

# Santa Clara County Innovation 01: Early Childhood Universal Screening Project

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## Interim Report on Findings from the Paper-Based Phase of ASQ-3 Administration



WELLNESS • RECOVERY • RESILIENCE

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# Executive Summary

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## Introduction

Innovation 01 is one of eight Mental Health Services Act (MHSA) Innovation projects that were developed in partnership between the Santa Clara Mental Health Department (SCCMHD) and community stakeholders as part of the County's Community Program Planning (CPP) process between 2008 and 2010. Innovation is one of five MHSA components with the aim to "research and disseminate mental health practices and approaches that contribute to learning, and are developed within communities through a process that is inclusive and representative, especially of unserved, underserved and inappropriately served individuals."<sup>1</sup>

Innovation 01: Early Childhood Universal Screening Project specifically calls for the universal screening of children using the Ages & Stages Questionnaire (ASQ-3) and the Ages & Stages Questionnaire: Social-Emotional (ASQ-SE) to detect developmental, social, and emotional variations or delays. The aim of systematic developmental screening is to identify all possible children who may be at-risk of a developmental delay and connect them with follow up assessment and support services. Follow up assessment and additional services that address a potential developmental delay are critical to preventing the onset of more serious developmental problems that may prove detrimental to the child's school performance, social adjustment, and global functioning as they get older.

The ASQ-3 and ASQ-SE were chosen for this project because the tools can be completed quickly and can be self-administered by the child's family or administered with the assistance of a trained Screener. Innovation 01 will test if the introduction of an electronic screening application with audio and video capabilities will improve the screening process and increase the rate of screening at routine pediatric health appointments, known as Well Child Checks, for children ages 0-5. Innovation 01 is meant to:

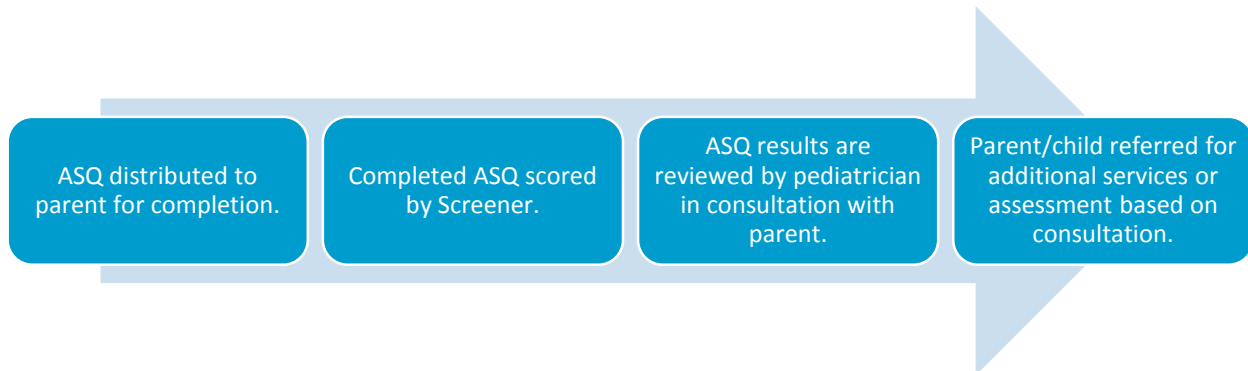
- ❖ Increase comprehension of the ASQ questions and tasks for monolingual Spanish speaking parents/guardians;
- ❖ Increase the number of ASQ screenings completed at the three pediatric clinics; and,
- ❖ Increase the capacity of pediatric clinics to conduct systematic screening in a way that is more feasible for pediatricians than in past efforts.

SCCMHD partnered with the Santa Clara County Valley Medical Center to hire and support Developmental Screeners in the Bascom, East Valley, and Gilroy Valley Health Centers (VHC) to facilitate administration of the ASQ. Below we depict the general ASQ screening process at pediatric clinics.

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<sup>1</sup> Department of Health Care Services, State of California, "Mental Health Services Act: Proposed Guidelines for the Innovation Component of the County's Three-Year Program & Expenditure Plan," Enclosure 1, February 2009: [http://www.dhcs.ca.gov/formsandpubs/MHArchives/InfoNotice09-02\\_Enclosure\\_1.pdf](http://www.dhcs.ca.gov/formsandpubs/MHArchives/InfoNotice09-02_Enclosure_1.pdf).

**Figure 1: General ASQ screening process at pediatric clinics.**



SCCMHD also contracted with Resource Development Associates (RDA) in 2010 to conduct the evaluation of its Mental Health Services Act (MHSA) Innovation 01: Universal Early Childhood Screening Project. The purpose of this interim report is to present findings related to the paper-based ASQ administration phase. These findings will ultimately be used in a pre-post comparison to understand how the transition to using the ASQ on an electronic tablet device (iPad) impacts the process of screening at the three Valley Health Center (VHC) pediatric clinics working in partnership with SCCMHD.

## Evaluation Approach

The evaluation plan includes the following process and outcome research questions.

### Process Questions

Process questions help us to understand the relational dynamics of implementing the ASQ screener as a screening tool for clinic staff. The evaluation investigates how the mode of ASQ screening administration (paper-based vs. electronic) impacts the utility of the tool, ease of use, and the ability to use a similar process in other settings. Our research questions related to the process of using the ASQ are:

1. How do different levels of clinic staff support affect access and usability of standardized screening for families and children?
2. How does the audio version of the screening tool affect access and usability by parents/guardians with limited English proficiency (LEP)?
3. How does the electronic (iPad) version of the screening tool and its audio/video components impact clinic staff capacity and support of implementing standardized universal screening?

### Outcome Questions

In addition to understanding the use or process of administering the ASQ, RDA is researching how the mode of ASQ screening impacts the overall number of screens completed and children referred for follow-up services. Our research questions related to outcomes are:



1. Does the innovation increase the number of children being screened?
2. Does the innovation increase the number of children being referred for follow up assessments?

Through this evaluation, RDA aims to understand the aforementioned areas of research in regards to the use of the paper-based ASQ and the transition from paper-based to the ASQ in electronic form on the iPad at the three pediatric clinics.

## Data Sources

Listed below are the evaluation data sources informing this report. RDA conducted data collection between September 2013 and August 2014 for this paper-based phase of the evaluation.

### 1. Daily ASQ Screening Activity Log

The Daily ASQ Screening Activity Log was used to track individual-level data (demographics and ASQ screening results) on child screenings. The Bascom VHC Screener documented each child screening that was completed while she was onsite. A total of 698 screens of children whose parents/guardians consented to participate in the evaluation were tracked in the log.

### 2. Monthly ASQ Screening Activity Log

The Monthly ASQ Screening Activity Log provided aggregate data of the clinic's productivity and screening productivity with 816 screens completed between September 2013 and March 2014. The Bascom VHC Screener documented overall screening productivity in this log separate from the Daily ASQ Screening Activity Log.

### 3. Parent/Guardian Satisfaction Surveys

The Bascom Valley Health Center Screener administered 129 Parent/Guardian Satisfaction Surveys for a sample of families completing the paper-based ASQ screener. Questions focused on the ease of use and satisfaction with the paper-based screening process, clarity of questions in the ASQ, and the need for and availability of assistance to complete the screener.

### 4. Online ASQ Experience Survey for Pediatricians

RDA created an online survey completed by 15 Valley Health Center pediatricians towards the end of implementing paper-based ASQ screeners. Questions focus on ease of retrieving and using screen results, barriers to receiving completed and scored screenings, the pediatrician's satisfaction with working with the Clinic Screener, and the pediatrician's general satisfaction with the screening process.

### 5. Focus Group with Pediatricians

RDA facilitated a focus group with pediatricians from the Bascom VHC as a follow up to the responses received from the Online ASQ Experience Survey for Pediatricians to better understand how referrals are being made, how well the paper-based screener was working in their clinics, and what their concerns or hopes are for the implementation of the iPad-based ASQ.



## **6. Phone Interviews with Pediatricians**

After conducting the focus group with pediatricians from the Bascom VHC, RDA decided to conduct follow up interviews with the pediatricians from the East Valley and Gilroy VHCs to better understand the process of administering the ASQ screener at each of these clinics.

## **7. Phone Interviews with Screeners**

Phone interviews with the Screeners at each of the three clinics were conducted to understand how systematic screening is perceived by clinic Screeners. We wanted to better understand how the paper-based screening process was working in their clinics and the Screeners' concerns or hopes for the implementation of the iPad-based ASQ.

# **Summary of Key Evaluation Findings**

After collecting the data using the methods described above, RDA used a grounded-theory approach to allow key themes and findings emerge from across the data sources. We verified key findings from qualitative surveys, interviews, and with data collected from the Screener's daily and monthly logs. We summarized our key findings below.

## **Benefits of Systematic Screening**

- ❖ **The ASQ is a valuable child development screening tool.** The majority (87%) of the 15 pediatricians responding to an online survey regarding their experience with the ASQ thought that having the ASQ screening results was "helpful" or "very helpful" in their screening of a child's developmental wellbeing. Benefits include:
  - Clarifies areas of concern and confirms prior suspicions of a delay;
  - Picks up borderline cases to monitor or refer for services;
  - More reliable and detailed information to base both referrals for services and guidance for families;
  - Provides a concrete score along a scale to show how a child's development progress changes incrementally between appointments, helping pediatricians make better informed judgments about the course of treatment;
  - Is an educational tool for parents to know what to expect developmentally at each age stage; and,
  - Increases dialogue with parents about strategies and resources to improve child's communication and motor and social development.
- ❖ **Clinic staff perceive the systematic screening process to result in referrals being made when a child is younger.** There was general agreement among pediatricians that referrals for



developmental services are likely happening *sooner* as a result of a systematic screening process using the ASQ. Pediatricians report that “The earlier delays can be detected, the earlier services can begin leading to overall better outcomes.”

## Screening Activity

- ❖ **Attaining universal screening in a high volume clinic is challenging.** Between September 16, 2013 and March 31, 2014, there were 1,357 potential child screenings at Bascom Valley Health Center while the Screener was on-duty, of which 60% were conducted (n=816). Because of the high volume of patients compared to other clinics, the Screener cannot assess every family prior to the completion of the appointment. (Note: This includes duplicate cases where a child was assessed at multiple ages within the study period.)
- ❖ **Translations of the ASQ in multiple languages will increase access to screening.** During the time period studied, 57% of the ASQs completed by parents/guardians were in English and 43% were completed in Spanish. Providing an ASQ translated into Vietnamese would be a significant improvement to increasing the accessibility of systematic screening,

## Screening Results

- ❖ Of the 698 screens completed of children whose parent/guardian consented to participate in the evaluation, **6% (43 screens) scored in the at-risk zone** indicating a significant concern about a potential developmental delay.
- ❖ **Fourteen percent (96 screens) were scored in the monitoring zone** for some concern of a developmental delay in one or more domains of the ASQ.
- ❖ Overall, **80% (559 screens) were scored in the normal range** indicating that the child is developmentally on-track for his or her age group.
- ❖ **The ASQ results are one of a number of factors pediatricians use in making referrals.** The evaluation found that pediatricians use the ASQ results in combination with their professional judgment as well as concerns expressed by parents during the exam in their decision to make a referral for further developmental assessment or services to Early Start and/or KidsConnections; 6% (42 screens) of the well-child visits in which a screening was conducted resulted in such a referral. Referrals were most frequently made at 24 months of age.





## Experiences Using the ASQ

- ❖ **The majority of parents (83%) reported that it took them 20 minutes or less to complete the ASQ** (31% less than 10 minutes, 52% 10-20 minutes).
- ❖ While very few parents/guardians (5%) reported encountering problems completing the ASQ, **the majority of parents/guardians (71%) received some Screener assistance to help with reading and writing down their answers to the questions.** This was likely due to the efforts of the Bascom Screener to increase the number of ASQs completed by assisting parents in completing the screener whenever possible.
- ❖ **Nearly all parents/guardians surveyed, 96%, were “satisfied” or “very satisfied” with the screening process.**
- ❖ **Pediatricians and Screeners reported challenges affecting the accuracy of ASQ results.**
  - Wording of the Spanish translation of the ASQ is difficult to understand.
  - Parents may not know if their child can perform a task and respond “no.”
  - Parents may not have the specific toys described in the task at home.

## Paper-based Administration of the ASQ - Implications for Universal Screening

- ❖ Based on the information collected thus far it is clear that having a **dedicated Screener to assist with completion of the ASQ**, scoring and follow-up with families is an essential component of a systematic or universal screening process.
- ❖ **The potential for universal screening at a clinic is likely based on a combination of Screener to patient volume ratio, Screener FTEs, along with the willingness of other staff to take on some of the Screener tasks when this Screener is not on-duty.** The three Valley Health Centers tried a variety of staff arrangements to complete as many ASQs as possible.

## Potential Benefits and Challenges of the Electronic-based ASQ

- ❖ **Pediatricians and Screeners are hopeful that the audio and video features of the iPad version of the ASQ will increase the ease, speed of completion, and accuracy of responses due to better parent/guardian comprehension.**
- ❖ However, pediatricians and Screeners at the three clinics expressed some **concerns regarding implementation of the iPad-based ASQ.**
  - The iPad must stay with the patient until they complete the ASQ. If the parent must pause answering the questions for the exam room visit with the pediatrician no one else can use the device.



