% (n=50) providers reporting results in Phase II. The online and mail-in system was designed to relieve the R&Rs of additional work. However, it appears that the personal relationship between the R&Rs and the childcare facilities is critical to obtaining screening results.



In Phase III, 268 ASQ screening results were reported using the online or mail-in system. Again, it is important to note that Phase III included 66 providers, while Phase II was comprised of 82 providers. In addition, Phase III numbers represent the number of initial screenings and individual children. In Phase II, initial and follow-up screenings were not separated; therefore, the number of screenings reported in Phase II was likely inflated. A total of 1281 ASQ screening results were reported over all three phases. The Southwest region did not report any screening results for Phase III, and the Southeast reported only 7 screening results.



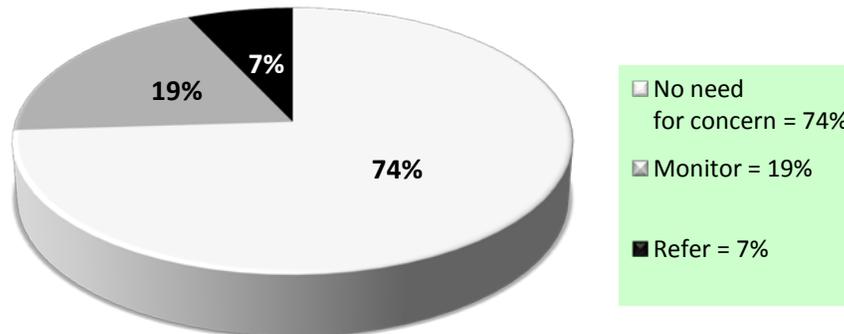
## Results of Screening

Of the 268 ASQ initial screening results reported in Phase III, 199 (74%) were classified as no need for concern, 51 (19%) were classified as monitor, and 18 (7%) were classified as refer. There were 25 follow-up ASQ screenings that were reported. Of those 25, 21 (84%) were classified as no need for concern, 4 (16%) were classified as monitor, and 0 were classified as refer.

ASQ Initial Screening Screenings Reported by Phase III Providers				
Region	Number of First Time ASQ's Reported	Number "No need for concern"	Number "Monitor"	Number "Refer"
Northwest	87	75	8	4
Northeast	43	30	11	2
Northcentral	44	30	10	4
Southeast	7	7	0	0
Central	87	57	22	8
Southwest	0	0	0	0
<b>TOTAL</b>	<b>268</b>	<b>199 (74%)</b>	<b>51 (19%)</b>	<b>18 (7%)</b>



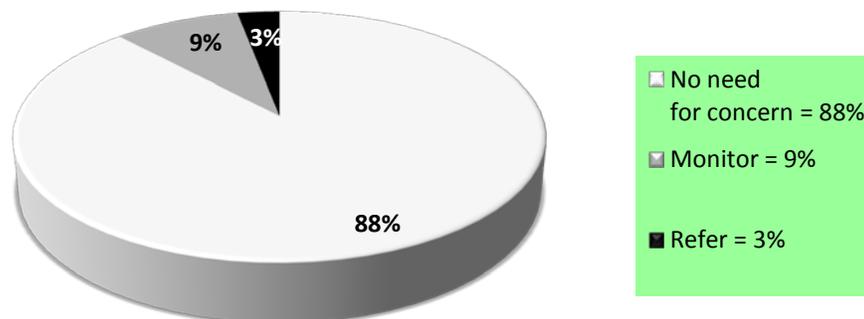
**Percentage of ASQ Screen Results Phase III**



Of the 230 ASQ-SE initial screening results reported in Phase III, 202 (88%) were classified as no need for concern, 21 (9%) were classified as monitor, and 7 (3%) were classified as refer. There were 30 follow up ASQ-SE screenings that were reported, with 19 (63%) classified as no need for concern, 8 (27%) classified as monitor and 3 (10%) classified as refer.

ASQ-SE Initial Screenings Reported by Phase III Providers				
Region	Number of First Time ASQ-SE's Reported	Number "No need for concern"	Number "Monitor"	Number "Refer"
Northwest	89	81	5	3
Northcentral	21	19	2	0
Northeast	44	39	2	3
Southeast	7	6	0	1
Central	69	57	12	0
Southwest	0	0	0	0
<b>TOTAL</b>	<b>230</b>	<b>202 (88%)</b>	<b>21 (9%)</b>	<b>7 (3%)</b>

Percentage of ASQ-SE Screen Results Phase III



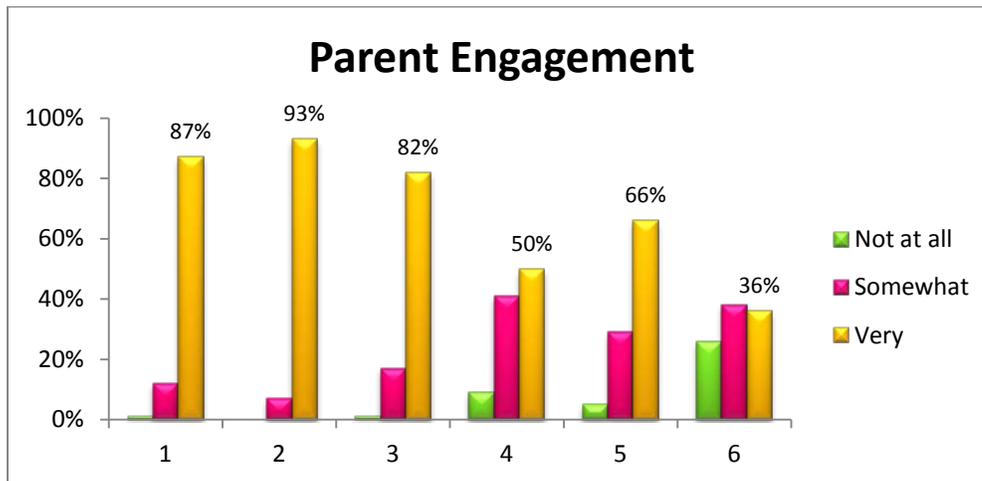
## Description of Provider-Parent Input

Childcare providers were asked to complete a provider-parent survey when they met with parents to share the results of the ASQ screening. The form is designed so that childcare providers complete one side of the form and parents complete the other. Although 268 initial ASQ screenings were reported, only 108 (40%) provider-parent surveys were returned. In Phase II, only 35% of the provider-parent surveys were returned. Fifteen percent of the facilities that returned provider-parent surveys were home-based facilities and 85% were center based facilities.

Provider-Parent Surveys	
Region	Number of Provider-Parent Surveys returned
<b>Northwest</b>	40
<b>Northeast</b>	21
<b>Northcentral</b>	6
<b>Southeast</b>	1
<b>Central</b>	21
<b>Southwest</b>	19
<b>TOTAL</b>	<b>108</b>

## Parent Engagement

The parent-provider survey assessed parents' perceptions and attitudes to the use of the ASQ screening tool. Overall, parents were supportive of the ASQ. For example, over 87% of parents found the ASQ questions clear, were comfortable with the questions, and understood its purpose. A majority (91%) indicated they learned a little or a lot about their child's development, and 95% found the information somewhat to very helpful.



