

# Florida Pediatric Medical Home

DEMONSTRATION PROJECT EVALUATION 2012



*Report Prepared by the Institute for Child Health Policy at the University of Florida*



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Report Prepared by the Institute for Child Health Policy at the University of Florida, May 2013

**Project Staff**

Caprice Knapp, PhD – Principal Investigator

Vanessa Madden, BSc Hons – Project Manager

Lindsey Woodworth, MA – Research Coordinator

Daniel Fernandez-Baca, MA – Research Coordinator

Shourjo Chakravorty, PhD – Research Coordinator

**Programming Staff**

Deepa Ranka, MS – Data Manager

Yijun Sun, PhD

Hongzhi Xu, PhD, MPH

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# Executive Summary

On February 4, 2009, President Barack Obama signed Public Law 111-3, the Children's Health Insurance Program Reauthorization Act (CHIPRA). CHIPRA is a reauthorization of the 1997 amendment to the Social Security Act that created Title XXI, the Children's Health Insurance Program (CHIP). The CHIPRA legislation had many components, one of which directed the Centers for Medicare and Medicaid Services (CMS) to establish a demonstration grant program for states. Grantee states could participate in one of five categories that were designed to improve children's health. Florida, in collaboration with Illinois, was named a grantee state in 2010. One of the categories that Florida is participating in is aimed at developing provider-based models that will improve child health outcomes. Florida chose to implement the patient-centered medical home (PCMH) model as its provider-based model.

Twenty practices were recruited to the demonstration project in 2011 and embarked on a provider-based quality improvement (QI) program led by the American Academy of Pediatrics (AAP). The QI program included three learning sessions, monthly educational webinars, and two 6-month periods of data collection. The Institute for Child Health Policy (the Institute) was contracted by the state to conduct a four-year, longitudinal, multi-stakeholder evaluation.

This report describes evaluation data collected in calendar year 2012 from the demonstration practices (core clinical teams and their staff), alongside community stakeholders who interact with the practices, as well as describing parent perspectives on the care their children receive in a PCMH.

Key findings are described below.

- Practices that completed two learning sessions (Phase 1) were offered the chance to participate in a third learning session and a second 6-month action period of data collection (Phase 2). Sixteen of the 20 demonstration practices participated in both phases of the QI program.
- Florida's demonstration practices have significantly improved their self-reported medical home scores since baseline. Improvements are observed for all six medical home domains (*listed from most to least improved*): QI, data management, community outreach, chronic condition management, organization capacity, and care coordination.
- For two consecutive years practice staff report consistent levels of 'adaptive reserve', which is the ability of the practice to adapt and make changes. Core clinical teams similarly report consistent levels of adaptive reserve since baseline.
- Interviews with the core clinical teams reveal that they are working hard to generate support for the medical home project within the practice and to engage staff. Transformation efforts, however, are often affected by practice characteristics (e.g., practice size, patient population, resources, leadership) reflecting that there may not be a "one-size-fits-all" model to becoming a PCMH. The majority of practices initially perceived that the transformation would be easier and had to shift their expectations as a result; however, most felt that their efforts would be rewarded in the long-term and welcomed the opportunity for self-reflection and the support and resources provided by the AAP.
- Surveys with community stakeholders reveal that there is room for improvement in the areas of information exchange and ease of communication with the demonstration practices.
- Surveys with the parents whose children receive care at the demonstration practices indicate that they were more satisfied with almost all the aspects of their child's care than parents whose children receive care at control practices.

# 1 Florida Pediatric Medical Home Demonstration Project

## CHIPRA Quality Demonstration Grants

On February 4, 2009, President Barack Obama signed Public Law 111-3, the Children’s Health Insurance Program Reauthorization Act (CHIPRA). CHIPRA extends CHIP funding through federal fiscal year 2013 and has provisions to expand coverage to uninsured children and improve the quality of children’s health care<sup>1</sup>. Under Section 401(a) of the Act, there are seven provisions to improve child health quality activities for children enrolled in Medicaid and CHIP. Two of the CHIPRA provisions specifically call for the development of:

- Demonstration projects for improving the quality of children’s health care and the use of health information technology (HIT), and