- The iPad may be difficult to use and navigate for parents/guardians who are less familiar with the technology.
- Children may play with the iPad and potentially damage it.
- Theft of the device is a concern and requires the use of antitheft equipment.

## Next Steps in the Evaluation of Innovation 01

Consistent with the paper-based phase of the ASQ implementation, the evaluation will collect qualitative information on how the iPad-based phase of this Innovation is implemented at Bascom as well as East Valley and Gilroy Valley Health Centers. We will also continue to collect screening statistics and ASQ results as well as parent/guardian satisfaction surveys at Bascom. We will add the same level of data collection on screening statistics for Gilroy and East Valley during the iPad-phase of administration to make cross-clinic comparisons similar to the format of this report, but we will be unable to make pre/post comparisons at Gilroy and East Valley like we plan to do with screening statistics at Bascom. With this information the evaluation seeks to determine the extent to which the iPad version of the screening tool and its audio/video components support the goal of implementing standardized universal screening.



# Introduction

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Innovation 01 is one of eight Mental Health Services Act (MHSA) Innovation projects that were developed in partnership between the Santa Clara Mental Health Department (SCCMHD) and community stakeholders as part of the County's Community Program Planning (CPP) process between 2008 and 2010. Innovation is one of five MHSA components with the aim to "research and disseminate mental health practices and approaches that contribute to learning, and are developed within communities through a process that is inclusive and representative, especially of unserved, underserved and inappropriately served individuals."<sup>2</sup>

Innovation 01: Early Childhood Universal Screening specifically calls for the universal screening of children using the Ages & Stages Questionnaire (ASQ-3) and the Ages & Stages Questionnaire: Social-Emotional (ASQ-SE) to detect developmental, social, and emotional variations or delays. The ASQ-3 and ASQ-SE were chosen for this project because the tools can be completed quickly and can be self-administered by the child's family or administered with the assistance of a trained Screener. As of this report, the ASQ-3/SE is available in both paper-based and electronic formats in English as well as Spanish.

The aim of systematic developmental screening is to identify all possible children who may be at-risk of a developmental delay and connect them with follow up assessment and support services. Follow up assessment and additional services that address a potential developmental delay is critical to preventing the onset of more serious developmental problems that may prove detrimental to the child's school performance, social adjustment, and global functioning as they get older. This project is in response to this risk for children, especially those from vulnerable families or populations, in an effort to enhance the overall potential of children to succeed in school and in the home throughout the rest of their development.

During a 2007-2009 pilot project involving the California State Department of Public Health and Santa Clara County pediatric clinics, County pediatricians determined that the process for paper-based ASQ universal screening might be improved by technological innovations that would help all families, regardless of their ability to read and write, complete the screening tools.<sup>3</sup> Innovation 01 will test if the introduction of an electronic screening application with audio and video capabilities will improve the screening process and increase the rate of screening at routine pediatric health appointments known as Well Child Checks for children ages 0-5. Innovation 01 is intended to:

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<sup>2</sup> Department of Health Care Services, State of California, "Mental Health Services Act: Proposed Guidelines for the Innovation Component of the County's Three-Year Program & Expenditure Plan," Enclosure 1, February 2009: [http://www.dhcs.ca.gov/formsandpubs/MHArchives/InfoNotice09-02\\_Enclosure\\_1.pdf](http://www.dhcs.ca.gov/formsandpubs/MHArchives/InfoNotice09-02_Enclosure_1.pdf).

<sup>3</sup> Santa Clara County Mental Health Department, "INN-01: Exhibit C," *Santa Clara County Initial Innovation Plan*, September 3, 2010, [http://www.mhsoac.ca.gov/Counties/Innovation/docs/InnovationPlans/INN\\_SantaClara\\_090310.pdf](http://www.mhsoac.ca.gov/Counties/Innovation/docs/InnovationPlans/INN_SantaClara_090310.pdf).

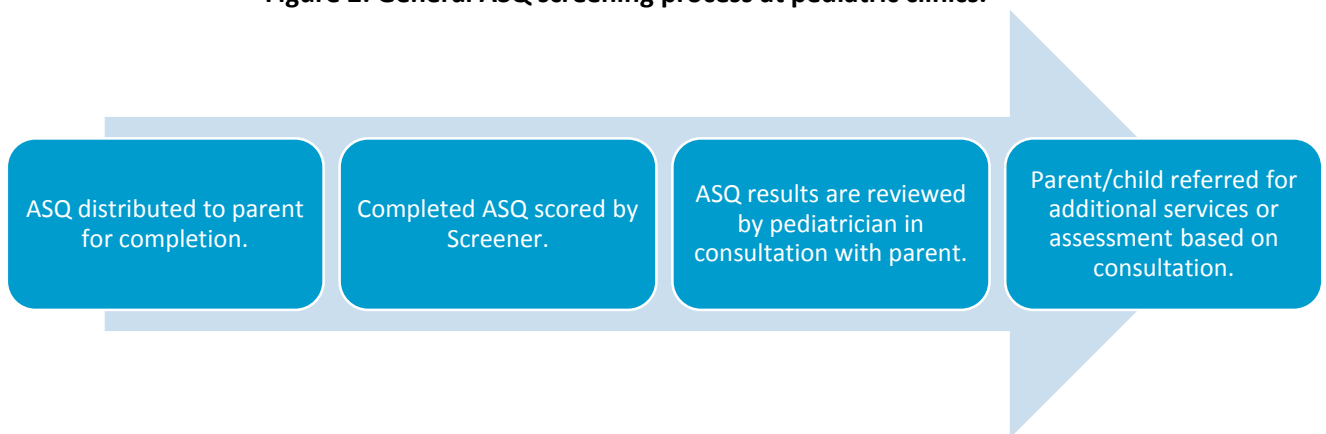


- ❖ Increase comprehension of the ASQ questions and tasks for monolingual Spanish speaking parents/guardians;
- ❖ Increase the number of ASQ screenings completed at the three pediatric clinics; and,
- ❖ Increase the capacity of pediatric clinics to conduct systematic screening in a way that is more feasible for pediatricians than in past efforts.

## Background

SCCMHD partnered with the Santa Clara County Valley Medical Center to hire and support Developmental Screeners in the Bascom, East Valley, and Gilroy Valley Health Centers. Screeners facilitate the screening process using the ASQ-3 (and ASQ-SE in some cases) when a parent/guardian reports to the pediatric clinic for their child's Well Child Check. The parent/guardian completes the ASQ and the Screener scores it. The pediatrician then reviews the ASQ results in consultation with the parent/guardian, when the ASQ is completed and scored in advance of the pediatrician's portion of the visit. Pediatricians refer the child for additional follow up assessment or services depending on the results of the ASQ and their professional judgment. Children are referred to Early Start (under age 3) and/or to KidConnections. KidConnections is a network of providers/services that are funded by the SCCMHD and FIRST 5 of Santa Clara County. The figure below depicts the general screening process at pediatric clinics. Exceptions to this process are described later in the report.

**Figure 2: General ASQ screening process at pediatric clinics.**



## Evaluation Overview

SCCMHD also contracted with Resource Development Associates (RDA) in 2010 to conduct the evaluation of its Mental Health Services Act (MHSA) Innovation 01: Universal Early Childhood Screening Project, in addition to two other Innovation projects. However, the implementation of Innovation 01 experienced a series of delays related mostly to privacy and security concerns of the electronic screening tool and collaboration efforts with the Santa Clara Valley Health and Hospital System Information Services



Department. Within this evolving environment, RDA modified the evaluation design incrementally to respond to the changes in the administration process. In early 2013, RDA finalized and SCCMHD approved the evaluation plan. The evaluation plan includes the following process and outcome research questions.

## **Process Questions**

Process questions help us to understand the relational dynamics of implementing the ASQ screener as a diagnostic tool for clinic staff. The evaluation investigates how the mode of ASQ screening administration (paper-based vs. electronic) impacts the utility of the tool, ease of use, and the ability to use a similar process in other settings. Our research questions related to the process of using the ASQ are:

1. How do different levels of clinic staff support affect access and usability of standardized screening for families and children?
2. How does the audio version of the screening tool affect access and usability by parents/guardians with limited English proficiency (LEP)?
3. How does the electronic (iPad) version of the screening tool and its audio/video components impact clinic staff capacity and support of implementing standardized universal screening?

## **Outcome Questions**

In addition to understanding the use or process of administering the ASQ, RDA is researching how the mode of ASQ screening impacts the overall number of screens completed and children referred for follow-up services. Our research questions related to outcomes are:

1. Does the innovation increase the number of children being screened?
2. Does the innovation increase the number of children being referred for follow up assessments?

Through this evaluation, RDA aims to understand the aforementioned areas of research in regards to the use of the paper-based ASQ and the transition from paper-based to the ASQ in electronic form on the iPad at the three pediatric clinics.



# Evaluation Activities & Methods

## Evaluation Approach

The purpose of this interim report is to present findings related to the paper-based ASQ administration phase. These findings will ultimately be used in a pre-post comparison to understand how the transition to using the ASQ on an electronic tablet device (iPad) impacts the process of screening at the three pediatric clinics working in partnership with SCCMHD.

RDA used a mixed-methods approach to this evaluation by combining quantitative data on the screening productivity in the Bascom Valley Health Center with a synthesis of surveys and interviews with clinic staff from all three pediatric clinics to better understand the benefits and challenges of systematic screening using the paper-based ASQ. RDA developed data collection tools in conjunction with the Innovation 01 project staff and the Screener at the Bascom Valley Health Center.

The Bascom Screener completed daily and monthly screening activity logs to document ASQ screening productivity at the Bascom Valley Health Center pediatric clinic. She collected ASQ screening data from September 2013 through March 2014. In addition to collecting screening data, the Bascom Screener administered a Parent/Guardian satisfaction survey to collect information about how parents/guardians perceived the process of using the paper-based ASQ.

From May 2014 – August 2014, RDA conducted the following activities to collect additional data:

- Online survey of pediatricians at Bascom, East Valley, and Gilroy Valley Health Centers;
- Focus group with pediatricians at the Bascom Valley Health Center;
- Interviews by telephone with pediatricians at East Valley and Gilroy Valley Health Centers; and,
- Interviews by telephone with the Screeners from each of the three health centers.

## Evaluation Data Sources

The table below provides an overview of the data sources available to RDA for this report.

**Table 1: Data Collected from each Health Center**

Data Collection Method	Bascom VHC	East Valley VHC	Gilroy VHC
Monthly ASQ Screening Data	✓		
Daily ASQ Screening Data	✓		
Parent/Guardian Screening Satisfaction Survey	✓		
Online Survey with Pediatricians	✓	✓	✓
Interviews with Pediatricians		✓	✓
Focus Group with Pediatricians	✓		
Interviews with Screeners	✓	✓	✓



At the time that data collection began in September 2013, East Valley and Gilroy Valley Health Centers were not staffed with Screeners to conduct systematic screenings with the ASQ. The Gilroy Screener began in February, 2014 and the East Valley screener started in March. We incorporated perspectives from clinic staff at those two sites to understand the screening process and how it may have differed from that at Bascom Valley Health Center. The table below describes each of the evaluation activities RDA conducted between September 2013 and August 2014.

**Table 2: Data Collection Activities**

<b>Data Collection Tool</b>	<b>Dates Administered</b>
<b>1. Daily ASQ Screening Activity Log (Appendix B)</b>	<b>September 2013 – March 2014</b>
<p>The Daily ASQ Screening Activity Log was used to track individual-level data on child screenings. Parents/Guardians were informed that their participation in this data collection was voluntary and they may opt out without repercussions. The Daily Log tracked the following elements for families who consented to be part of this evaluation: date of screening, age stage of ASQ, ASQ language, time spent to complete ASQ, referrals, if child was determined to be at-risk, if child was in-monitoring, limited English proficiency and needing literacy support (as determined by the Screener), additional ASQ-SE, notes, confirmation of consent received, child's gender, and child's race or ethnicity.</p> <p><b>RDA tracked a total of 698 completed screens of children whose parents/guardians consented to participate in the evaluation.</b></p>	
<b>2. Monthly ASQ Screening Activity Log (Appendix C)</b>	<b>September 2013 – March 2014</b>
<p>The Monthly ASQ Screening Activity Log provided aggregate data of the clinic's productivity and screening productivity. We tracked: number of expected children per day, number of cancellations per day, number of no-shows per day, number of possible children to be screened per day, number of children screened per day, and percent of children screened daily. These daily aggregate numbers were reported on a monthly basis to RDA.</p> <p><b>RDA tracked a total of 816 screens completed in aggregate from September 2013 – March 2014.</b></p>	
<b>3. Parent/Guardian Satisfaction Surveys (Appendix D)</b>	<b>September 2013 – March 2014</b>
<p>The Bascom Valley Health Center Screener administered parent/guardian Satisfaction Surveys for a sample of families completing the paper-based ASQ screener. Questions focused on the ease of use and satisfaction with the paper-based screening process, clarity of questions in the ASQ, and the need for and availability of assistance. Parents/guardians had an opportunity to share recommendations for improving the screening process. Participants were informed that the survey is voluntary and they may opt out without repercussions. Participants were also told that they may choose to not answer any specific question. Questionnaires were available in both Spanish and English.</p> <p><b>RDA collected a total of 129 completed Parent/Guardian satisfaction surveys from the Bascom Clinic.</b></p>	
<b>4. Online ASQ Experience Survey for Pediatricians (Appendix E)</b>	<b>June - July 2014</b>
<p>RDA created an online survey to be completed by the Valley Health Center pediatricians towards the end of implementing paper-based ASQ screening, and will again when implementation of the iPad ASQ application is established. Questions focus on ease of retrieving and using screening results, barriers to</p>	



receiving completed and scored screens, the Pediatrician's satisfaction with working with the Clinic Screener, and the pediatricians' general satisfaction with the screening process. Clinic pediatricians were invited to share their recommendations for how to improve the screening process. Clinic pediatricians were informed that the survey was voluntary and they may opt out without repercussion. They were also told that they may choose not to answer any specific question.