### Questions

1. Were the questions on the Ages and Stages Questionnaire clear?
2. How comfortable were you answering the questions on the Ages and Stages Questionnaire?
3. Do you understand the purpose of the Ages and Stages Questionnaire?
4. How much did you learn about your child's development after taking the Ages and Stages Questionnaire?
5. Was the information you were given about your child's development helpful?
6. How likely are you to discuss the results with your child's doctor?

Parent responses were listed as: Not at all, Somewhat or Very (Clear, Comfortable, Helpful, Likely)

Thirty-six percent indicated they were ‘very’ likely to discuss the results with their child’s doctor.

<b>ASQ Result By Plans to Visit Physician</b>					
<i>Q6. How likely are you to discuss the results with your child's doctor?</i>					
		<b>Not at all likely</b>	<b>Somewhat likely</b>	<b>Very likely</b>	<b>Total</b>
<b>ASQ Result</b>	<b>No need for concern</b>	22	32	27	78
	<b>Monitor</b>	3	7	7	17
	<b>Refer</b>	1	1	7	9
<b>Total</b>		26	40	38	104

- 14 of 17 (82%) that received “monitor” scores were somewhat to very likely to discuss results with child’s doctor.
- 8 of 9 (89%) that received “refer” scores were somewhat to very likely to discuss results with child’s doctor.
- 22 of 26 (85%) that received “monitor/refer” scores were somewhat to very likely to discuss results with child’s doctor.

In-depth parent interviews were not conducted during Phase III due to the time needed to receive IRB approval.

A follow-up phone survey was conducted with Phase I and Phase II providers to determine if they were still using the ASQ. Calls were made to 104 facilities, with at least five attempts made to contact the facility before classifying them as unable to contact. Of the 69 facilities that were contacted, 33(48%) reported that they were still using the ASQ. Of the 33 facilities still using the ASQ, 17 of them were home-based facilities, and 16 were center based facilities.

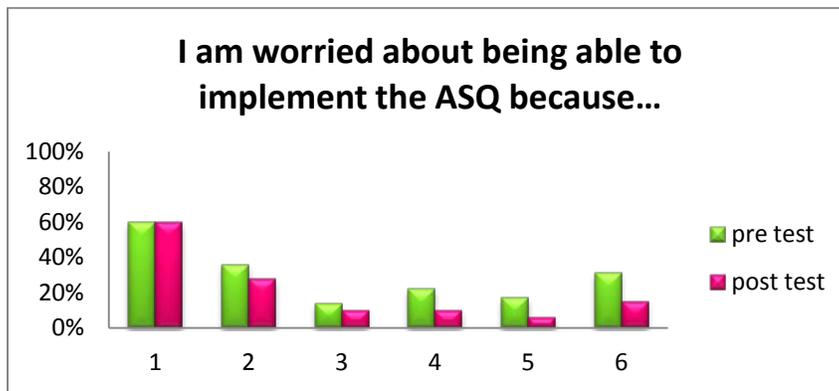
<b>Phase I &amp; II Provider Phone Survey</b>				
<b>Region</b>	<b>Number of Facilities Attempted</b>	<b>Unable to Contact</b>	<b>Facilities Not Using ASQ</b>	<b>Facilities Using ASQ</b>
<b>Northwest</b>	28	9	9	10
<b>Northeast</b>	24	8	9	7
<b>Northcentral</b>	12	4	1	7
<b>Southeast</b>	8	3	2	3
<b>Central</b>	15	7	6	2
<b>Southwest</b>	17	4	9	4
<b>TOTAL</b>	<b>104</b>	<b>35</b>	<b>36</b>	<b>33</b>

# GOAL THREE: Address Barriers to On-going Use of ASQ Among Providers and Physicians

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## Pre and Post Assessments by Providers During Training

Pre and Post training assessments asked providers to identify their concerns about implementing the ASQ. Their concerns decreased in all areas with the exception of getting parents to cooperate.



### Questions

1. Getting parents to cooperate
2. Finding time to do it
3. Remembering to do it
4. Getting the child to cooperate
5. Lack of resources
6. Lack of formal training

## Rating of Provider Support by R&R Staff

After training, R&Rs were asked to rate each of the childcare providers in three areas: likely to implement the ASQ, supportive of the ASQ, and overall reaction to the ASQ. In all areas, providers rated each area high. As seen below, in all but two areas, the average rating by providers was above 4 on a scale of 1 to 5. That is, at the end of training, R&Rs felt most providers were likely to implement the ASQ project.

R&R Staff Ratings for Providers Attending Training			
REGION	Likely to Implement the ASQ	Supportive of the ASQ	Overall reaction to the ASQ
NW	4.8	4.8	4.6
NC	4.8	4.8	4.8
NE	4.2	4.9	4.9
SE	3.7	5.0	4.7
Central	4.6	4.9	4.9
SW	3.1	4.0	3.2

Note: ratings on 1 to 5 with 5 the most positive

## Continuing Medical Education Event to Raise Physician Awareness of ASQ Project

A continuing medical education event was created to raise physician awareness of the ASQ project and developmental screening in general. Dr. Kathy L. Shapley created the presentation material, and Dr. Eldon G. Schulz presented the information to audiences. The presentation addressed four main points: 1) the importance of early intervention, 2) the physician's role in developmental screening, 3) an overview of the ASQ project, and 4) next steps and resources. See Appendix 7 for a handout of the presentation.

### Target Audiences

The *Navigating the Maze: Easy Steps from Developmental Screening to Referral* program was targeted to pediatricians, primary care and family practice physicians, nurse practitioners within these specialties, and clinic administrators across Arkansas. The core message to these audiences answers the question, "Why is childhood screening important" by stating that only 10% of patients age 5 and under with development delays are identified in a doctor's visit. The participants learned how screening can increase identification of children with developmental delay and how to handle referrals that are sent to the physicians' offices.

### Audience Generation

The program, *Navigating the Maze*, was delivered to a group of primary care physicians on June 23, 2012. In order to further disseminate the presentation, the educational program was repeated on July 17, 2012 at no additional cost. This continuing medical education (CME) event received a great deal of marketing through to the Department of Family & Preventive Medicine's core audience. To promote the CME event, approximately 4,720 postcards were mailed June 18, 2012 to a marketing list of physicians, nurse practitioners, and pediatric and primary care clinic managers across the state of Arkansas. Phone calls were also made to clinic managers of 22 pediatric clinics within a 30-mile radius of Little Rock, and follow-up flyers were sent by email

so clinics could distribute to their physicians promoting this educational opportunity. An e-blast of the program postcard was sent as a reminder on July 2, 2012, and a subsequent e-blast was sent the following week of July 13, 2012. An intranet notice to the UAMS campus was posted the week of June 25, 2012 to promote the event to UAMS faculty and staff.