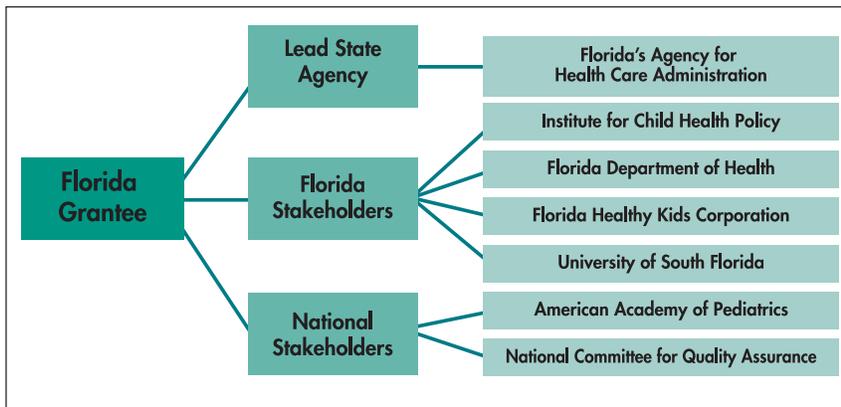
- A core set of measures that will be used to provide a national standard for measurement, reporting, and QI for children’s health care.

As a result of these two provisions, CMS issued an invitation to apply for CHIPRA Quality Demonstration Grants in September of 2009. Ten grants were to be awarded and states were encouraged to collaborate with one another to submit proposals in the following five categories: A) evaluate and experiment with new and existing measures of quality for children covered by CHIP and Medicaid; B) promote the use of HIT; C) evaluate provider-based models to improve health care delivery; D) demonstrate the impact of electronic health records (EHR) to improve pediatric health and pediatric health care quality while reducing health care

costs; and E) provide a model of the applicant’s own design that expands the activities under categories A-D<sup>2</sup>. Florida and Illinois submitted a joint grant application for categories A, B, C, and E.

Florida’s Agency for Health Care Administration (AHCA) and Illinois’ Department of Healthcare and Family Services serve as the lead State agencies. The grant includes national stakeholders such as the AAP, Health Management Associates (HMA), and the National Committee for Quality Assurance (NCQA). Florida stakeholders include the Institute at the University of Florida (UF), the Florida Department of Health (DOH), Florida Healthy Kids Corporation (FHKC), and the University of South Florida (Figure 1). Florida and Illinois’ proposal was selected in early 2010 along with sixteen other grantees states (Appendix 1).

Figure 1. Structure of the Florida Quality Demonstration Grant



Florida chose to implement the PCMH model as its provider-based model for Category C, henceforth referred to as the Florida Pediatric Medical Home Demonstration Project. Subcontracts were awarded by AHCA in 2011 to (i) the AAP to implement a PCMH QI project, and (ii) the Institute to undertake an independent evaluation of the Florida

Pediatric Medical Home Demonstration Project.

The Florida Pediatric Medical Home Demonstration Project is a five-year program. Year one of the program began in 2010 and was devoted to planning activities, with the following four years of the program designated as the implementation and evaluation phases. For the purposes of this report, the baseline year of data collection in 2011 is noted as year one, 2012 as year two, 2013 as year three, and 2014 as year four.

## PCMH Model

### PCMH Principles

The concept of the PCMH has existed since 1967<sup>3</sup>. This approach to care is comprehensive and based on partnerships between multiple stakeholders such as patients, families, providers, and other organizations in the community. According to the AAP's 1992 policy statement, a PCMH provides accessible, continuous, comprehensive, family-centered, coordinated, and compassionate medical care<sup>4</sup>. The definition of a PCMH was further expanded in 2002 to include cultural effectiveness<sup>5</sup>. Most recently, a 2007 statement on the Joint Principles of the PCMH by the American Academy of Family Physicians (AAFP), AAP, American College of Physicians,