**RDA collected a total of 15 responses from pediatricians' at all three pediatric clinics during the paper-based phase of ASQ implementation.**

#### **5. Focus Group with Pediatricians Protocol (Appendix F)**

**July 2014**

RDA facilitated a focus group with pediatricians from the Bascom **Valley Health Center**. This focus group was conducted as a follow up to the responses received from the Online ASQ Experience Survey for Pediatricians to better understand how referrals are being made, how well the paper-based screener was working in their clinics, and what their concerns or hopes are for the implementation of the iPad-based ASQ.

**RDA conducted one focus group with eight pediatricians from Bascom Valley Health Center.**

#### **6. Phone Interviews with Pediatricians Protocol (Appendix G)**

**August 2014**

After conducting the focus group with pediatricians from the Bascom **Valley Health Center**, RDA decided to conduct follow up interviews with the pediatricians from the East Valley and Gilroy **Valley Health Centers** to better understand the process of administering the ASQ screener at each of these clinics as well as the pediatricians' perspectives on how referral are being made, to know more about how well the paper-based screener was working in their clinics, and what their concerns or hopes are for the implementation of the iPad-based ASQ.

**RDA conducted two phone interviews with pediatricians from East Valley and Gilroy Valley Health Center.**

#### **7. Phone Interviews with Screener Protocol (Appendix H)**

**August 2014**

Phone interviews with Screeners were conducted to understand how systematic screening is perceived by clinic Screeners. We created an interview protocol with questions about the ease of use of the paper-based ASQ, amount of time spent supporting families completing the screens, any barriers they noticed while helping families to complete the screens, and the Screeners' satisfaction with the screening process. Screeners were also asked about ways to improve the screening process.

**RDA conducted three phone interviews with the three Screeners at Bascom, East Valley, and Gilroy Valley Health Centers.**

## **Key Limitations to Data Collection and Analysis**

During the period studied, the project team had to make several adjustments to the process of administering the paper-based ASQ. Between September 16, 2013 and October 6, 2013, the Bascom Valley Health Center Screener interviewed the majority of parents to complete the ASQ, rather than having them complete it on their own. When the screener was not available, the parents completed it in the waiting room on their own. We documented how this impacted the responses to the Parent/Guardian Satisfaction Survey in a January 2014 memo (Attachment I). Based on our findings, between October 7,





2013 and December 31, 2013, the Bascom Screener adjusted her process for administering the ASQ to provide parents/guardians a greater opportunity to complete the ASQ more autonomously. This is key to the evaluation because it allows us to answer questions related to ease/difficulty of completing the paper-based ASQ and potential benefits of enhancement integrated into the iPad. Starting in January 2014, the Bascom Valley Health Center Screener was employed for .1 FTE and then .5 FTE in February and March 2014. In an effort to increase the efficiency of ASQ screening, given her reduced hours in the clinic, the Screener resumed interviewing parents when possible to complete the ASQ. This process maximized the number of children who were screened. However, it reduced the opportunity of parents/guardians to complete the ASQ autonomously, thus potentially affecting their perceptions of the ease of the screening process. This may have influenced the conclusions we can make about their satisfaction with the process. ASQ screenings are not completed when the Screener is not present. When the Screener is not available, pediatricians rely on their medical training, instinct, and questioning parents/guardians about their child's development to decide whether or not to make a referral for additional services.

## Protection of Human Subjects

RDA's evaluation framework ensured the protection of human subjects from potential risks, harms, and coercion during the research study. Parents/guardians were asked to sign a consent form to participate in the individual-level data collection and the Satisfaction Survey. Copies of the Consent form was given to parents and read aloud to them prior to their signing. The Bascom Valley Health Center Screener answered questions parents/guardians had about the evaluation prior to signing the consent. Parents/guardians were informed that their participation in this study was voluntary and that if they chose to opt out of the evaluation it would pose no risk to the services they would receive.

The evaluation team submitted one full Institutional Review Board (IRB) application in April 2013 and two renewal applications in September 2013 and June 2014. All applications were approved by the Santa Clara County IRB. RDA's IRB approval is included in Appendix J.



# Interim Evaluation Findings

## Screening Activity

Between September 16, 2013 and March 31, 2014, there were 1,357 expected child screenings while the Screener was on-duty, of which 60% (n = 816) were conducted. Twelve percent of these screenings were considered rescreens or follow-ups to re-check prior findings. November 2013 had the highest proportion of screenings completed at 68%. The lowest proportion of children screened, 50%, occurred in January 2014. The Screener attempts to screen all babies and toddlers being seen for a well-child visit that fall into the age intervals they were screening (6, 9, 12, 15, 18, 24 and 30 months). However, Bascom Valley Health Center serves a very high volume of patients compared to other clinics, and the Screener cannot get to every family prior to the completion of the appointment. The priority was to screen children at 9, 18, 24 and 30 months.

**Table 3: An ASQ was conducted for 60% of possible child screenings.**

Month	# Possible	# Screened	% Screened
September '13	137	90	66%
October '13	336	190	57%
November '13	256	175	68%
December '13	165	86	52%
January '14	110	55	50%
February '14	104	56	54%
March '14	249	164	66%
Total	1,357	816	60%
<b>Source:</b> Monthly Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014			

\* Possible = total expected minus cancellations and no-shows

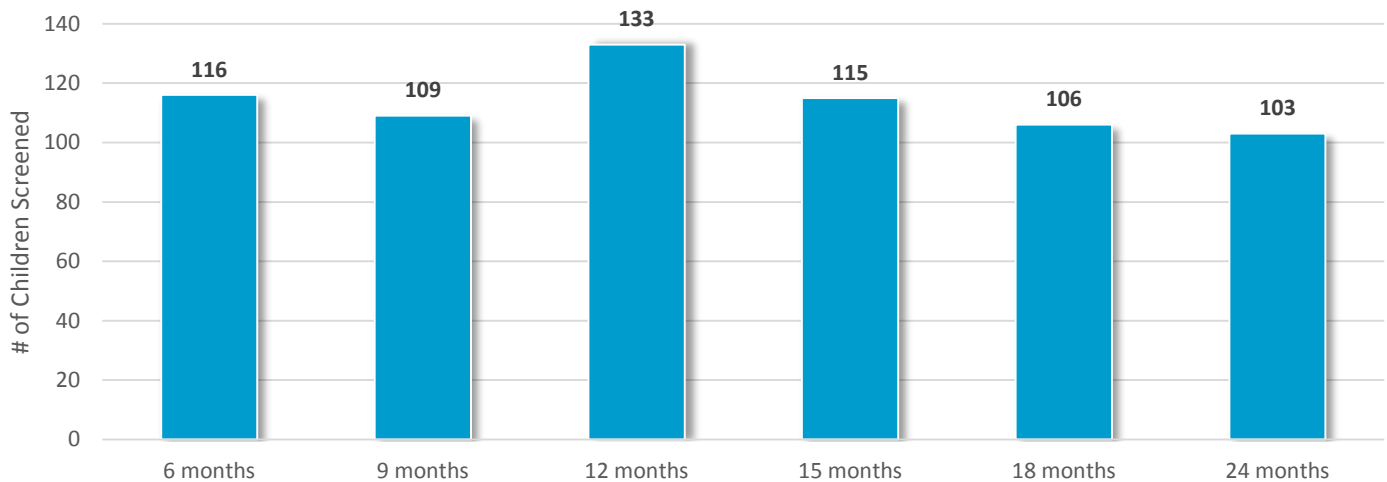
## Description of the Study Sample

In order for a child's individual-level data to be included in this report, parent/guardian consent was required. In the period studied, consent was obtained from 698 (86%) parents/guardians. Please refer to Appendix A for the consent form used in this study.



The following age intervals had the highest number of screenings completed (listed from highest frequency to lowest): 1) 12-month old, 2) 6-month old, and 3) 15-month old. This includes duplicate cases where a child was assessed at multiple ages within the study period. Sixteen other ASQs were collected in this time period at other ages (5, 8, 10, 16, and 30 months), but were not included in the figure below.

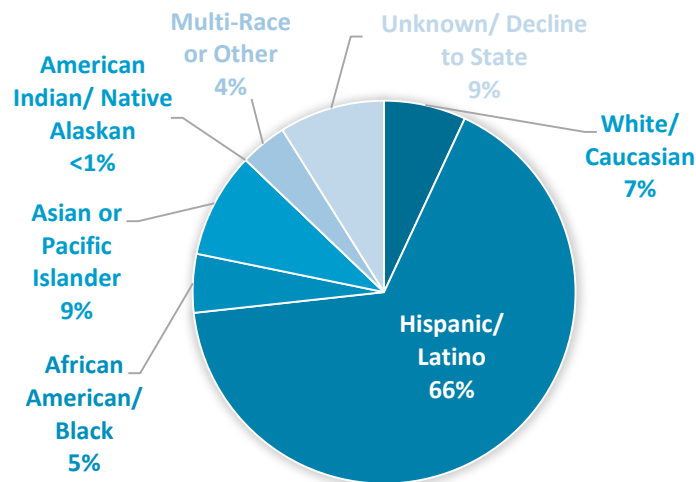
**Figure 3: The majority of screenings were completed with children from 6 months to 24 months old.**



*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014.

A little over two-thirds of child screenings were for Hispanic/Latino children (68%).

**Figure 4: The majority of children screened at the Bascom Valley Health Center were Hispanic/Latino.**

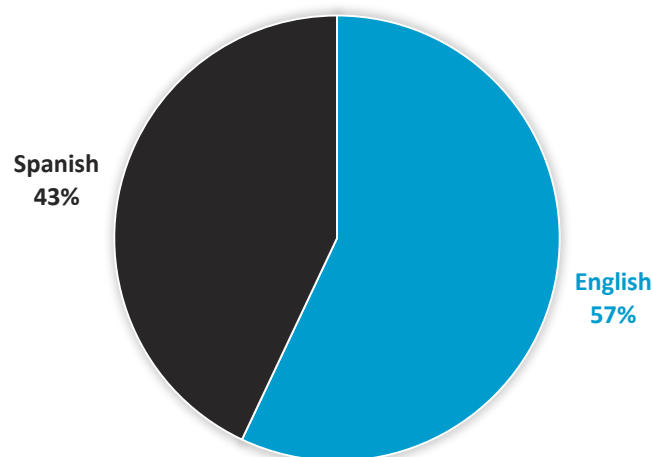


*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014 (n=698)



The ASQ is available to parents in both Spanish and English. During the time period studied, 57% of the ASQs completed by parents/guardians were in English and 43% were completed in Spanish. Translation assistance was sought in the few cases where a parent did not speak English or Spanish. In these cases the screener filled in the English version of the ASQ. If the parent/guardian was not proficient enough in English and a translator was not available the ASQ was not completed. Screeners at all three pediatric clinics suggested in their interviews that making the ASQ available in Vietnamese would be a significant improvement to increasing the accessibility of systematic screening, especially where a Vietnamese pediatrician is not regularly available.

**Figure 5: ASQs were completed in both English and Spanish.**



*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014 (n=698)

## Benefits of Systematic Screening

The majority (87%) of the 15 pediatricians responding to an online survey regarding their experience with the ASQ thought that having the ASQ screening results was “helpful” or “very helpful” in their screening of a child’s developmental wellbeing. Benefits of ASQ screening in the clinic, as reported by pediatricians on the survey and during interviews include:

- Clarifies areas of concern and confirms prior suspicions of a delay;
- Picks up borderline cases to monitor or refer for services;
- More reliable and detailed information for referring for services and following clinically at subsequent appointments;



## Key Findings:

Pediatricians noted the following benefits to systematic screening:

- ❖ Clarifies areas of concern or confirms suspicion of delays;
- ❖ Identifies borderline cases that may have gone missed;
- ❖ Provides reliable and detailed information to make a better referral for follow-up assessment and services;
- ❖ Provides a concrete measure of a child's developmental progress;
- ❖ Serves as an educational tool for parents to know what to expect developmentally at each age stage; and
- ❖ Increases dialog with parents/guardians about how to help improve their child's development.