#### **Interactive Televised Sites:**

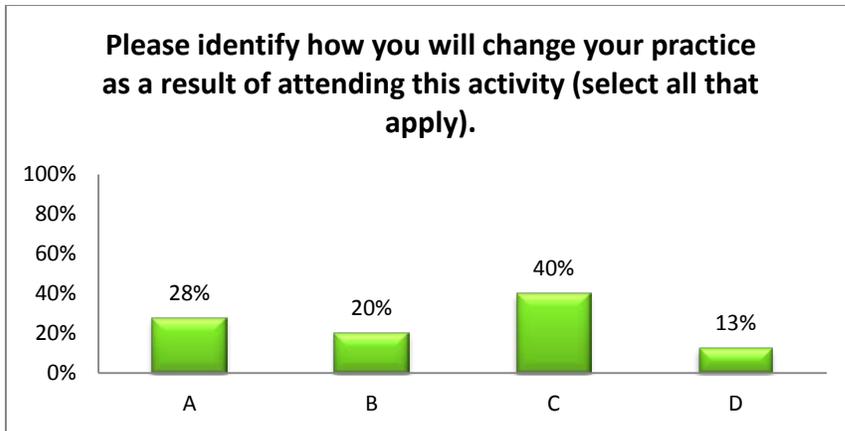
Interactive Televised Sites (ITV) viewed a live presentation of this CME program on July 17, 2012 at noon. An e-blast including a site registration form was sent June 10, 2012 to 107 sites across the state. Follow up phone calls were made to generate interest and explain the ASQ project with about a third of this list, focusing on areas of the state where childcare providers have been trained to use the ASQ. Fourteen sites registered for the CME event. The 14 sites included five AHEC sites in Helena, Mountain Home, El Dorado, Pine Bluff and Texarkana, Arkansas Children's Hospital, ASU College of Nursing, Dallas County Medical Center (Fordyce), Jefferson Regional Medical Center (Pine Bluff), St. Vincent Hospital, UAMS Northwest campus in Fayetteville, and other locations around the state. The ITV session was offered through a partnership with the UAMS Center for Rural Health. The Center for Rural Health recorded the presentation to create enduring material that will be available for ongoing viewing online through their CME portal for at least one year. DVD's of the session will be made available for distribution through the CME office at no cost.

#### **Participation**

The CME program, *Navigating the Maze*, was presented to 19 staff, faculty and residents within the Department of Family and Preventive Medicine on June 13, 2012. The program was repeated on July 17, 2012 to a live audience on the UAMS campus and to 14 distance sites around Arkansas. A total of 76 professionals participated in the July 17, 2012 presentation.

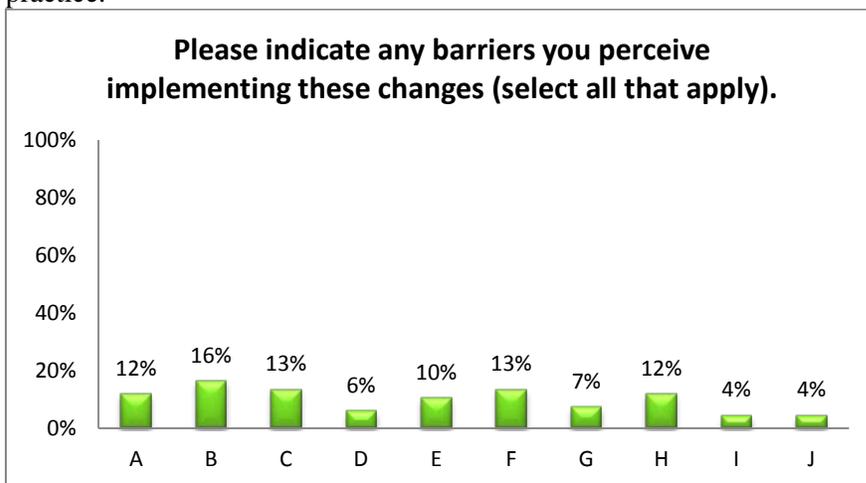
#### **Evaluation**

A posttest was used to evaluate the program for both presentation dates. The audience was 12.5% MDs, 18.8% nurses, 6.2% Pharmacist, 62.5% Other. One hundred percent of the audience "agreed" to "strongly agreed" Dr. Schulz was knowledgeable regarding the content, clearly explained the material and gave an effective presentation. Ninety-seven percent of the audience "agreed" to "strongly agreed" after the presentation they were better able to describe the important of early intervention and the AAP policy on developmental screening. Eighty-four percent of the audience "agreed" to "strongly agreed" after the presentation they were better able to describe the Arkansas ASQ project. When asked "After attending this presentation, I am better able to: Describe the 'next steps' physicians should take after receiving screening results," 93.8% "agreed" to "strongly agreed", and 96.7% "agreed" to "strongly agreed" they were better able to identify the resources for early intervention/early childhood special education. More than 97% of participants "agreed" to "strongly agreed" the presentation expanded their knowledge or affirmed their current knowledge is correct. Sixty percent of participants said they would change their current practice after attending this presentation.



- A- This activity validated my current practice. No changes will be made.
- B- Change the management and/or treatment of my patients.
- C- Create/revise protocols, policies and/or procedures.
- D-Other

Participants identified a variety of barriers to implementing the changes they would make in their practice.



- A-Cost
- B-Lack of Administrative Support
- C-Lack of Experience
- D-Lack of consensus or Professional guidelines
- E-Lack of resources (equipment)
- F-Lack of time to assess/counsel patients
- G-Reimbursement/insurance issues
- H-Patient compliance issues
- I-No barriers
- J-Other

# Summary

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Developmental screening is the first step in identifying children who need early intervention services. By capitalizing on the on-going relationship between childcare providers and parents, Arkansas has the unique opportunity to improve ChildFind activities and identify children who are in need of early intervention/early childhood special education services in the state. In addition, the Arkansas ASQ project keeps the Medical Home informed of all screening results. The end goal is to ensure children are receiving appropriate intervention services.

This project assessed the feasibility of the Ages & Stages Questionnaire (ASQ) to identify children 6 months to 5 years at risk for developmental delay in home- and center-based childcare facilities throughout Arkansas. The ASQ project had three goals:

1. Increase the knowledge of childcare providers
  - a. Educate many providers
  - b. Educate providers regarding the ASQ and early screening
2. Integrate the ASQ into Early Childcare programs
  - a. Encourage providers to adopt the ASQ to screen routinely
  - b. Engage parents to support use of ASQ
  - c. Educate providers to make program changes based on ASQ
3. Identify provider and address physician barriers to on-going use of the ASQ

## **Provider Knowledge Increased**

Across all three phases, 41 of the 75 counties in Arkansas have had at least one childcare facility trained on the ASQ/ASQ-SE. A total of 186 facilities and 416 childcare providers have received training. While one challenge is the frequent turnover in childcare staff, it is not uncommon for staff members to move between facilities. The fact that in a two year period 416 childcare providers have received training is encouraging. Both home- and center-based facilities are represented at 32% and 68% respectively.