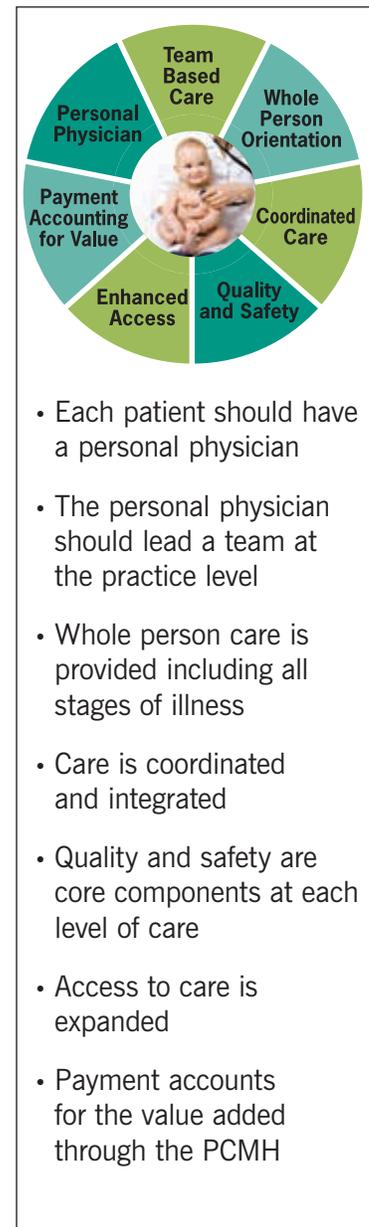
and the American Osteopathic Association identified seven core principles of a PCMH<sup>6</sup> (Figure 2).

Because the AAP's 1992 definition of a medical home left many providers uncertain as to how to apply the theoretical features of the model, a 2002 revision to the policy statement clearly spelled out the practical implications of a PCMH. The reader is referred to the Institute's 2011 evaluation report for a complete history of the PCMH model and a summary of national PCMH initiatives<sup>7</sup>.

### Implementation Challenges

Although there has been much agreement about the potential value of the PCMH, implementation can be challenging for several reasons. First, there is an extraordinary amount of information available on the PCMH which can be overwhelming to practices who have limited resources and time to implement such initiatives. One way to combat this formidable barrier is through facilitated education forums<sup>8</sup>. Second, PCMH can be implemented in a variety of ways. Practices may wish to make marginal changes around a system that is otherwise functioning well, or they may wish to completely re-design care delivery. Third, physicians have competing demands. Even

Figure 2. Joint Principles of the PCMH



if they are given materials to review and set on a course of action, it may be difficult to find time to implement these changes. Studies have shown that implementation of the PCMH takes time; as long as two years<sup>9</sup>. Finally, there is little evidence on the best way to implement the PCMH model<sup>10</sup>.

### Evaluation Challenges

Practice level interventions are challenging to implement, and perhaps even more challenging to evaluate. Due to the relatively new and evolving nature of the PCMH concept, there is limited evidence in the literature on the effectiveness of the model. Similarly, the measures for PCMH effectiveness have yet to become standardized<sup>11</sup> and a recent review shows that many evaluations of the PCMH have some methodological issues and show mostly inconclusive results<sup>10</sup>. Evaluation is further complicated by the issues of

attrition in longitudinal studies, and the fact that although a number of PCMH tools exist, few have been validated and there is no consensus across the medical or academic communities on which tools are optimal. Additionally, practice-level benchmarks are not available for all tools. Even among the 12 CHIPRA Quality Demonstration Grantee states implementing the PCMH model as their provider-based model of care for Category C, evaluation plans and tools differ considerably.

## AAP Quality Improvement Activities

### 2011

During 2011, the AAP recruited and selected 20 practices in Florida to participate in the Florida Pediatric Medical Home Demonstration Project. To be eligible, practices had to accept Medicaid and CHIP and serve at least 100

children with special health care needs (CSHCN). The AAP was responsible for recruiting the demonstration practices, facilitating the practices with educational opportunities, and facilitation of QI work led by a three-person core clinical team (lead physician and two other staff members) from each practice.

The aim of the QI project was to provide physicians and their staff with strategies, tools, and resources necessary to strengthen their medical home capacity and to provide high quality, family-centered care for all children and youth, including those with special health care needs. The QI project was approved by the AAP's Institutional Review Board (IRB) (#11KA01) on June 18, 2011, and a revision was approved on March 26, 2012.