- Provides a concrete number (rather than just yes/no response to a question) to assist in monitoring movement (for example moving from a mild delay to normal);
- Is an educational tool for parents to know what to expect developmentally at each age stage; and
- Increases dialogue with parents about strategies and resources to improve child's communication and motor and social development.

All physicians reported on the survey that potential developmental delays were “definitely” or “possibly” being detected more frequently as a result of screening, and the majority thought using the ASQ could be resulting in more referrals for services. Reasons for the numbers of referrals not “definitely” increasing include the screener not always being present to distribute the ASQ and help patients as well as the fact that pediatricians have always conducted developmental screening as part of the well-child visits, albeit with a less formal, brief set of questions. One pediatrician commented that the ASQ was capturing deficits in problem-solving and social skills missed by the standard questions pediatricians ask.

*ASQ is a great additional tool in developmental screening. Sometimes the ASQ detects subtle findings and I am reminded to focus on certain areas of development at the next visit. If we can detect delays earlier, it would be a great benefit for the children.*  
(Pediatrician Survey respondent)

There was general agreement that **referrals for developmental services are likely happening sooner as a result of the ASQ**. Pediatricians report that “The earlier delays can be detected the earlier services can begin leading to overall outcomes.”

## Screening Results

After a parent/guardian completes the ASQ, the clinic Screener scores their responses using the ASQ Scoring Guide. The results are converted into numeric cutoff scores to determine if the child is developmentally on track in comparison to their age and peers. The results below are based on screenings, not unique children. Thus there will be multiple results in cases where a child is re-screened during the study period. For an example of how the ASQ is scored and cutoff scores are determined, please visit the Brookes Publishing website to see a 16-month ASQ-3 sample here:

<http://archive.brookespublishing.com/documents/asq-3-16-month-sample.pdf>



## At-Risk

If the results of the ASQ screening showed that the child scored below the cutoff in the ASQ Scoring Guide (in the black zone) for any of the domains measured (i.e., communication, fine motor, gross motor, problem solving, personal-social), then the child is marked in the Screener's Excel tracking sheet as "at-risk," indicating a significant concern about a potential developmental delay. **Of the 698 screens conducted, 6% (43 screens) were in the at-risk zone.**

## In Monitoring

The results of the ASQ may be in the gray or "in monitoring" zone in one or more domains, indicating that there is not yet a developmental delay but there is some concern in that area. **Of the 698 screens conducted, 14% (96 screens) scored in the monitoring zone.** (Note: If a screen revealed that a child was at-risk for at least one domain and in monitoring for another, for purposes of this report they were included in the at-risk group above. However, all results were indicated in the Excel tracking log.)

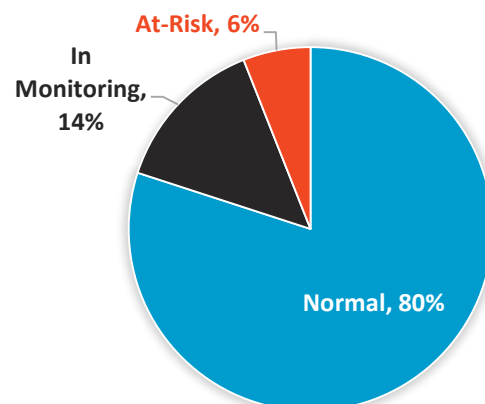
In the interviews with clinic staff, we discovered that some pediatricians will want to monitor some children more closely based on their consultation with the family or based on the child's medical history. The pediatrician will make a note to follow-up on this concern in the child's chart for that visit, and before they see them again for their next visit, pediatricians and the Screeners review the notes and see how that child is progressing in a particular domain compared to their last visit.

*If there is a concern that didn't come up on the ASQ but the parent still has a concern (i.e. not walking at a certain age or speaking at a certain age) I let them know they can see the activities that are appropriate for that age via the ASQ and say they can schedule a follow up with the doctor. (Screener)*

## Developmentally On-Track

The results of an ASQ screening may show that all domains are in the "normal range" (white zone), indicating that a child is on track relative to their peers and age. **Eighty percent of screens resulted in a normal score during the study period.**

**Figure 6: One-fifth of child screenings (20%) may be near to or at-risk of a developmental delay.**



*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014 (n=698).



## Referrals

The Screener provides the results of the ASQ screening to the pediatrician and will notify the pediatrician if the child scored in the at-risk or monitoring zone. The decision to monitor the child and follow-up at a subsequent visit, as opposed to referring the patient for specialized developmental services, is up to the professional judgment of the individual pediatrician in consultation with the family. Pediatricians may vary in the extent to which they rely on the ASQ results versus their professional experience and training. Other factors influencing a referral may include age of the child, if the observed delay has persisted over time, and the level of concern of the family. For example, a pediatrician may be more likely to monitor a delay first detected at six months than a concern that has persisted in an 18-month old who has been monitored. Interviews with pediatricians indicate that it may take some time for them to fully incorporate or more heavily rely on the ASQ results to guide the decision to make a referral, as this is a new tool available to them.

*It helps reinforce the need for a referral. Can attach last page of ASQ with scores to the referral to help reinforce the need. Have more evidence.*  
(Pediatrician Interview)

### Key Finding:

- ❖ 20% of children screened were near or at-risk of a developmental delay.
- ❖ 6% of children were referred for additional services.

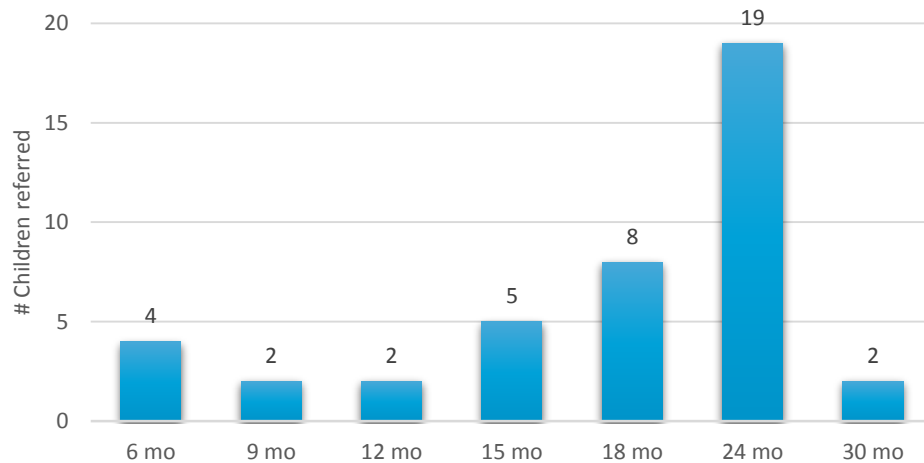
Prior to a County-wide initiative to increase the developmental screening and assessment of children, Early Start and/or KidConnections received referrals for only the most serious cases of children at-risk of a developmental delay. However, Early Start and KidConnections have been working with the County's pediatric clinics to enhance their resources in addressing more referrals for follow up screening and assessment. Early Start serves children up to 36 months and encourages referrals by 24 months of age.

A child is noted to be "referred" in the Screener's Excel log when their parent/guardian is provided with a referral for other services to support the child's development and wellbeing (e.g. FIRST 5) or when the pediatrician makes a referral to the Early Start and/or KidConnections Network for further assessment of a possible developmental delay. (Note: If the pediatrician makes a referral without the Screener's knowledge, this will not be reflected in the log.)



**Out of the total 698 child screenings for which the parent consented to the evaluation 6% (42 screens) resulted in a referral for additional services or follow-up assessment.** Of these, 29 were referred to Early Start and/or KidsConnections at this visit. An additional 13 children who did not test in the at-risk or monitoring categories at this visit received a referral due to parent or physician concerns. Sixteen screens were for children who were already receiving services.

**Figure 7: Referrals were most frequently made at 24 months of age.**



*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014.

The majority of children who were referred for follow-up, who received an “at-risk” or “in-monitoring” ASQ score were Hispanic/Latino. See Table 4: Screening Results by Race/Ethnicity.

**Table 4: Screening Results by Race/Ethnicity**

Race/Ethnicity	Referred		At-Risk		In-Monitoring Only	
	Sum	%	Sum	%	Sum	%
African American/Black (n=33)	1	3%	3	9%	2	6%
American Indian/Alaskan Native (n=2)	0	0%	0	0%	0	0%
Asian or Pacific Islander (n=62)	1	2%	4	6%	7	11%
Caucasian/White (n=49)	0	0%	3	6%	6	12%
Hispanic/Latino (n=464)	38	8%	31	7%	73	16%
Multi-Race or Other (n=27)	2	7%	0	0%	4	15%
Unknown/Decline to State (n=61)	0	0%	2	3%	4	7%
<b>Total (n=698)</b>	<b>42</b>	<b>6%</b>	<b>43</b>	<b>6%</b>	<b>96</b>	<b>14%</b>

*Source:* Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014.





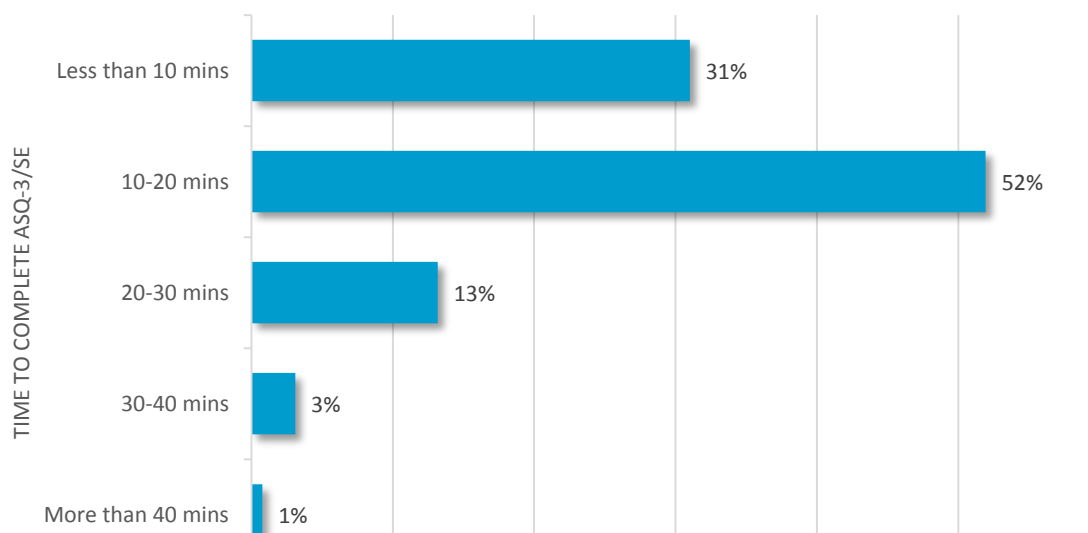
For children who are referred for additional follow up assessment or services for a possible developmental delay at the Bascom Clinic, a referral is made via fax from the clinic to Early Start and/or KidConnections Network of Santa Clara County. Early Start and/or KidConnections is a collaboration of providers between SCCMHD and FIRST 5. Comprehensive developmental screening and assessment, behavioral health services, parenting supports, and connection to other specialized education programs are made through Early Start and/or KidConnections.

Interviews with pediatricians and Screeners revealed that staff vary in the criteria they use to determine what qualifies a child to be referred to Early Start and/or KidConnections. Some pediatricians may still only refer children and their families to Early Start and/or KidConnections in the most severe cases, whereas others may refer children displaying sub-acute signs of being at-risk of a developmental delay. Santa Clara County is starting a new initiative to increase universal screening for children ages 0-5, potentially impacting when and how many referrals are made for follow up screening and assessment by Early Start and/or KidConnections Network. SCCMHD and Early Start and/or KidConnections are working with the pediatric clinics to standardize the criteria pediatricians use to determine when a child should be referred to Early Start and/or KidConnections in light of the County's initiative.

## Experiences of Clinic Staff & Parents Using the ASQ

During the study period, the Bascom Valley Health Center Screener administered satisfaction surveys to a random sample of parents/guardians completing the ASQ. Of those families that completed the satisfaction questionnaire, the majority of them (83%) reported that they completed the ASQ in 20 minutes or less.

**Figure 8: The majority of parents (83%) said that they completed the ASQ in 20 minutes or less.**



*Source:* Parent/Guardian Satisfaction Survey Results, Bascom Valley Health Center, October 7, 2013 – March 31, 2014 (n=129).



Almost all of the families surveyed (95%) said they did not encounter any problems completing the ASQ.

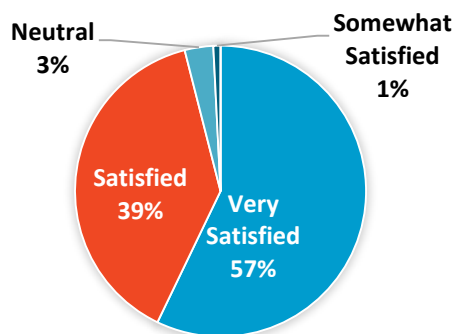
**Table 5: Almost all parents/guardians who completed a Satisfaction Survey (95%) said that they did not encounter any problems completing the ASQ.**

Did you encounter problems completing the ASQ?	Count of Parents	% of total
No	122	95%
Yes	7	5%
Total	129	100%

**Source:** Parent/Guardian Satisfaction Survey Results, Bascom Valley Health Center, October 7, 2013 – March 31, 2014.

Nearly all of the families that completed a satisfaction survey (96%) said they were Very Satisfied or Satisfied with the ASQ screening process. No families reported that they were “not satisfied” with the ASQ screening process.