More than two-thirds of the individuals trained in Phase III stated that they learned a lot and thought the information in the training would help them work with families and children with developmental disabilities. Seventy-eight percent of the childcare providers thought screening with the ASQ was a good idea.

Pre/Post assessment measures indicated a 30% increase in childcare provider's abilities to identify children with developmental needs. After the training, 100% of the childcare providers said they somewhat to very comfortable working with a child with a developmental concern.

## **ASQ Was Successfully Integrated**

Childcare providers successfully integrated the ASQ into their programs. In Phase III, 268 initial ASQ screenings were reported, and 230 initial ASQ-SE screenings were reported. However, it is important to note that only 39% of the facilities trained on the ASQ actually reported their screening results using the UAMS online system or fax/mail. This represents a considerable decrease from the 61% of facilities reporting in Phase II. It appears that the relationship between the childcare provider and the R&R is critical to collecting this type of information. Across all three phases, a total of 1,281 screening results have been reported. During Phase II, however,

initial and repeat screenings were not separated. Therefore, the 1,013 screenings completed in Phase II may not represent individual children.

Among the 268 initial ASQ screenings, 51(19%) were classified as monitor and 18 (7%) were classified as refer. Among the 230 initial ASQ-SE screenings, 21(9%) were classified as monitor and 7 (3%) were classified as refer. Based on the 108 Provider-Parent surveys that were returned, 87% of parents found the ASQ questions clear, were comfortable with the questions, and understood the purpose of the ASQ.

### **Barriers Were Identified**

Sixty percent of participant who attended the CME event said they would change their current practice after viewing the presentation. The participants identified the following barriers to making those changes in their practice: cost (12%), lack of administrative support (16%), lack of experience (13%), lack of time to assess/counsel patients (13%), and patient compliance issues (12%).

### **Recommendations**

This project identified several recommendations that would lead to improvements in the early identification and service delivery for children. These include recommendations for continued use of the ASQ and its long term integration into early childhood programs.

1. The findings from this study suggest implementing screening in childcare settings is a cost effective means for reducing later use of special education services; therefore, it is important to facilitate the use of developmental screenings in quality early childhood programs. Implementing ASQ at the lowest levels of Better Beginnings as deemed financially feasible for the state would have the greatest impact on child outcomes.
2. Continue the system of R&R training for the use of the ASQ as a screening tool. The R&R staff has been successful in training programs to use and understand the value of screening tools like the ASQ.
3. R&R programs may need support and advice in the ongoing use of the ASQ, specifically related to the initial recruitment of childcare providers. There was significant variation across the regions of the state in the success of the R&R to engage and entice childcare providers to attend and implement. This is likely driven by the expertise of the R&R staff but may also be impacted by the capacity of the providers in the area and the number of programs at higher levels of Better Beginnings.
4. There is an ongoing need to increase awareness of the ASQ program and the system of referrals for medical providers. It is important to continue to promote the CME enduring material developed by this project to healthcare providers across the state. This is best done by working with the UAMS Department of Family and Preventive Medicine CME group and the Medical Home group to continue to advertise the enduring material.
5. To streamline the process of referrals to early intervention/early childhood special education, the Division should sponsor presentations conducted in each R&R area to educate childcare providers on making referrals to First Connections (Part C) and Early Childhood Special Education (Part B).
6. To monitor and evaluate the system, a routine data collection system should be considered. By continuing to collect and track the data on screening results, this

information can help the state know where different types of providers are needed. Consider developing a central repository where data can be entered and analyzed. This information can be conveyed to Part C/Part B as well as university training programs to possibly address staffing needs. Based on the rate of return during Phase III, it appears when the R&Rs have contact with the childcare providers and are requesting the information on a weekly/monthly basis, the rate of return is higher than having the childcare providers enter the data themselves. It may be possible to include the reporting of the ASQ results of the initial child screening into the current reporting systems used by providers.

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# Appendix 1: Ages & Stages Training for Child Care programs Cover Sheet for Trainers

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Date of Training: \_\_\_\_\_

R&R Trainer: \_\_\_\_\_

**Instructions:**

Before the training, number the pre and posttest forms and provide them in a packet to each person trained. Instruct each participant to complete a Pretest ASQ form before training begins. Our goal is to be able to match each person's pre and posttest forms without having them identify themselves.

Child Care Provider's Name  Place a star (*) next to the name of providers from Phase I and II	Number of staff trained today	Approximate number of children served 0 to 5 at provider	Rate Provider		
			Likely to Implement 1= No 5 = Yes	Supportive 1= No 5 = Yes	Overall reaction to ASQ 1= Poor 5 = Good

The *Number of staff trained* will let the evaluation team know how many pre and posttests we should have in the pile. This will help us double check ourselves.

The *Approximate number of children served 0 to 5 at provider* will let the evaluation team know about how many children should be assessed with an ASQ over the course of the year.

*Rate Agency* – This is very subjective, but we will use to give us an initial rating on the three areas.

**Rate 1 = 'Not Very Positive' to 5 = 'Very Positive'**

1. *Likely to Implement* – Reaction suggests that the agency staff will conduct ASQ and ASQ-SE on schedule.
2. *Supportive to ASQ Use* – Even if they have concerns at their own site, they think it is valuable or a waste of time.
3. *Overall Reaction* – For example, many participants said positive or negative things during training.

1. Was the training completed? Please comment on any event that caused the training to be altered (i.e., shortened, some areas skipped, etc.).

2. Please note any comments regarding barriers, quotes of positive or negative nature, or other events from the training related to implementation and reaction.

Please keep this and the pre/post survey tools together in an envelope and mail to:

Janice Dent  
Community Research  
521 Jack Stephens Dr, Slot 530  
Little Rock, AR 72205

**Direct questions to Janice Dent at 501-686-6602 or by email to [dentjanicel@uams.edu](mailto:dentjanicel@uams.edu)**

## Appendix 2: Ages & Stages Child Care Programs Pre-Assessment Questionnaire

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Date of Training: \_\_\_\_\_ Name of your Child Care : \_\_\_\_\_

Trainer's Name: \_\_\_\_\_ Unique Number to Match Pre and Post: \_\_\_\_\_

	Yes	No	Don't know		
1. I have attended ASQ training within the last two years.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
2. My program/agency already uses the ASQ regularly to screen children for developmental needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	Not at all	A little	Some	Very much	
3. I have had enough training to identify children with developmental needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Not at all knowledgeable	Somewhat knowledgeable	Knowledgeable	Very knowledgeable	
4. I am knowledgeable about social and emotional development in children.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
5. I am knowledgeable about how to help children with developmental needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<b><i>When a child has a developmental concern:</i></b>	Not at all comfortable	Somewhat comfortable	Comfortable	Very comfortable	
6. I am comfortable talking to the parent about the delay.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
7. I am comfortable I can make a good referral.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
8. I am comfortable I can intervene with a child during my work with them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9. I am worried about being able to implement the ASQ because <b><i>(Mark all that apply)</i></b>					
Getting parents to cooperate	Finding time to do it	Remembering to do it	Getting the child to cooperate	Lack of resources	Lack of formal training for staff
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please share your questions or comments about the Ages and Stages Questionnaire.