In the early stages of the grant, the AAP formed an Expert Group to provide guidance in planning the project protocol and to oversee the implementation of the project. Expert Group membership included: AAP staff, physicians, the AAP Florida Chapter, AHCA and DOH representatives, HMA representatives, a QI advisor, and the UF evaluation team. The primary responsibilities of the AAP included managing

**Figure 3. The Role of the AAP**

<h2>AAP Brief</h2>	<ul style="list-style-type: none"> <li>■ Recruit 20 practices to be included in the community of learners</li> <li>■ Establish and implement a practice-based PCMH QI project</li> <li>■ Facilitate the education and QI work of a three-person core clinical team from each practice</li> </ul>
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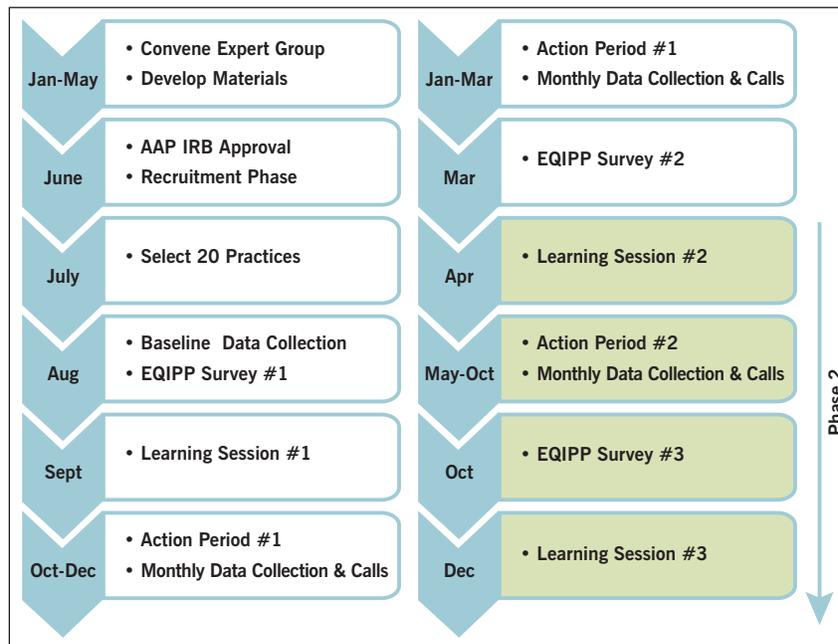
the project through the AAP's Division of Children with Special Needs and implementing the QI project through the AAP's Quality Improvement Innovation Network (QuIIN).

During calendar year 2011, core clinical teams from the participating practices were asked to submit baseline data prior to a Learning Session on PCMH concepts and QI science. A six-month action period followed during which time the core clinical teams audited their medical records and participated in monthly educational webinars (**Figure 4**). Participants also were given access to the AAP Education in Quality Improvement for Pediatric Practices (EQIPP) program. The reader is referred to the 2011 UF evaluation report for an in-depth description of all QI activities for calendar year 2011<sup>7</sup>.

## 2012

One of the key findings from the baseline interviews was that many of the core clinical teams felt overwhelmed by the scope of the project and wanted more facilitated time with the AAP to implement their desired changes. In response, the AAP extended its role in the QI project for a longer period. As part of "Phase 2", the AAP

**Figure 4. QI Activities in Calendar Years 2011 and 2012**



offered an additional QI action period following the second Learning Session and introduced a third Learning Session. Participating physicians were again eligible for continuing medical education (CME) credits for Phase 2 work. Sixteen of the 20 practices elected to participate in Phase 2 of the QI project (**Figure 4**)<sup>i</sup>.

Activities for calendar year 2012 are described below.

### Second Learning Session

The second Learning Session was held April 27-28, 2012 in Orlando. Core clinical team members from 18 practices

attended along with 8 parent partners. Participants received educational content from local and national PCMH experts and had the opportunity to attend break-out sessions on special topics. In addition to the structured seminars and 'ideas for change' resource booklet, practices were also encouraged to learn from each other and their parent partners, with time dedicated to sharing information about each practice's operations and ideas for change. As part of this collaborative model, 6 of the 18 practices were invited to present best practices. Practices received individualized

<sup>i</sup> Phases 1 and 2 comprise Round 1 of the Florida Pediatric Medical Home Demonstration Project. Round 2 is proposed for 2013 and will be discussed in the 2013 evaluation report.

performance measure data to help guide their planning activities for continued and sustained improvements.