**Figure 9: Families reported a high level of satisfaction with the ASQ screening process.**



**Source:** Parent/Guardian Satisfaction Survey Results, Bascom Valley Health Center, October 7, 2013 – March 31, 2014 (n=129).

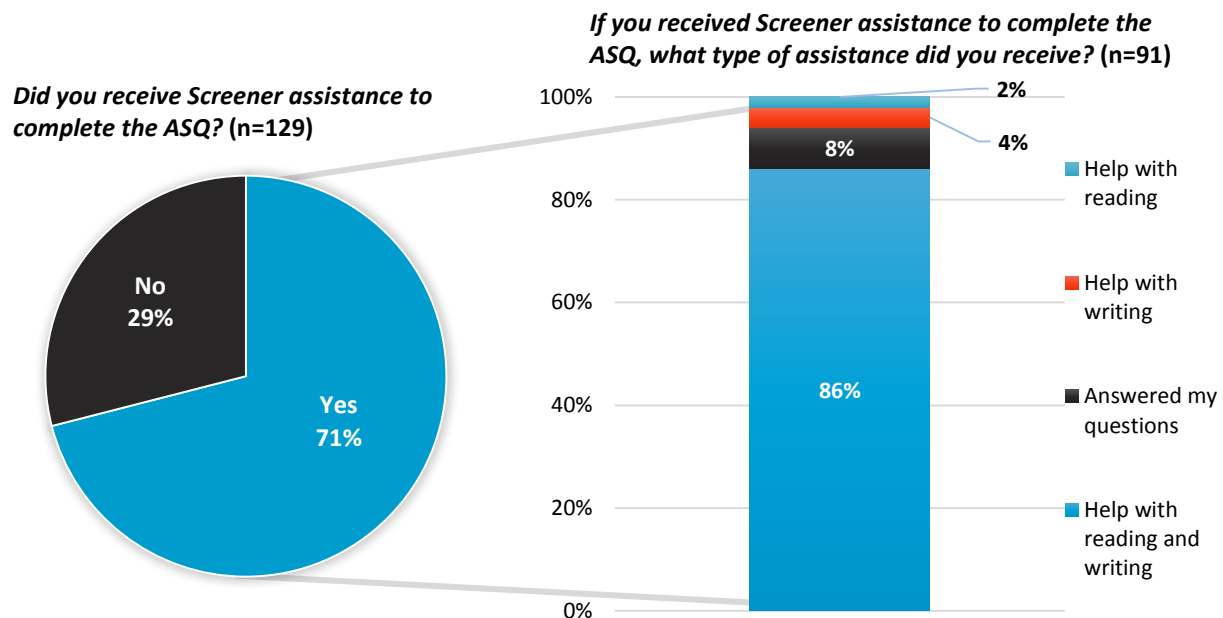
**Key Finding:**

Although the majority of parents/guardians said they did not encounter any problems in completing the ASQ (95%), less than one-third of parents (29%) completed the ASQ independently (i.e., without assistance from the Bascom Valley Health Center Screener).



However, less than one-third of parents (29%) said they completed the ASQ independently or without the assistance from a staff Screener. The majority of parents surveyed who received assistance (86%) obtained help with both reading the questions and writing down their answers to the ASQ screening tool.

**Figure 10: A majority of parents/guardians (71%) received Screener assistance to help with reading the ASQ and writing down their answers to the questions.**



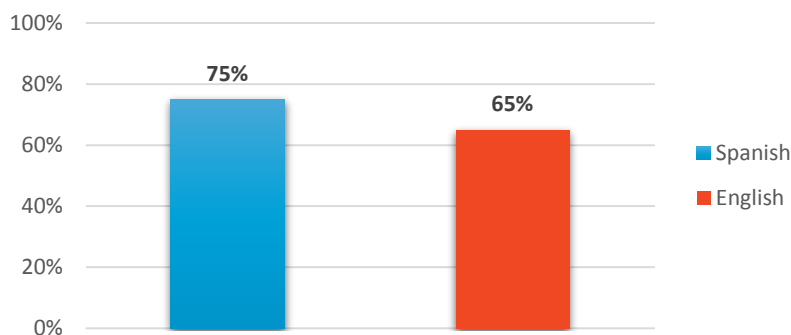
*Source:* Parent/Guardian Satisfaction Survey Results, Bascom Valley Health Center, October 7, 2013 – March 31,

However, as noted in the limitations section above, the number of parents receiving assistance may not actually reflect the number who could not have completed the ASQ without that assistance. Because of limited time constraints of the visit, some clinic pediatricians requested that the Bascom Screener be more active in providing support to families to complete the ASQ, especially in the January – March 2014 timeframe when the Screener’s hours were reduced to .5 FTE. The Screener is able to work through the ASQ with the family much quicker by interviewing the parents/guardians than if they are left to complete it on their own. Thus, in an unknown number of these cases where the parent reported receiving Screener assistance, the family could have completed the screen partially or entirely on their own.



Slightly more families who completed a Spanish language version of the Parent Satisfaction Survey (75%) reported receiving assistance from the clinic Screener to complete the ASQ than families who completed an English language version of the same survey (65%).

**Figure 11: Slightly more parents/guardians completing the Spanish version of the Satisfaction Survey received Screener assistance to complete the ASQ.**



*Source:* Parent/Guardian Satisfaction Survey Results, Bascom Valley Health Center, October 7, 2013 – March 31, 2014 (n=129).

Pediatricians and Screeners reported on the survey, in the focus group, and during interviews that parents faced some challenges completing the ASQ. Parents/guardians may not understand a question nor play or interact with their children enough or in the ways that the ASQ is asking to understand the task an ASQ question is asking or not know if their child can perform the task. Or they may not have the toys referenced in the question in the home. Consequently, they may answer “no” or leave the item blank. The Screener at Bascom commented that the wording of the Spanish translation of the ASQ items is more difficult to understand than in the English version, independent of the parent/guardian’s proficiency in reading and understanding the

#### Key Finding:

Factors affecting accuracy of parent/guardian responses include:

- ❖ Wording of the Spanish language ASQ is difficult to understand .
- ❖ Parents may not know if their child can perform a task and respond “no.”
- ❖ Parents may not have the specific toys described in the task at home.

*When we see a lot of NAs on the form then we will talk with the family and check the items. Sometimes they don't do the things with the kids. It's a great moment to do some teaching. To help them work with their children.*  
(Pediatrician Interview)

Spanish language. At times, it did not use commonly used words. In addition to the challenges interpreting the Spanish translation, the Bascom Screener noted that many parents completing the Spanish translation of the ASQ were more likely to interpret the questions literally. For example, if a question asked about a child playing with blocks but the family doesn't have blocks in the home, the parent/guardian is more likely to answer that the child cannot complete a task even if the child is capable of completing the task with a different type of item. When the Screener or a pediatrician



detects that a parent answered “no” or “NA” on many responses, they review those items with the parent in order to obtain a more accurate screen.

Another source of information on parent/guardian need for assistance is the daily screening log maintained by the Bascom Screener. Of the 698 screens for which we have individual level information, the Screener indicated that 40 parents (6%) could not have completed the screen without her active assistance due to some type of literacy barrier. Only three of these were due to solely not being able to read. The remainder were due to the parent/guardian have limited proficiency in reading either Spanish or English.

The highest percentage of children screened whose parents needed literacy support or had limited English proficiency (LEP) were American Indian/Native Alaskan, African American, and Asian/Pacific Islander. Additionally, almost a third of children screened whose parents needed literacy support or were LEP declined to state their race/ethnicity.

**Table 6: Literacy support and/or limited English proficiency by race/ethnicity.**

Race/ethnicity	Count of parents needing literacy support	% of total
White/Caucasian (n=49)	1	2%
Hispanic/Latino (n=464)	2	<1%
African American/Black (n=33)	11	33%
Asian or Pacific Islander (n=62)	12	19%
American Indian/Native Alaskan (n=2)	1	50%
Multi-Race or Other (n=27)	0	0%
Unknown/Decline to State (n=61)	12	20%
<b>Total (n=698)</b>	<b>39</b>	<b>5.6%</b>
<b>Source:</b> Daily Screening Activity Log, Bascom Valley Health Center, September 16, 2013 – March 31, 2014.		

Looking at the ASQ score status of just those children whose parents required literacy support or who had limited English proficiency (LEP) (n=39), seven children were deemed “at-risk” or “in-monitoring.” None of the children were referred for additional services to address a developmental delay during these visits, though two were already receiving services.



# Discussion of the Screening Process using the Paper-based ASQ

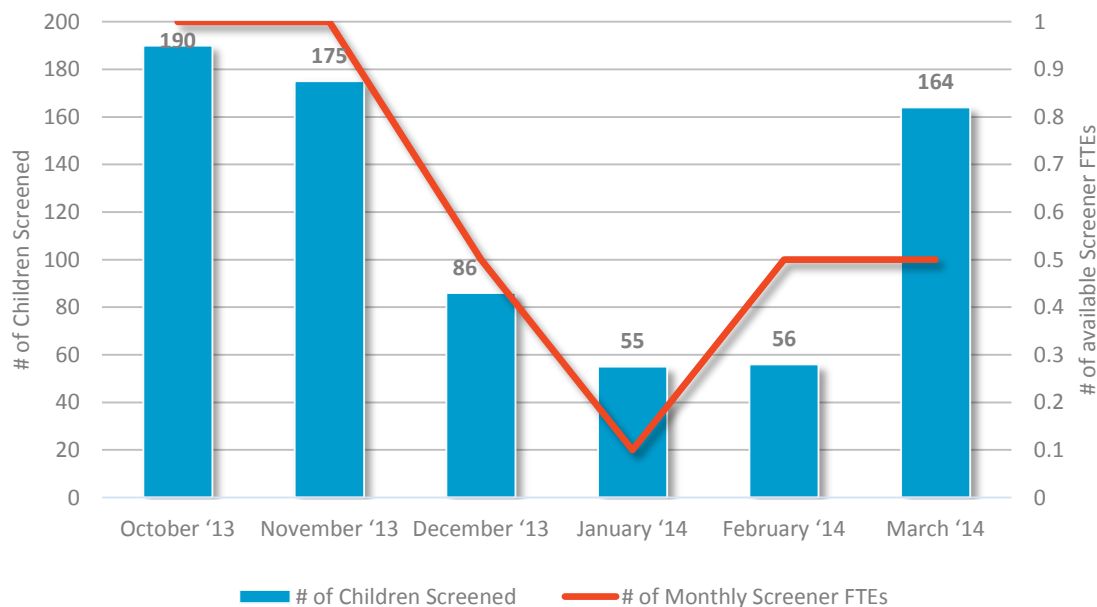
## Impact of Screener Availability on Screening Productivity

The total number of children screened is influenced by several factors, including the number of available Screener hours in the month to conduct screenings, patient volume, availability of Pediatric staff, and major holidays. In the figure below, Bascom Clinic **Screener FTEs correlate to the number of children screened for the majority of months (October 2013 – January 2014) studied.**<sup>4</sup> In February and March, the correlation does not hold as true as in the previous months of data collection.

### Key Finding:

When the Screener is present, a greater number of screenings are completed and the screening process is most efficient.

**Figure 12: Screener FTEs correlated to the number of screenings completed in most months during the study period.**



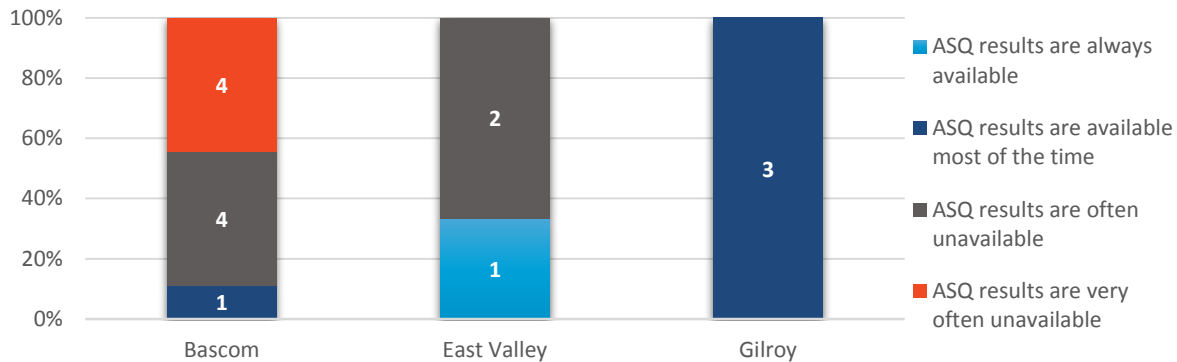
*Source:* Monthly Screening Activity Log, Bascom Valley Health Center, October 1, 2013 – March 31, 2014.

<sup>4</sup> September 2013 was not included in this particular analysis because data collection did not begin until September 16, 2013. Seventy-two ASQs were collected in the month of September '13.