# Appendix 3: Ages & Stages Training for Child Care Programs Post-Assessment Questionnaire

Date of Training: \_\_\_\_\_ Name of your Child Care: \_\_\_\_\_  
 Trainer's Name: \_\_\_\_\_ Unique Number to Match Pre & Post: \_\_\_\_\_

- |   |                              |                        |                       |                                |                       |                                   |
|---|------------------------------|------------------------|-----------------------|--------------------------------|-----------------------|-----------------------------------|
| 1. I have had enough training to identify children with developmental needs.  | Not at all                   | A little               | Some                  | Very much                      |                       |                                   |
|   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
|   | Not at all knowledgeable     | Somewhat knowledgeable | Knowledgeable         | Very knowledgeable             |                       |                                   |
| 2. I am knowledgeable about social and emotional development in children.   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
| 3. I am knowledgeable about how to help children with developmental needs.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
| <b><i>When a child has a developmental concern,</i></b>   | Not at all comfortable       | Somewhat comfortable   | Comfortable           | Very comfortable               |                       |                                   |
| 4. I am comfortable talking to the parent about the delay.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
| 5. I am comfortable I can make a good referral.   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
| 6. I am comfortable I can intervene with a child during my work with them.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          |                       |                                   |
| 7. I am worried about being able to implement the ASQ because <i>(Mark all that apply.)</i>                         |                              |                        |                       |                                |                       |                                   |
|   | Getting parents to cooperate | Finding time to do it  | Remembering to do it  | Getting the child to cooperate | Lack of resources     | Lack of formal training for staff |
|   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> | <input type="radio"/>             |
|   |                              | Not at all             | A little              | Some                           | Very much             |                                   |
| 8. I learned a lot in this training session.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
| 9. The information I learned in this session will help me work with families and children with developmental needs. | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
| 10. Overall, I think screening with the ASQ is a good idea.   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
|   |                              | Not at all comfortable | Somewhat comfortable  | Comfortable                    | Very comfortable      |                                   |
| 11. I am comfortable I can administer the ASQ.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
| 12. I am comfortable I can administer the ASQ-SE.   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
| 13. I understand the goal of the ASQ.   | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |
| 14. I understand the goal of the ASQ-SE.  | <input type="radio"/>        | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/>          | <input type="radio"/> |                                   |

Please share your questions or comments about the Ages and Stages Questionnaire.

## Appendix 4: ASQ Screenings for Phase III Child Care Providers

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### ASQ Screenings for Phase III Child Care Providers

UAMS is working with the Department of Child Care and Early Childhood Education to show the importance of screening children for developmental delays using the ASQ screening tool. We understand that your childcare facility used the ASQ to screen children last year and is continuing to use the ASQ to screen children this year. We would like you to complete this report each month for the ASQ screenings you conduct. Your participation is voluntary but **very** important in our efforts to show the value of the ASQ screening tool. All screening information will be kept confidential. If you have any questions, please contact Janice Dent at (501) 258-4406.

Region: \_\_\_\_\_

Child Care Facility: \_\_\_\_\_

This report is for the ASQs Screenings completed in the month of \_\_\_\_\_.

#### Initial Screenings

(the **first time** a child has been screened using the ASQ at your facility **this year**):

**White** (normal development), **Gray** (monitor range), **Black** (referral range)

How many first time ASQ-3 screenings have you done this month? \_\_\_\_\_

**ASQ-3:** Report the Number of Children Receiving First Time Screens  
(*numbers only, please*)

Age of child in months	Number with normal development (White) range	Number in monitor (Gray) range	Number in referral (Black) range
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-20 months			
Children 30 months			
Children over 30 months			

How many first time ASQ-SE screenings have you done this month? \_\_\_\_\_

**ASQ-SE:** Report the Number of Children Receiving First Time Screens  
(*numbers only, please*)

Age of child in months	Number Below Cutoff (normal development)	Number Near Cutoff (monitor range)	Number Above Cutoff (referral range)
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

### Follow-up Screenings

(any screenings **after** the first one a child received **this year**):

How many **follow-up ASQ-3** screenings have you done this month? \_\_\_\_\_

**ASQ-3** Report the Number of Children Receiving Additional Screens This Year  
(*numbers only, please*)

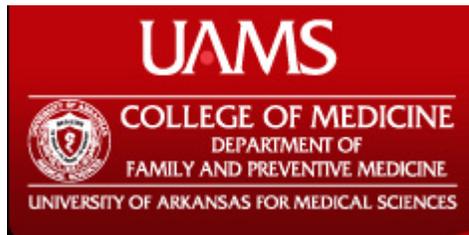
Age of child in months	Number with normal development (White) range	Number in monitor (Gray) range	Number in referral (Black) range
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 30 months			
Children over 30 months			

How many **follow-up ASQ-SE** screenings have you done this month? \_\_\_\_\_

**ASQ-SE:** Report the Number of Children Receiving Additional Screens This Year  
(*numbers only, please*)

Age of child in months	Number below cutoff (normal development)	Number near cutoff (monitor range)	Number above cutoff (referral range)
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

Thank you so much for taking the time to complete the ASQ reporting form. Remember, your answers will be kept confidential and used to tell us more about the usefulness of the ASQ screening tool. If you have any questions, please contact Janice Dent at (501) 686-6602.



Funded by the Arkansas Department of Human Services Division of Child Care and Early Childhood Education



## Appendix 5: Ages & Stages Phase III Provider-Parent Satisfaction Survey

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### **This survey is part of the Ages & Stages Project.**

The goal of the project is to ensure that children are healthy and ready to learn. The project seeks to coordinate parents, teachers, and physicians in providing the best care possible for each individual child.

Participating children should be screened at 6, 18, 30, 42, and 54 months.

Teachers and parents, please fill out the survey after discussing ASQ screening results. Upon completion, teachers should fax or mail the survey to:

**Janice Dent  
Community Research  
521 Jack Stephens Dr, Slot 530  
Little Rock, AR 72205**

**Fax: 686-8741**

This survey may be reproduced, but additional copies are also available upon request.