Partnering with parents and community organizations was emphasized throughout the learning session. Parent engagement was encouraged through dedicated plenary and breakout sessions as well as a structured orientation program and an informal session to discuss parent partner roles and next steps. Core clinical team members were able to speak with representatives from NCQA, Direct Secure Messaging, Florida State Health Online Tracking System (SHOTS), The Family Café, The Family Network on Disabilities, and the Florida Asthma Action Coalition

### **Second Action Period**

The second QI action period began in May 2012. During this six-month phase, the core clinical teams were asked to complete the following on a monthly basis: (i) participate in a webinar, (ii) submit a narrative progress update, and (iii) submit medical record review data for their publicly-insured pediatric patients for three different performance measures (24-month well child visit, pharyngitis, asthma). Monthly webinars were offered

on two different dates and times each month to accommodate physicians' schedules. The six topics covered by the monthly webinars were: (i) *CHIPRA Core Measures Update*, (ii) *Spotlight on Community Resources: The Central Directory, The Family Network on Disabilities, and The Family Café*, (iii) *Incorporating Questionnaires into Practice, Including Pre-visit Forms*, (iv) *Finding Time in Your Day/Mindfulness*, (v) *Cultural Competency*, and (vi) *Transition to Adult Care, featuring Florida Health and Transition Services (FL HATS)*. Part of each webinar was dedicated to discussions between the practices, led by the QI advisor. Throughout the action period the core clinical teams were also invited to ask questions on the project listserv and to access resources through the secure project workspace website (e.g., practice data reports/run charts, progress reports, tools and resources, Learning Session slides, and monthly webinars).

### **Third Learning Session**

Fifteen of the 16 practices participating in Phase 2 attended the third Learning Session on December 7, 2012 in Orlando. Plenary and breakout sessions emphasized the importance of communication at all levels within the

practice, from engaging staff in QI activities, to providing strategies for improved patient-provider communication and parent partner engagement, and improving partnerships with community organizations. Planning, communication, and relationship-building were reinforced as key concepts for improving practice efficiency and sustaining the PCMH model long-term. As with prior learning sessions, practices received individualized performance measure data to help guide their planning activities for continued and sustained improvements. Protected time was set aside for facilitated goal-setting and reflecting on the achievements of the core clinical teams thus far.

### **EQIPP Surveys**

Core clinical teams were asked by the AAP to complete an EQIPP survey at three time points to assess their practice operations: August 2011, March 2012, and October 2012. Survey questions addressed the following areas: (i) know and manage your patient population, (ii) develop a cross-disciplinary PCMH improvement team, (iii) enhance access to care, (iv) provide family-centered care, (v) provide and document planned, proactive, comprehensive care, and (vi) coordinate care across all settings.

Please be aware that data submitted to the AAP as part of the QI project (e.g., medical record reviews, performance measures, EQIPP surveys) is not presented in this report as it is not part of the Institute's evaluation.

### Value-Added Activities

The Florida Pediatric Medical Home Demonstration Project presented the AAP with a unique opportunity to provide additional resources to this network of practices based on their emergent needs. The AAP developed three additional programs to support parent partners, care coordinators, and the core clinical teams themselves. Value-added activities are summarized in **Figure 5** below.

### Parent Partners

As in Phase 1, the AAP continued to provide opportunities for parent engagement at the project level, including: (i) learning session presentations dedicated to parent partner engagement, (ii) weekly 'Tuesday Tidbits' updates disseminated through the parent partner listserv, and (iii) periodic conference calls. Where feasible, the AAP encouraged practices to engage parents in their improvement efforts, through such things as developing parent advisory boards and surveying their patient population to elicit parent feedback.

### Care Coordinators

Some practices expressed a need for further training of staff

acting in a care coordinator capacity within their practices. In response, the AAP developed a care coordinator training program with financial and staff support from the National Center for Medical Home Implementation. The program was modeled on an existing curriculum developed by national experts and piloted at the Boston Children's Hospital. The care coordination training program was divided into the following four modules: *Integrating Care Coordination into Everyday Work*; *Building Patient- and Family-Centered Care Coordination*; *Care Coordination as a Continuous Partnership*; and *Health-Related Social Service Needs*. The introductory module was offered via webinar in April

**Figure 5. Value-Added Activities, 2012**



2012, followed by an in-person workshop in which two modules were delivered in conjunction with the second learning session. Formal training concluded with a final webinar to cover the content of the last module in June 2012. Additional informational webinars were offered to care coordinators to increase their knowledge of resources in the state, including Title V and Children’s Medical Services (August 2012) and Social Media—What Health Care Professionals Need to Know (September 2012). Lastly, weekly ‘Friday Findings’ educational updates were disseminated to the care coordinators through a designated email listserv.