Pediatricians from Bascom Valley Health Center, which has the highest patient volume, responded on the survey that at least once a week to at least once a day there have been well-child visits where they would have liked to use the results of the ASQ but none was conducted. Gilroy Valley Health Center pediatricians were the least likely to report having problems with ASQ results availability.

**Figure 13: Health Centers varied in the frequency that pediatricians reported that ASQ results were available at the time of the well child check exam.**



*Source:* Pediatrician ASQ Experience Survey, June 17 – July 25, 2014.

## Screening Process by Pediatric Clinic

Data presented for this report is largely based on that collected from Bascom Valley Health Center (i.e., screening statistics, parent satisfaction survey). The East Valley and Gilroy Valley Health Centers also implemented the ASQ. We conducted interviews with the pediatricians and screeners at all three clinics in order to obtain a more in-depth picture of how each implemented the paper-based phase of the ASQ.

Each clinic has variable levels of Screener FTEs available to assist with ASQ screening. While the primary responsibility of the Screener is to assist families with completing the ASQ, the role of each varies somewhat and is affected by size of the clinic and priorities of clinical staff.



### **Bascom Valley Health Center:**

- ❖ Highest volume VHC pediatric clinic with potential 30.5 ASQ screenings per day in 2012.
- ❖ .5 FTE allocated for Screener assistance beginning in 2014.
- ❖ High levels of Screener support to assist parents/ guardians to complete the ASQ.
- ❖ Screener essential to linking families to additional community resources, but minimal time spent on follow-up to ensure linkage.
- ❖ No ASQ screening conducted in the absence of the Screener.

Bascom Valley Health Center is the largest clinic in terms of patient volume and saw a total of 5,015 (unduplicated) children age 0-5 in 2012 with a potential 30.5 screens a day. The Bascom Screener assists families to complete the ASQ as quickly as possible. While there are a small number of parents/guardians who need significant assistance answering the questions she will help many more, particularly if they are not done by the time they get to the examination room. Some of the impetus to be so heavily involved in the ASQ's administration comes from clinical staff. The Screener also feels it is much quicker if she asks families the questions and writes down the answers and that she can get more completed and scored prior to the exam than if they proceed without her assistance.

Pediatricians at Bascom place a high priority on seeing the ASQ results at the beginning of the visit, though this reportedly occurs only about half of the time due to the large number of well-child visits at this clinic. For those parents/guardians who can complete the screen largely on their own the Screener is available to answer their questions. This screener has found that those

families using the version translated in Spanish required more assistance because the translated wording is difficult to understand. Sometimes, one of the Health Service Representatives (HSRs)<sup>5</sup> distributed the ASQ to families when they arrived for their visit only during the times that the screener was present in the clinic. When she is not on shift the ASQ is not administered and pediatricians revert to asking the standard developmental questions. The Screener at Bascom is able to complete a small number of telephone screens (about 5-6 a week) when asked by the pediatricians for clients for which they have a concern and were unable to be screened at the clinic in person. She makes copies of the summary page for the doctors to fax over with a referral when needed.

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<sup>5</sup> Health Service Representative (HSR) is the job classification for clinic staff who manage front desk operations, including patient check-in, paperwork completion, and schedule coordination.





East Valley is the second largest Valley Health Center clinic with 3,644 patients age 0-5 in 2012 resulting in 22.4 possible screens a day. The Screener also conducts some screens over the phone upon the request of the pediatrician; about 10-15 a week. When families check-in for their visit she gives them the ASQ. At East Valley the HSRs are not involved in the ASQ administration process. On days that she is not present in the clinic, the ASQ is not done except for those that she conducts by telephone during her shift. She lets parents/guardians finish the questionnaire on their own unless they have questions. They generally are able to complete the screen prior to the visit. She scores the ASQ, reviews the results with the family, and shares them with the pediatrician. At the end of each visit, the East Valley Screener provides families with resources including FIRST 5 Family Resource Centers and preschool resources, particularly if there are minor developmental delays. The pediatricians also depend on the Screener to follow-up on referrals for developmental services. Many times in the past they would make a follow-up clinic appointment with the primary purpose of checking to see if the child was receiving services. This is less necessary

as the Screener follows up with the family and helps them navigate the system.

#### **East Valley Health Center:**

- ❖ Second largest VHC pediatric clinic in our study with potential 22.4 ASQ screenings per day in 2012.
- ❖ 1 FTE allocated for Screener assistance in FY14.
- ❖ Moderate levels of Screener support to assist parents/guardians to complete the ASQ.
- ❖ Screener essential to linking families to additional community resources and follow-up with families to ensure linkage.
- ❖ Screener conducts some pre-appointment ASQs over the phone prior to days off.

#### **Gilroy Valley Health Center:**

- ❖ Smallest VHC pediatric clinic in our study with potential 10.4 ASQ screenings per day in 2012.
- ❖ .8 FTE allocated for Screener assistance in FY14.
- ❖ Low levels of Screener support to assist parents/guardians to complete the ASQ.
- ❖ Screener provides some support to refer parents/guardians to additional resources in the community.
- ❖ Screener conducts most pre-appointment ASQs over the phone prior to days off.

Gilroy Valley Health Center, in contrast, had 1,716 patients age 0-5 in 2012 with an average of 10.4 screens a day. The Screener distributes the ASQ and scores it after it is completed. She reports that she spends very little time needing to assist families with its completion. If they have a question or if she notices that there are a lot of responses of “never” then she will review the items with the parent/guardian. Pediatricians report that the ASQ is completed most of the time by the time they get into the exam room and they can review results with families during the appointment and make the appropriate referral if needed. The three pediatricians serving Gilroy reported on the survey that it is a rare occurrence that there is not an ASQ screening result available when they need one. Because the volume at this clinic is much lower than at the other two, the Screener at Gilroy was able to prepare packets ahead of time, which the HSRs could distribute to families as they check in for their appointment when she is not present. At the time of this writing, HSRs are no longer involved in the ASQ process. Instead, a nurse has begun to administer the ASQ when the Screener is not present. The Screener will also conduct phone call screenings when possible, and if requested by clinic staff. If parent/guardians have questions about completing the ASQ when the



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Screeener is not on shift the pediatrician will help them and will then score the ASQ so that results can be reviewed with the family.

The table below summarizes each of the key features of the pediatric clinics.

**Table 7: Pediatric clinic comparisons**

	Bascom	East Valley	Gilroy
<b>Number of Patients age 0-5 in 2012*</b>	5,015	3,644	1,716
<b>Number of Potential ASQ Screenings per day in 2012*</b>	30.5	22.4	10.4
<b>Screeener FTE in FY 13-14</b>	Approximately .5 FTE Starting Feb '14	Approximately 1 FTE Starting March '14	Approximately .8 FTE Starting in February '14
<b>Number of Unduplicated Screenings Completed in FY 13-14</b>	1,469 (Starting July '13)	1,231 (Starting March '14)	589 (Starting February '14)
<b>Average Unduplicated Screenings Completed per Month FY 13-14</b>	122.4	307.8	117.8
<b>Level of Screeener Assistance Needed</b>	High	Moderate	Low
<b>Phone call screenings</b>	When requested by physician (5-6/wk)	When requested by physician (10-15/wk)	When possible; as requested by staff
<b>Additional Screeener Responsibilities</b>	<ul style="list-style-type: none"> <li>• Links family to community resources</li> <li>• Scores ASQ</li> </ul>	<ul style="list-style-type: none"> <li>• Scores ASQ and reviews results with family</li> <li>• Links families to additional community resources</li> <li>• Follows up on referrals</li> </ul>	<ul style="list-style-type: none"> <li>• Prepares ASQ packets for when she is off-duty</li> <li>• Scores ASQ</li> </ul>
*At the time this report was written, we had complete information for 2012 on the total number of Well Check Visits at all three clinics.			



## Benefits of Using the Paper-based ASQ

In our interviews with Screeners and pediatricians, several benefits were documented on the use of the paper-based ASQ. We summarize the benefits mentioned below:

- ❖ **The paper-based ASQ is highly mobile throughout the clinic.** The paper-based ASQ can easily travel with the parent/guardian throughout the clinic from the waiting room to the exam room. This is important at Bascom Clinic where parents/guardians are often taken to the exam room where they complete the ASQ.
- ❖ **The paper-based ASQ does not require a high level of supervision by Screeners in order to be completed in all clinic settings.** In higher volume screening environments, multiple families may be completing an ASQ simultaneously. The paper-based ASQ does not require a Screener's constant supervision or monitoring if she is moving from family to family to assist them.
- ❖ **The paper-based format allows Screeners to assess ASQ results for parent/guardian comprehension before scores are finalized.** We noted that there are some socioeconomic and cultural barriers to how some parents/guardians interpret the ASQ tasks. Screeners can easily go through the paper-based ASQ to identify those areas where parents/guardians may not have understood the question or the task and are able to quickly assess and enact changes to the ASQ prior to scoring.
- ❖ **The paper-based ASQ can potentially be distributed by other clinic staff to parents/guardians when the Screener is not available.** HSRs were playing a role in some VMC clinics to distribute the ASQ upon a parent/guardian's arrival. At Gilroy Valley Health Center the nurse is now distributing the ASQ when the Screener is not available. The paper-based version of the ASQ can be distributed as part of the parent/guardian's packet of other materials to complete prior to their child's exam.



# Discussion of the Process to Implement iPad-based Screening

## Perceived Benefits and Challenges to the iPad-based ASQ

This report described the experience of implementing the ASQ in the paper-based form. During discussions with the pediatricians and Screeners we asked about their hopes and concerns for the next phase of this Innovation in which the ASQ is administered on an iPad. The iPad version includes audio reading of the items (in English or Spanish) along with video demonstrations of the task being asked about in the ASQ.

Pediatricians were very pleased to have the ASQ results as a complement to their exam as well as the availability of the Screeners to assist in its administration. They are hopeful that the audio and video features of the iPad version will increase the ease, speed of completion, and accuracy of responses due to better comprehension. However, pediatricians and Screeners at the three clinics expressed some concerns regarding implementation of the iPad-based ASQ such as the device's security and mobility, and familiarity of parents with using the technology.

Below, we summarize both of the perceived benefits and anticipated potential challenges to implementing the iPad-based ASQ. In the next phase of the evaluation, we aim to better understand how these potential challenges actually impact the implementation and usability of the iPad-based ASQ.

Potential Benefits of iPad-based ASQ	Potential Challenges of iPad-based ASQ
<ul style="list-style-type: none"><li>➤ Audio/video components may increase parent/guardian understanding of ASQ questions.</li><li>➤ Audio/video components may increase the accuracy of the ASQ results because of better parent/guardian responses.</li><li>➤ Audio/video components may enhance the ease of use of the ASQ and increase screening efficiency.</li></ul>	<ul style="list-style-type: none"><li>➤ The iPad must stay with the patient until they complete the ASQ. If the parent must pause answering the questions for the exam room visit with the pediatrician, no one else can use the device.</li><li>➤ iPad may be difficult to use and navigate for parents/guardians who are less familiar with the technology.</li><li>➤ Children may play with the iPad and potentially damage it.</li><li>➤ Theft of the device is a concern to the SCCMHD and requires the use of antitheft equipment.</li></ul>



## Conclusion

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The goal of this report was to document the experience of implementing the paper-based phase of ASQ implementation in Santa Clara County Valley Health Center pediatric clinics in preparation of the phasing in of iPad-based ASQ screening. Pediatricians shared their thoughts on the many benefits of using the ASQ including clarifying areas of concern, identifying potential problems earlier, providing a concrete measure of a child's developmental progress, and serving as an education tool and stepping off point for discussion with parents about their child's development.

Based on the information collected thus far, it is clear that having a dedicated Screener to assist with completion of the ASQ, scoring, and follow-up with families is an important component of a screening system. Because staff will vary in their time availability and willingness to distribute the ASQ to families and score the screen, it is unlikely that the ASQ would be systematically used without the presence of the Screener staff.

Clinics varied in the extent to which ASQ screening results were available for every well child visit. **The potential for universal screening at a clinic is likely based on a combination of Screener to patient volume ratio along with the willingness of other staff to take on some of the Screener tasks when the Screener is not on-duty.** A .8 FTE at a low volume clinic with staff who are willing to distribute the ASQ when that person is not on-shift creates a situation in which ASQ results are nearly always available. In contrast, a .5 FTE staffing level in a high volume clinic in which other staff do not administer the ASQ in the Screener's absence results in many children not being screened.

Consistent with the paper-based phase of the ASQ implementation, the evaluation will collect qualitative information on how the iPad-based phase of this Innovation is implemented at Bascom as well as East Valley and Gilroy Valley Health Centers. We will also continue to collect screening statistics and ASQ results as well as parent/guardian satisfaction surveys at Bascom. We will add the same level of data collection on screening statistics for Gilroy and East Valley during the iPad-phase of administration to make cross-clinic comparisons similar to the format of this report, but we will be unable to make pre/post comparisons at Gilroy and East Valley as we plan to do with screening statistics at Bascom. With this information, the evaluation seeks to determine the extent to which the iPad version of the screening tool and its audio/video components support the goal of implementing standardized universal screening.