For requests or questions, contact your Resource and Referral Agency or  
Janice Dent at UAMS  
(501) 686-6602  
[dentjanicel@uams.edu](mailto:dentjanicel@uams.edu)

**Thank you for participating!**

**Questions 1-12 for Teacher Response**

1. Date Summary Completed \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

2. Center or Program Name  
\_\_\_\_\_  
\_\_\_\_\_

3. What county is your program in?  
\_\_\_\_\_  
\_\_\_\_\_

**Center/Program Type**

Center visitation     Home     Home

5. Child's age in months: \_\_\_\_ months

**6. ASQ-3 completed by**

Parent     Provider     Both

**7. ASQ-3 result**

	White	Gray	Black
Communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gross Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fine Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem Solving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Social	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**9. ASQ-SE completed by**

Parent     Provider     Both

**9. ASQ-SE result**

Below cutoff     Near cutoff     Above cutoff

**10. Do you intend to modify planning and activities provided for the child in these domains?**

	Yes	No	Not Sure
Communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gross Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fine Motor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem Solving	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Social	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Physician who will receive results  
\_\_\_\_\_  
\_\_\_\_\_

12. Will you make additional referrals? If yes, please describe.

**Questions 13-19 for Parent Response**

13. Were the questions on the Ages and Stages Questionnaire clear?

- Not at all clear
- Somewhat clear
- Very clear

14. How comfortable were you answering questions on the Ages and Stages Questionnaire?

- Not at all comfortable
- Somewhat comfortable
- Very comfortable

15. Do you understand the purpose of the Ages and Stages Questionnaire?

- Not at all
- Somewhat
- Yes, very clearly

16. How much did you learn about your child's development after taking the Ages and Stages Questionnaire?

- None
- A little
- A lot

17. Was information you were given about your child's development helpful?

- Not at all helpful
- Somewhat helpful
- Very helpful

18. How likely are you to discuss results with your child's doctor?

- Not at all likely
- Somewhat likely
- Very likely

19. How soon do you intend to set an appointment with your child's doctor?

- Within one month
- Within the next 3 months
- Within the next 6 months

## Appendix 6: Ages & Stages Questionnaire Phase III Phone Survey of Providers in Phase I & II

---

**Date:** \_\_\_\_\_ **Name of Provider Facility:** \_\_\_\_\_

**R & R Area:** \_\_\_\_\_ **Director's name:** \_\_\_\_\_

Results of call:

Conducted interview with Director or \_\_\_\_\_ why: \_\_\_\_\_

Phone number disconnected

Person did not know about ASQ and director not available.

No answer (mark this only after you have tried 5 times at 5 different times a day)

Call Log

Date /Time Called	Results/Notes

I am Lacy Lewis with University of Arkansas for Medical Sciences. I am trying to reach **Director's name** \_\_\_\_\_.

The Division of Child Care for the State of Arkansas has asked us to conduct a survey of the childcare facilities that participated in the Ages and Stages Questionnaire project. Our records show that your center was part of that project. That is, you or some of your staff were trained to use the ASQ (*repeat Ages and Stages if they ask*). Is that correct?

Yes  No

If you have time now I would like to ask a few brief questions about your experience with the use of the Ages and Stages Questionnaire in your facility, or I can call you back at a time later today when you could be available to answer my questions.

We are looking for centers that would be willing to share their ASQ results for the 2011-2012 year. To thank you for sharing your results, we will enter your child care facility into a drawing for \$50.00. We will draw the names of 25 participating child care facilities to receive the \$50.00 in May. Our reports of this information are confidential and no child care facility will be identified.

1. Are you still using ASQ screening with your children?  Yes  No

(If no) Thank you for your time. Have a nice day. They will not be entered into drawing.

(If yes), How many ASQs have completed this year? \_\_\_\_\_

Of those \_\_\_\_ ASQs completed how many have been initial screenings and how many have been repeated or follow up screenings? Initial \_\_\_\_\_ Repeat/Follow up \_\_\_\_\_

### Initial Screenings

#### **ASQ-3:** Report the Number of Children Receiving First Time Screenings

Of those XX initial screenings completed how many fall in the following age ranges...

Age of child in months	Number with normal development (White) range	Number in monitor (Gray) range	Number in referral (Black) range
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

#### **ASQ-3** Report the Number of Children Receiving Repeat/Follow up Screenings

Of those XX initial screenings completed how many fall in the following age ranges...

Age of child in months	Number with normal development (White) range	Number in monitor (Gray) range	Number in referral (Black) range
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

2. Are you still using ASQ-SE screening with your children?  Yes  No

(If no) skip to \*\*

(If yes), How many ASQ-SEs have completed this year? \_\_\_\_\_

Of those \_\_\_\_ ASQ-SEs completed how many have been initial screenings and how many have been repeated or follow up screenings? Initial \_\_\_\_\_ Repeat/Follow up \_\_\_\_\_

**ASQ-SE: Report the Number of Children Receiving First Time Screens**

Of those XX completed how many fall in the following age ranges...

Age of child in months	Number Below Cutoff (normal development)	Number Near Cutoff (monitor range)	Number Above Cutoff (referral range)
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

**ASQ-SE: Report the Number of Children Receiving Additional Screens This Year**

Of those XX completed how many fall in the following age ranges...

Age of child in months	Number with normal development (White) range	Number in monitor (Gray) range	Number in referral (Black) range
Children 2-8 months			
Children 9 months			
Children 10-17 months			
Children 18 months			
Children 19-29 months			
Children 30 months			
Children over 30 months			

\*\* start here if you skipped down...

- Can you estimate how many parent conferences you were able to schedule to review findings?  
Most, about half, or not many?  
 Not many     About half     Most
- Have you received any information from physicians based on the ASQ screens you sent to them?  
 Yes     No

Comments: \_\_\_\_\_

Thank you so much for taking the time to provide information about your ASQ screenings conducted this year. If you have any questions, please contact Janice Dent at (501) 686-6602.

## DEVELOPMENTAL SCREENING: FROM SCREENING TO REFERRAL AND ALL THE STEPS IN-BETWEEN

Presented by: Dr. Eldon G. Schulz  
Developed by: Kathy L. Shapley Ph.D.

### Program Overview

- Eldon G. Schulz, MD
  - Dr. Schulz is a Developmental-Behavioral Pediatrician, Professor in the College of Medicine and the College of Public Health at University of Arkansas Medical Sciences (UAMS) and is the *Rockefeller Chair for Children with Special Needs*. He is the Section Chief for Developmental-Behavioral and Rehabilitative Pediatrics in the Department of Pediatrics at UAMS.
- Program Overview
  - Dr. Schulz will provide an overview of child development, the importance of developmental screening and early intervention and the role of physicians in these programs.

### Objectives & Disclosures

- Objectives
  - Describe the importance of early intervention
  - Review the AAP policy on Development Screening
  - Describe the Arkansas ASQ/ASQ-SE project
  - Describe "next steps" physicians should take after receiving screening results
  - Identify the resources for early intervention/early childhood special education
- Dr. Schulz, MD and the conference planners have nothing to disclose related to this presentation.