### Practice Facilitation

During year one, practices received informal mentorship by the QI advisor and the AAP Expert Group panel as the need arose. The AAP has since

enhanced its level of support and developed a Practice Facilitation Program to formally assist practices with their practice transformation. Twelve of the 16 practices opted to participate in the program and were assigned to one of three expert facilitators. The goal of the program was to help practices sustain their implemented changes, support their continuing QI efforts, and to offer customizable assistance in areas of need (e.g., applying for NCQA PCMH recognition, parent partner engagement, performance measures, etc.). All participating practices participated in a pre-visit conference call in September or October 2012, a 2-3 hour site visit with their designated facilitator in October or November 2012, a follow-up conference call in December 2012, and a second site visit in January or February 2013. Practice facilitation will continue into 2013.

## Practice Demographics

### Phase One

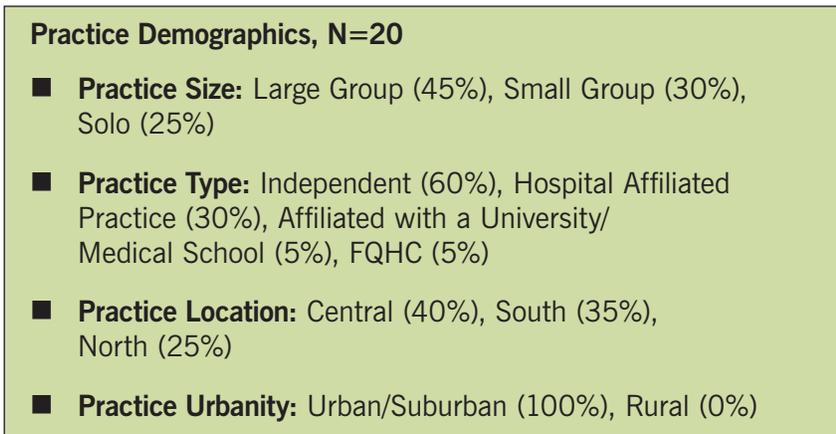
Practice recruitment was primarily achieved through the following email distribution lists: Children’s Medical Services Network (CMSN); FHKC; the Florida Chapters of the AAP and AAFP, respectively; and Florida QuIN members. Practices had to serve publicly-insured children and meet a minimum quota of CSHCN to be eligible to participate. The reader is referred to the 2011 evaluation report for a detailed description of the recruitment and selection process<sup>7</sup>.

The 20 demonstration practices recruited were primarily independent or hospital-affiliated practices (**Figure 6**). Nearly half of practices classify themselves as a part of a “large group”, which consists of more than three physicians. All practices classify themselves as urban or suburban, with no practices operating in rural areas. No practice had NCQA medical home recognition (PPC-PCMH) at baseline.

### Phase Two

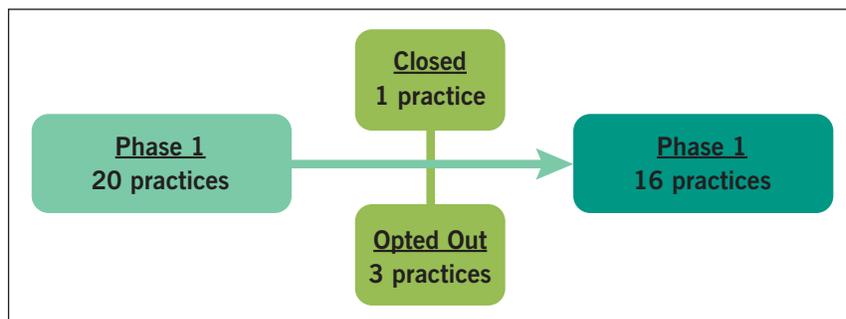
There was attrition between Phase 1 and Phase 2 of the Florida Pediatric Medical Home Demonstration Project. Sixteen of the 20 practices continued with the second phase of the QI

**Figure 6. Practice Demographics**



project. One federally qualified health-center (FQHC) and two large-group, independent practices elected not to continue and one hospital-affiliated practice closed down (**Figure 7**). Additionally, one hospital-affiliated practice experienced a change of location, staffing, patient population, and became a designated FQHC.