However, as we move forward with the implementation and evaluation of the iPad-based phase of the ASQ, we recognize several factors that may affect the study results and answers to the research questions posed in the Evaluation Methodology section of this report.

- **The number of iPads purchased for each clinic may affect screening efficiency.** Multiple families are seen concurrently for well child visits, even more so at higher volume clinics. If there are not enough iPads, then it is likely that some families will be completing a paper version and some an



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electronic version. It will be critical to the evaluation that the assignment of paper or iPad version is done randomly and that the number used of each as well as phone screens be documented.

- **There is a great deal of concern regarding the security of the iPad.** If the Screener or other clinic staff must be physically present while the electronic device is being used, as has been suggested, this could affect ASQ completion rates and conflict with clinic flow. In response, SCCMHD worked with clinics to identify and purchase antitheft equipment which will allow parents/guardians to complete the ASQ as they moved around the clinic (e.g., from reception to exam room).
- **Some parents indicate that their child cannot do a task because they have not tried it with their child or do not have the indicated toys at home.** Having an audio/video component repeat the wording of the question and/or demonstrate the task may not increase parents' ability to determine if their child is able to perform the task. This will be explored through parent satisfaction surveys and interviews with clinic staff. Similarly, Screeners have reported that the Spanish version of the items is worded in a way that is difficult to understand. While the audio component may not increase comprehension we will explore if the video demonstrations improves understanding.
- **Few families required literacy support from Screeners during the paper-based phase of the ASQ.** If the vast majority of parents/guardians do not need Screener assistance to complete the ASQ without the audio/video components, there may be an insignificant impact that those components will have in increasing accessibility and efficiency of screening in pediatric clinics. However, clinic staff consistently reported that they do feel these features of the iPad are likely to improve comprehension and accuracy of the ASQ results.
- **The iPad technology may be new to many families.** The evaluation will document the extent of parents' unfamiliarity with how to use the iPad device and time it takes Screeners to teach families how to use it.



# Appendices

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## Appendix A: Participant Voluntary Consent Forms

### Parent/Legal Guardian Consent

**Title of Study:** Evaluation of Santa Clara Mental Health Department's Innovation #1: Early Childhood Universal Screening Project

**Investigators:**

Principle Investigator: Ryan Wythe, Program Associate, Resource Development Associates.

**Contact Phone Number:** 510-629-4812 (Resource Development Associates, 230 4<sup>th</sup> Street, Oakland, CA 94607).

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The Early Childhood Universal Screen Project staff have explained the purpose and procedure of the study: \_\_\_\_\_ Yes \_\_\_\_\_ No

**I understand that:**

As part of my child's Well Child Check visit, I will be asked to complete the Ages & Stages Questionnaire (ASQ). My doctor will go over the results with me during my visit. The purpose of the evaluation is to see how the ASQ screening is working and to make suggestions for how to improve the screening process.

By agreeing to participate in this evaluation, I may be asked to complete a satisfaction survey and/or interview about the screening process and the screening tool.

The information collected for this evaluation will include: demographic information about my child, my child's screening results, and information about any referrals made based on the screening.

Participating in the evaluation is voluntary. Refusal to participate in the study will involve no penalty or loss of benefits and/or services to which I am otherwise entitled. I am free to withdraw my consent and discontinue participation in the project at any time without prejudice to me or effect on my participation in county mental health programs.

My name will never appear in reports. The evaluation will report information about groups of people, not individuals, to the Santa Clara Valley Health & Hospital System Mental Health Department's (MHD) Early Childhood Universal Screening Project stakeholders.

If I have any additional questions, I can contact the Principle Investigator, Ryan Wythe, at (510) 629-4812.

**I AGREE TO VOLUNTRILY PARTICIPATE IN THIS STUDY:**

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Signature of Parent/Legal Guardian\*

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Date Signed







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Signature of Witness

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Date Signed

\*A family member or caregiver cannot consent to participate in the evaluation, unless the family member or caregiver is the child's legal guardian.



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Consentimiento del Padre / Tutor Legal

**Título del estudio:** Evaluación de Innovación #1 del Departamento de Salud Mental del Condado de Santa Clara: Proyecto de evaluación universal de la primera infancia

**Investigadora Principal:** Ryan Wythe, Program Associate, Resource Development Associates.

**Número de teléfono:** 510-629-4812 (Resource Development Associates, 230 4<sup>th</sup> Street, Oakland, CA 94607).

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El personal del proyecto de evaluación universal de la primera infancia ha explicado el propósito y procedimiento del estudio: \_\_\_\_\_ Sí \_\_\_\_\_ No

**Entiendo que:**

Como parte de la visita “Well Child Check” de mi hijo/a, me van a pedir que complete el Cuestionario de Edades y Etapas (ASQ). El médico revisará los resultados conmigo durante mi visita. El propósito del cuestionario es ver cómo la evaluación ASQ está trabajando y para hacer sugerencias sobre cómo mejorar el proceso de evaluación.

Al aceptar participar en esta evaluación, se me puede pedir que complete una encuesta de satisfacción y/o entrevista sobre el proceso de evaluación.

La información colectada en esta evaluación incluyen: información demográfica acerca de mi hijo/a, los resultados de la evaluación de mi hijo/a e información acerca de cualquier referencia hecha a través de la evaluación.

Participar en la evaluación es voluntario. Negar a participar en el estudio implicará ninguna sanción o pérdida de beneficios y/o servicios a los que tengo derecho. Soy libre para retirar mi consentimiento y dejar de participar en el proyecto en cualquier momento y sin perjuicio de mí o efecto sobre mi participación en programas de salud mental del condado.

Mi nombre nunca aparecerá en los informes. En la evaluación se elaborará la información acerca de los grupos de personas, no los individuos, a los interesados del proyecto de evaluación universal de la primera infancia de parte de la “Santa Clara Valley Health & Hospital System Mental Health Department (MHD)”.

Si tengo alguna pregunta adicional, puedo comunicarme con la investigadora principal, Ryan Wythe, al (510) 629-4812.

**ACEPTO VOLUNTARIAMENTE PARTICIPAR EN ESTE ESTUDIO:**

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Firma del Padre/Tutor Legal \*

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Fecha





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Firma del testigo

Fecha

\* Un miembro de la familia o el cuidador no puede dar su consentimiento para participar en la evaluación, a menos que el miembro de la familia o el cuidador es el tutor legal del niño.

[illegible][illegible]

[illegible]



## Parent/Guardian Survey

### Paper-Based ASQ-3/ASQ-SE Administration

Date ASQ Completed:                   /                   /

*This survey is anonymous. You do not need to complete this survey if you do not want to. Your answers will not affect any services you receive at the clinic or anywhere else.*

1. How long did it take to complete Ages and Stages Questionnaire (ASQ)?
  - ☐ Less than 10 minutes
  - ☐ 10 – 20 minutes
  - ☐ 20 – 30 minutes
  - ☐ 30 – 40 minutes
  - ☐ Longer than 40 minutes
2. What problems did you have answering the ASQ questions? Please check all that apply.
  - ☐ I did **not** have any problems answering the ASQ questions.
  - ☐ I had problems reading and/or understanding the ASQ questions.
  - ☐ I did not have enough time to complete the ASQ or there were too many questions to answer.
  - ☐ Other (please write in your answer): \_\_\_\_\_
3. Did someone help you complete the ASQ? Please check all that apply.
  - ☐ No, I completed it by myself.
  - ☐ Yes, a staff person at the clinic helped me by answering my questions about the ASQ.
  - ☐ Yes, a staff person read aloud the questions to me.
  - ☐ Yes, a staff person wrote down my answers to the ASQ.
  - ☐ Yes, other (please write in your answer): \_\_\_\_\_
4. Did the clinic staff member help you in the language you are most comfortable speaking? (For example, if you feel more comfortable speaking Spanish, was the clinic staff member able to speak with you in Spanish?)
  - ☐ Yes
  - ☐ No
  - ☐ I did not need help from a clinic staff person to complete the ASQ.



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5. Overall, how satisfied were you with this process of using the assessment about your child's development today on a scale of 1 – 5, 5 being very satisfied? *(Please circle one)*

1 ☹️	2	3	4	5 😊
Not Satisfied	Somewhat Satisfied	Neutral	Satisfied	Very Satisfied

6. Do you have any comments or suggestions on how we could improve the process of using the Ages and Stages Questionnaire?

***Thank you for your time!***



## Encuesta para padres/tutores

Versión de idioma del ASQ (marque con un círculo):

Inglés

Español

*Paper-Based ASQ-3/ASQ-SE  
Administration*

Fecha en que se completó ASQ:

\_\_\_\_/\_\_\_\_/\_\_\_\_

*Por favor conteste las siguientes preguntas sobre su experiencia en el uso de las Edades y Etapas (ASQ) de hoy. Sus respuestas, junto con las de otros padres o tutores, nos ayudarán a mejorar los servicios.*

*Esta encuesta es anónima. No se necesita completar esta encuesta si usted no quiere. Sus respuestas no afectarán los servicios que recibe en la clínica o en cualquier otro lugar.*

1. ¿Cuánto tiempo se tardó en completar el cuestionario de Edades y Etapas (ASQ)?

- ☐ Menos de 10 minutos
- ☐ 10 – 20 minutos
- ☐ 20 – 30 minutos
- ☐ 30 – 40 minutos
- ☐ Más de 40 minutos

2. ¿Qué problemas tuvo en contestar las preguntas del ASQ? Marque todas las que correspondan.

- ☐ Yo **no** tuve ningún problema en responder a las preguntas del ASQ.
- ☐ Yo tuve problemas leyendo y/o entendiendo las preguntas del ASQ.
- ☐ Yo no tuve tiempo suficiente para completar el ASQ o habían muchas preguntas para contestar.
- ☐ Algo más (por favor escribe su respuesta): \_\_\_\_\_

3. ¿Alguien le ayudó a completar el ASQ? Marque todas las que correspondan.

- ☐ No, lo he completado por mí mismo.
- ☐ Sí, un miembro del personal de la clínica me ayudó con mis preguntas acerca del ASQ.
- ☐ Sí, un miembro del personal me leyó en voz alta las preguntas.
- ☐ Sí, un miembro del personal escribió mis respuestas del ASQ.
- ☐ Sí, algo más (por favor escribe su respuesta): \_\_\_\_\_

4. ¿El miembro del personal de la clínica le ayudó en el idioma que usted se sienta más cómodo hablando? (Por ejemplo, si usted se siente más cómodo hablando español, ¿fue el miembro del personal de la clínica capaz de hablar con usted en español?)

- ☐ Sí
- ☐ No
- ☐ Yo no necesité la ayuda de ningún miembro del personal de la clínica para completar el ASQ.





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5. En general, ¿Qué tan satisfecho estuvo usted con el proceso de usar la evaluación acerca del desarrollo de su hijo/a hoy? Usa una escala de 1 a 5, donde 5 significa muy satisfecho. *(Por favor, marque con un círculo)*

1 ☹️	2	3	4	5 😊
No estoy satisfecho	Estoy un poco satisfecho	Neutral	Estoy satisfecho	Estoy muy satisfecho

6. ¿Tiene algún comentario o sugerencia sobre cómo podemos mejorar el proceso de utilización del cuestionario de Edades y Etapas?

***¡Gracias por su tiempo!***



## Appendix E: Online ASQ Experience Survey for Pediatricians

### Pediatrician ASQ-3 Experience Survey

#### Introduction:

*Santa Clara County has started early childhood developmental screenings for children, utilizing the Ages and Stages Questionnaire (ASQ). We would like to know your opinion regarding how it is working. Please answer the following questions. Your answers will help us understand the ASQ administration process. We will follow-up with a second Experience Survey in several months.*

*This survey is anonymous. Your answer will not affect your job standing or impact your work.*

Please indicate the clinic where you primarily work: \*required

- ☐ Bascom
- ☐ East Valley
- ☐ Gilroy

1. Have you used the ASQ results to help screen for children with potential developmental variations and delays, since your clinic has had a dedicated Screener? \*required

- ☐ Yes
- ☐ No

2. How helpful are the ASQ results to your assessment of a child's developmental wellbeing?

- ☐ I do not review or otherwise use the results
- ☐ I review the results but it does not make a difference for my assessment
- ☐ Somewhat helpful
- ☐ Helpful
- ☐ Very helpful

Follow up to Question 3: How does knowing the results of the ASQ impact your assessment and decision to refer pediatric patients? [Text Box]

3. Since instituting systematic ASQ screening, are potential developmental variations or delays being detected in children more frequently?

- ☐ No
- ☐ Possibly or Maybe
- ☐ Yes



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4. Since instituting systematic ASQ screening, have you noticed any change in the number of referrals you are making to services that address the child's social and emotional development?
- ☐ No  
☐ Possibly or Maybe  
☐ Yes

Follow up to Questions 4 and 5: For your practice, what are the potential impacts or benefits of more frequent early detection or increased referrals for children and families? [Text Box]

5. How often have there been well-baby/well-child visits where you would have liked to use the results of the ASQ, but no developmental screening was conducted or available in the child's medical record?
- ☐ Very Often (at least once each day)  
☐ Often (at least once each week)  
☐ Rarely (at least once each month)  
☐ Never

Follow up to Question 2: What are some challenges you observe with getting the ASQ screening results? [Text Box]

6. Please rate your overall satisfaction with the process for administering the ASQ since your clinic has had a dedicated Screener (*select one*).