## IMPORTANCE OF EARLY INTERVENTION

### Child Development

**Human Brain Development**  
Synapse Formation Dependent on Early Experiences

Sensory Pathways (Vision, Hearing)      Language      Higher Cognitive Function

Conception      Birth      (Months)      (Years)      Age

Source: Nelson, C. A., in *Wonders of Neighborhoods* (2006). Shankoff, J. & Phillips, D. (Eds.)

### Child Development

**Disparities in Early Vocabulary Growth**

SES = Socio-Economic Status

Cumulative Vocabulary

Age (months)

Source: Paul, R. & Paul, T. (1998). *Intelligence differences and the early experience of young American children*. Baltimore, MD: Brookes.

### Child Development

- Children's earliest experiences play a critical role in brain development.
- Early social/emotional development and physical health provide a foundation for cognitive and language skills to develop.

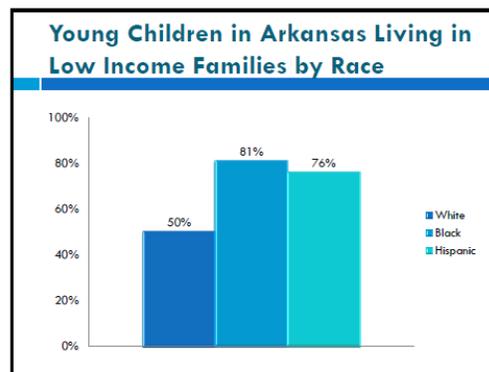
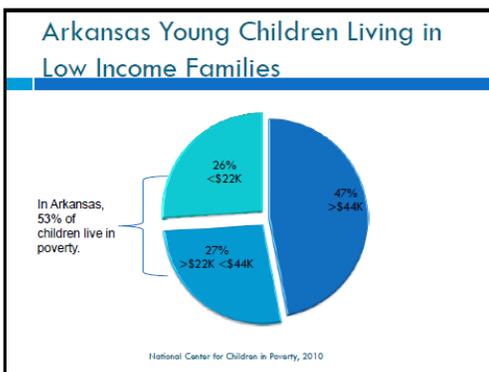


Center on the Developing Child at Harvard University, 2007

### Risk factors

- Children living in poverty are more likely to have
  - poor health
  - chronic health conditions
  - developmental disabilities

US Dep. Health & Human Services 2000; Bradley & Corwyn, 2002



### Importance of Early Intervention

- Investing in early childhood education has a greater return than remedial programs for adults.
- Model early childhood programs can produce benefit-cost ratios as high as 17:1 and yearly rates of return of 18% over 35 years.



National Scientific Council on the Developing Child, 2007

### PHYSICIAN'S ROLE

## Surveillance

- A means of discerning
  - Developmental risk (trauma, violence, abuse)
  - Protective factors (nurturing relationships, adequate nutrition, safe environment)
  - **does not** require a standardized instrument
- Informal questions and checklists identify only 10% of the children who are eligible for services<sup>1</sup>
- Is not the most effective way to detect developmental delays<sup>2,3</sup>

Glasco, et al., 2009; Rydt, Sharill, Majumdar, & Oskoui, 2005; AAP, 2006

## Developmental Screening

- Developmental screening
  - involves the use of standardized instrument.
  - **does not** result in a diagnosis or treatment plan
- Less than 20% of children between ten months and five years of age receive a developmental screening during a health care visit<sup>1</sup>.
  - The detection of developmental disorders is significantly lower than the prevalence<sup>2</sup>.

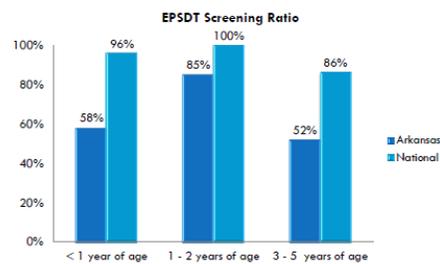
NSCH, 2007; AAP, 2006

## AAP policy

- All children should receive
  - a developmental screening at their 9-, 18-, and 30-month well-child visits<sup>1</sup>
  - an Autism screen @ 18 months and 24-30 months<sup>1</sup>
- Developmental screening at well-child visits is recommended as a key component of preventive care for children<sup>2</sup>.

AAP, 2006; Earls, Andrews, Hay, 2009

## 2010 EPSDT Rates



## Barriers to Physicians Conducting Developmental Screening

- Medicaid does not currently reimburse for developmental screenings
- Not enough time to complete a developmental screener and paperwork
- Physician administered screeners are less versatile and require certain materials<sup>1</sup>.

Dobrez, et al., 2001

## Barriers to Conducting Developmental Screening

- Concern regarding conflict of interest, i.e., "Fox guarding the chicken house"
- Physicians reluctant to refer without a "medical diagnosis"<sup>1</sup>
- No evidence base for therapy outcomes

Silverstein, et al., 2006

### Given these barriers to conducting developmental screenings...

- Arkansas implemented a state initiative, the ASQ project, designed to:
  - Ensure children receive developmental screenings at 6, 18, 30, 42, and 54 months of age months
  - Utilize community based childcare providers to work with parents to conduct screenings and review results
  - Keep the Medical Home informed (i.e. results are faxed/mailed to physician)

## ARKANSAS ASQ/ASQ-SE PROJECT

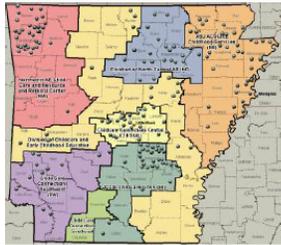
### ASQ/ASQ-SE

- The Ages and Stages Questionnaire (ASQ) is a developmental screener:
  - communication,
  - fine motor,
  - gross motor
  - problem solving, and
  - personal-social.
- The ASQ-Social Emotional (ASQ-SE) screens infants and young children for social-emotional concerns.

### Screening

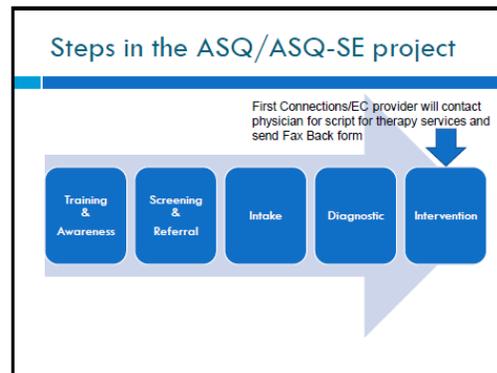
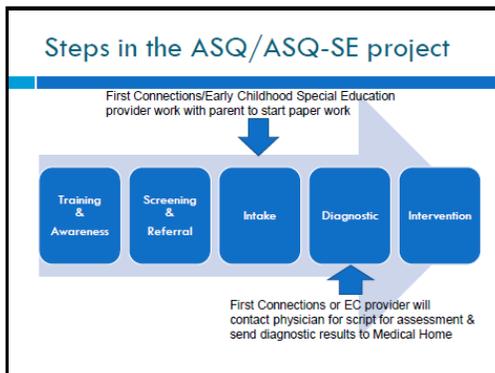
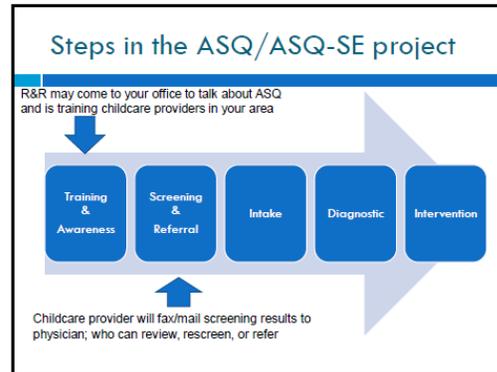
- Ages and Stages Questionnaire (ASQ-III/ASQ-SE)
  - Standardized measure
  - Completed by Parent/Caregiver
  - Results fall into 1 of 3 categories:
    - no need for concern
    - monitor
    - refer for diagnostic testing
  - Sensitivity 82% and Specificity 78%
  - Scored by childcare providers

### At least 1 childcare provider has been trained on the ASQ in 41 counties



### 2010-2011 ASQ results

2010-2011 ASQ Screening Results				
Region	Number of ASQ Reported	Number in "no need for concern" range	Number in "monitor" range	Number in "refer" range
North East	152	94	27	31
North Central	346	254	59	33
North West	65	40	17	8
South East	24	17	2	5
Central	76	58	10	8
South West	69	67	1	1
<b>TOTAL</b>	<b>732</b>	<b>530 (72%)</b>	<b>116 (16%)</b>	<b>86 (12%)</b>



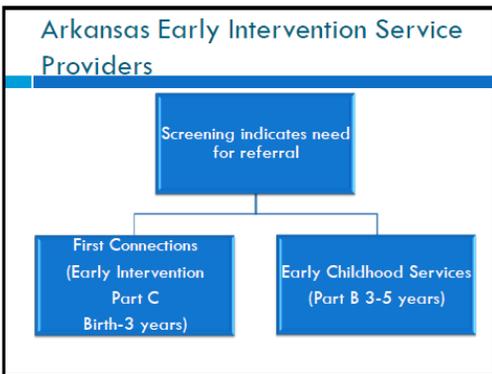
- ### Physician Actions
- Child care providers fax all ASQ screening results to the child's physician.
    - For those who screen in the "no need for concern" range;
      - keep a copy of the screening results in the child's medical record
    - For those who screen in the "monitor" range;
      - consider rescreening the child in 3-6 months

- ### Physician Actions
- For children who screen in the "refer" range;
    - repeat the screen or
    - refer the parent to the appropriate agency for diagnostic testing
      - First Connections for Birth-3 years, 1-800-643-8258
      - Early Childhood Special Education for 3-5 years : either special education service cooperatives or school district

### What physicians need to know about the Arkansas ASQ Project...

- Childcare providers
  - ▣ received training to work with parents to administer and interpret screening results.
  - ▣ will be faxing/ mailing ASQ screening results to the child's physician.
- Physicians can
  - ▣ Repeat the screener
  - ▣ Review results and make appropriate referral

## NEXT STEPS AND RESOURCES



### Eligibility requirements for First Connections

- Children ages birth to thirty-six months who:
  - ▣ Have a 25% delay in one area qualify for early intervention services
  - ▣ Have a 25% delay in 2 or more areas qualify for DDS (includes DDTCS), or
  - ▣ Have a medical diagnosis that has a high probability of resulting in developmental delay.

First Connections 1-800-643-8258

### Services offered through First Connections

- Services provided through the First Connection Program are:
  - ▣ Free to eligible infants & toddlers and their families
  - ▣ Voluntary on the part of the family
  - ▣ Provided by qualified professionals who meet state licensing requirements
  - ▣ Services are available to all children even if the child is not Medicaid eligible

First Connections 1-800-643-8258

### First Connections Services

Assistive Technology	Health Services	Medical Diagnostic Services
Speech Therapy	Social Work Services	Psychological Services
Physical Therapy	Nutritional Services	Nursing Services
Occupational Therapy	Transportation Services	Audiological
Special Instruction Services	Vision Services	Respite
Service Coordination	Multi-disciplinary Evaluation	Family Training, Counseling and Home Visits

- A referral to First Connections can be made by **anyone** 1-800-643-8258.



Advanced Pediatric Evaluation and Consent Form

Physician's Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Child's Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 Parent's Name: \_\_\_\_\_ City: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Email: \_\_\_\_\_

I, \_\_\_\_\_, Parent/Guardian/Responsible Adult/Other, hereby consent to the following:  
 1. I have read the above information and understand the purpose of this form.  
 2. I understand that this information is for informational purposes only and does not constitute a diagnosis or recommendation for treatment.  
 3. I understand that this information is for informational purposes only and does not constitute a diagnosis or recommendation for treatment.

The above information is for informational purposes only and does not constitute a diagnosis or recommendation for treatment. This form is a consent form for the use of the information provided herein for research purposes only. It is not intended to be used for clinical purposes. The information provided herein is for informational purposes only and does not constitute a diagnosis or recommendation for treatment. This form is a consent form for the use of the information provided herein for research purposes only. It is not intended to be used for clinical purposes.

Physician's Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Child's Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
 Parent's Name: \_\_\_\_\_ City: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Email: \_\_\_\_\_

### Modified Checklist for Autism in Toddlers (M-CHAT)

1. Does your child enjoy being swung, bounced on your knee, etc.?	Yes No
2. Does your child take an interest in other children?	Yes No
3. Does your child like climbing on things, such as up stairs?	Yes No
4. Does your child enjoy playing peek-a-boo/hide-and-seek?	Yes No
5. Does your child ever pretend, for example, to talk on the phone or take care of a doll or pretend other things?	Yes No
6. Does your child ever use his/her index finger to point, to ask for something?	Yes No
7. Does your child ever use his/her index finger to point, to indicate interest in something?	Yes No

<https://m-chat.org/index.php>

### In Summary...

- Early intervention
  - Has proven to be effective
  - No evidence that it is not effective
  - Endorsed by all major pediatric associations and professional societies (AAP, AMA, AAFP, ASHA, AOTA, etc.)
  - mandated in Federal Law (20 USC 1431-35, Section 303.12)
  - Offering services to families maximizes their autonomy and parental prerogative
- a moral imperative

### If you need to make a referral...

- First Connections for children Birth-3 years, 1-800-643-8258
- Early Childhood Special Education for children 3-5 years : contact local special education service cooperatives or local school district

See handout for contact information

# Thank you

UAMS  
 UNIVERSITY OF MICHIGAN  
 UNIVERSITY OF MICHIGAN  
 UNIVERSITY OF MICHIGAN

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