1	2	3	4	5
Not satisfied	Somewhat satisfied	Neutral	Satisfied	Very Satisfied

7. What other comments or suggestions for improvement of the process for developmental screening do you have? [Text Box]



## Appendix F: Focus Group with Pediatricians Protocol

### Physician Focus Group Guide

*Introduction:* Thank you for allowing us to use part of your meeting today to talk with you about the ASQ screening process. We are Ryan and Pat from Resource Development Associates. Santa Clara County Mental Health has hired us to help them evaluation the ASQ Innovation project. April Kihara from the County is here as well so she can learn more about your experiences. You will hopefully have completed a brief questionnaire about your experiences with the ASQ. The information you provided was very helpful and we appreciate the detailed comments you provided. This morning we are going to ask you just a few follow-up questions based on the responses we received from you. For purposes of this group there is no right or wrong comment and we will not spend time debating any one suggestion. The information you share will be reported in aggregate in our report. We may use a quote from a comment but will not name individuals who participated in this discussion. Are there any questions?

1. On the survey when asked if you noticed any change in the number of referrals you are making to services that address the child's social and emotional development, a few physicians said the number of referrals did not increase and several said possibly. We were a little confused because this runs slightly contrary to the comments we received about the benefits of the ASQ in detecting possibly problems earlier. *Can you help us understand this response? Why would referrals not increase?*
2. Some of you mentioned in the survey that there are challenges with having the ASQ completed during certain clinic hours when the screener is not available. *What do you do when don't have a completed ASQ available because the screener was not there?*
3. *Do you have suggestions or ideas on how to deal with these missed screens?*
4. Some of your responses to the survey mentioned that there were problems with some parents not understanding questions on the ASQ or not knowing if their child could perform a task. As a result sometimes parents would say "no" as a result.
  - a. *Have you observed this?*
  - b. *Do you have any ideas on how to improve validity of results given this situation?*
5. The clinics will soon be starting to use the ASQ on the iPad. The electronic version has features including reading items out loud and short videos to demonstrate a task.
  - a. *What do you see as potential benefits of this electronic screening method?*
  - b. *What are the potential challenges?*

Thank you very much for your time.



## **Appendix G: Phone Interview with Pediatricians Protocol**

### **PHYSICIAN INTERVIEW (GILROY & EAST VALLEY) – PAPER BASED**

Thank you for talking with me today about ASQ screening at \_\_\_\_\_ clinic. From the on-line survey we learned that having screening results from the ASQ helps pediatricians identify potential developmental issues earlier and facilitates quicker referrals for services. I want to take this time with you to discuss some follow-up questions to the on-line survey.

1. How were you screening for delays prior to systematic ASQ screening? How did that work?
2. What components to systematic screening process is most helpful to you and your team as pediatricians?
3. How does the screener support your staff and the assessment process? What is the role of HSRs?
4. On the survey when we asked if you noticed any change in the number of referrals you are making to services that address the child's social and emotional development a few physicians said the number of referrals did not increase and several said possibly. We were a little confused because this runs slightly contrary to the comments we received about the benefits of the ASQ in detecting possibly problems earlier. Can you help us understand this response? Why would referrals not increase?
5. Some pediatricians from Bascom and East Valley clinics mentioned in the survey that there are challenges with having the ASQ completed during certain clinic hours when the screener is not available. Have you noticed this at Gilroy? What do your staff do when they don't have a completed ASQ available because the screener was not there?
6. Do you have suggestions or ideas on how to deal with these missed screens?
7. Some in the survey mentioned that there were problems with some parents not understanding questions on the ASQ or not knowing if their child could perform a task. As a result sometimes parents would say "no" as a result.
  - a) Have you observed this?
  - b) Do you have any ideas on how to improve validity of results given this situation?



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8. The clinics will soon be starting to use the ASQ on the ipad. The electronic version has features including reading items out loud and short videos to demonstrate a task.
  - a) What do you see as potential benefits of this electronic screening method?
  - b) What are the potential challenges? (longer time to complete? greater understanding by parents?)



## Appendix H: Phone Interview with Screeners Protocol

### Clinic Screener Interview Guide

#### *Paper-Based ASQ-3/ASQ-SE Administration*

*Santa Clara County has started universal early childhood developmental screenings for children ages 9, 18, 24, and 30 months. We would like to know your opinion about how it is working. Please answer the following questions. Your answers will help us improve services.*

*This survey is confidential. Your answer will not affect your job standing or impact your work.*

1. Approximately, how many hours per week do you work at your clinic site?
2. What is the approximate proportion of time spent per day supporting families completing the paper-based ASQ-3/ASQ-SE (e.g. answering their questions, translating survey items, explaining the instructions)?
  - ☐ 0% of my time is spent supporting families to complete the ASQ-3/ASQ-SE
  - ☐ 1% - 25% of my time is spent supporting families to complete the ASQ-3/ASQ-SE
  - ☐ 26% - 45% of my time is spent supporting families to complete the ASQ-3/ASQ-SE
  - ☐ 46% - 70% of my time is spent supporting families to complete the ASQ-3/ASQ-SE
  - ☐ 71% or more of my time is spent supporting families to complete the ASQ-3/ASQ-SE
3. What other activities do you do besides helping families complete the ASQ screener? (Referrals, health system navigation, other?)
4. What is the approximate proportion of ASQ screens completed by phone and in-person?
5. When you complete an ASQ screener after the child's visit is complete, how do you communicate those results to the pediatrician and to the family?
6. In general, do you think that most children who could possibly get screened prior to their Well Child Check are getting screened?
  - a. If not, what are some of the things getting in the way?
7. What proportion of families need assistance completing the ASQ screener?
8. What are the most common requests for assistance from families completing the paper-based ASQ-3/ASQ-SE assessment? Or what are some of their most frequent problems in using the paper-based ASQ?



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9. Have you provided assistance to families in English, Spanish, and/or in another language (please check all that apply)?

☐ English

☐ Spanish

☐ Another language:

a. Please write-in other languages:

10. Are the majority of requests for assistance due to literacy or language barriers or due to not understanding the task/question?

11. The iPad version of the ASQ screener will include both video and audio components with the aim to assist parents who low literacy skills and to help demonstrate the concepts some of the questions ask about. How do you think the audio/video components will help parents to complete the ASQ screener? Do you have any concerns about using the iPad-based ASQ screener?

Please rate your overall satisfaction with the use of universal paper-based ASQ-3/ASQ-SE assessments for children at the Bascom Clinic (*select one*).

1	2	3	4	5
Not satisfied	Somewhat satisfied	Neutral	Satisfied	Very Satisfied

Do you have any other comments or suggestions about how we can improve the process for administering the paper-based ASQ-3/ASQ-SE assessment?

*Thank you for your time!*





## **Appendix I: Preliminary Parent/Guardian Satisfaction Survey Results Memorandum**

### **Patient Satisfaction Survey: Pre vs. Post-Oct 6<sup>th</sup> Data Findings**

#### **Purpose:**

In October 2013, SCCMHD agreed to alter the process for administering the ASQ-3/ASQ-SE at the Bascom Clinic as part of the evaluation of the Innovation #1 project. Prior to October 6<sup>th</sup>, the SCCMHD Screener was proactively completing the ASQ-3/ASQ-SE for parents and guardians. The Innovation #1 evaluation team, in collaboration with SCCMHD, altered the administration process to make it more parent/guardian driven. The Screener would allow parents/guardians more opportunities to complete the ASQ-3/SE screening tool individually before receiving more direct assistance from the clinic's Screener.

This change to the administration of the ASQ-3/SE allowed for us to examine how the process of administering the ASQ-3/SE impacts the responses from parents/guardians on the parent/guardian satisfaction survey. We determined that making the administration of the ASQ-3/SE more parent/guardian-driven provides us with a more realistic understanding of the problems they encounter in the screening process. Below is a summary of key findings from our analysis of parent/guardian satisfaction surveys between September 13, 2013 and October 31, 2013 (the complete analysis is located on page 2).

#### **Key Findings:**

1. Parents report receiving less direct support in completing the ASQ-3/SE from the Screener in the post-October 6<sup>th</sup> period.
2. There is an increase in parents/guardians reporting longer completion times in the post-October 6<sup>th</sup> period.
3. A slight increase is observed in the number of parents who reported having problems answering the ASQ-3/SE questions in the post-October 6<sup>th</sup> period.
4. All parents/guardians were very satisfied or satisfied with the process of administering the ASQ-3/SE regardless of what intensity of staff report they received.

Establishing these key findings are important as we move ahead in planning for the implementation of the iPad-based ASQ-3/SE at the Bascom clinic. With a more realistic baseline of how parents/guardians are impacted by the paper-based ASQ-3/SE administration process, we will be able to make more accurate conclusions about the benefits (and drawbacks) of using the iPad-based screening tool in clinic settings.

For the complete analysis of pre/post findings from the parent/guardian survey, please see the table on page 2.



**Santa Clara County Mental Health Department**  
*Innovation 01: Universal Early Childhood Screening Project Evaluation*

Question	Pre Oct 6 <sup>th</sup> Data (N=18)	Post Oct. 6 <sup>th</sup> Data (N=11)	Key Findings
<b>1. How long did it take to complete the ASQ?</b>	13 out of 18 (72%) parents checked it took them 10-20 mins to complete the ASQ. 3 out of 18 (17%) parents checked it took them 20-30 mins to complete the survey. 2 out of 18 (11%) parents checked it took them less than 10 mins to complete the survey.	6 out of 11 (55%) parents said it took them 10-20 mins to complete the ASQ. 5 out of 11 (45%) parents said it took them 20-30 mins to complete the ASQ.	While the majority of parents are taking 10-20 mins to complete the ASQ, a higher percentage of the post-Oct. 6 <sup>th</sup> cohort is taking longer to complete the assessment (45% vs 28%).
<b>2. What problems did you have answering the ASQ questions? (check all that apply)</b>	None reported problems answering the ASQ.	9 reported no problems. 2 had problems reading/understanding the ASQ questions; 1 out of these 2 parents also checked the box: "not having enough time to complete the ASQ or there were too many questions to answer."	Several parents (18%) in the post-Oct. 6 <sup>th</sup> cohort experienced difficulty answering the ASQ questions, whereas no parents indicated that in the pre-Oct 6 <sup>th</sup> cohort.
<b>3. Did someone help you complete the ASQ? (check all that apply)</b>	1 parent checked "screener answered questions about the ASQ." 18 parents (100%) reported screener read aloud the questions to the parent. 16 out of 18 (89%) checked "the screener wrote down parent's answers to the ASQ."	3 had no screener assistance, and these same 3 parents also checked they had no problems answering the ASQ questions. 3 reported screener answered questions about the ASQ. 5 out of 11 parents (45%) reported screener read aloud and wrote down answers to the ASQ.	While 100% of the pre-Oct. 6 <sup>th</sup> cohort reported that the screener read aloud and wrote down the answers to the ASQ, 45% of the post-Oct.6 <sup>th</sup> cohort had the questions read to them.
<b>4. Did the clinic staff member help you in the language you are most comfortable speaking?</b>	All 18 (100%) parents reported the screener was language proficient.	10 parents (91%) reported the screener was language proficient.	A slightly less percentage of parents reported the screener was linguistically proficient.
<b>5. Overall, how satisfied are you with the assessment process, on a scale of 1-5, 5 being very satisfied?</b>	12 parents (67%) said they were very satisfied 6 (33%) checked satisfied with the ASQ assessment process.	6 (55%) were very satisfied with the ASQ assessment process. 5 parents (45%) were satisfied.	All parents in both cohorts reported they were satisfied/very satisfied with the assessment process.



## Appendix J: Santa Clara County Institutional Review Board (IRB) Approval

Dedicated to the Health  
Of the Whole Community



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DATE: June 9, 2014

TO: Ryan Wythe

FROM: Kakoli Banerjee, Ph.D.  
Chair, Health Services Institutional Review Board  
Santa Clara Valley Health & Hospital System

RE: Santa Clara County MHSA Innovation #1: Early Childhood Universal Screening Project

On behalf of the Health Services IRB, I have reviewed your renewal application and found it meets all requirements for approval. Your project contains all necessary procedures for the protection of privacy, confidentiality and health and safety of the participants consistent with federal and other applicable regulatory guidelines necessary for research integrity.

Your IRB number is 14-19.

This IRB approval is valid until July 31, 2015. If this study will continue beyond one year, you will need to submit a request for an extension prior to the expiration date, indicating changes, if any, in the approved protocol.

Any change in the research project which significantly alters the procedures or risks must be submitted for review by the IRB prior to the implementation of such change, including a change in investigators. Any complications should be reported at once to the IRB before continuing with the project.

Please keep the IRB Committee informed of the project's progress on a regular basis over its duration. At the end of the study, please provide the IRB with a report of the findings or copy of any published articles.

The Department of Alcohol and Drug Services is a division of the Santa Clara Valley Health & Hospital System. It is owned and operated by the County of Santa Clara.