**Figure 7. Practice Attrition in Phase 2**



In year two the 16 practices were surveyed again about their practice demographics (**Table 1**). The mean number of full-time equivalent employees is 20 per practice and the majority of practices have a designated person on-site who coordinates care (63%). The number of pediatric patients per practice ranges from 500 to 18,000, and there is large variability in the characteristics of patients across practices. Use of EHRs is common-place (75%). Moreover, 63% of practices use

registries to track/follow-up with CSHCN and 69% of practices have formal specialty referral tracking processes.

### Evaluation Design

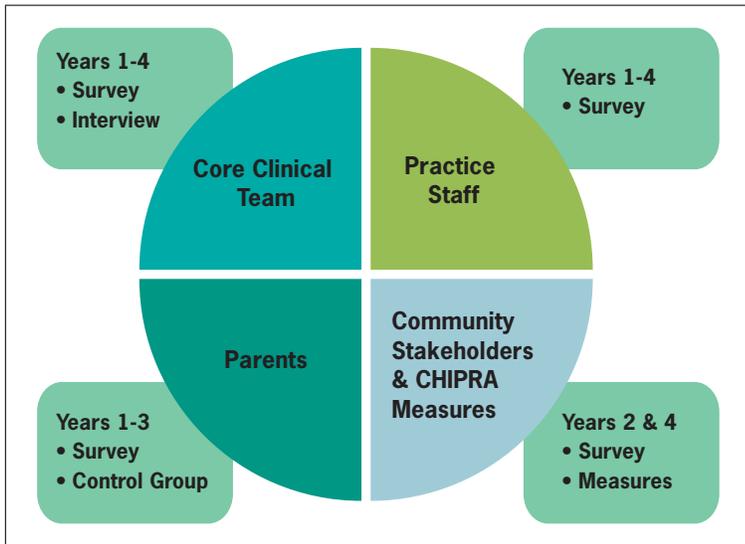
A four-year, longitudinal, multi-stakeholder evaluation was designed by the Institute to capture both short and long term effects of PCMH implementation. The evaluation plan aims to assess the experiences of multiple stakeholders, including:

parents whose children receive care in the demonstration practices, staff working at the demonstration practices, community stakeholders who interact with the demonstration practices, and the core clinical teams themselves (**Figure 8**). Although the core clinical team is responsible for leading the PCMH initiative, practice transformation is likely to have a wide-spread effect on other parties both inside and outside the practice.

**Table 1. Practice Demographics, Year Two (N=16)**

PRACTICE CHARACTERISTIC	PERCENTAGE OF PRACTICES	MEAN PER PRACTICE
<b>Processes/Use of Technology</b>		
Electronic Health Records	75%	--
Registry to Track/Follow-up with CSHCN	63%	--
Formal Specialty Referral Tracking Process	69%	--
<b>Pediatric Patients</b>		
Number of Patients per Practice	--	4,836
Publicly Insured CSHCN per Practice	--	697
<b>Practice Staff</b>		
Care-Coordinator On-Site	63%	--
Number of Full Time Equivalent Employees	--	20

**Figure 8. Multi-Stakeholder Evaluation Design**



**Figure 9. Evaluation Timeframe**



The core clinical team, practice staff, and parents are assessed at baseline and then annually every year thereafter, while community stakeholders are assessed at two time points (**Figure 9**). Both qualitative and quantitative survey methods are used to assess the experiences of the core clinical team. Surveys tools used in the second year of the evaluation are described in Appendix 2.

### Report Purpose

The purpose of this report is to describe evaluation data collected in year two of Florida’s Pediatric Medical Home Demonstration Project. Individual sections of this report will describe the approach that was taken to assess the experiences of the core clinical team, practice staff, and community stakeholders.

Assessment of the overall project will be not be addressed until the end of the four-year evaluation period as practice transformation is not yet complete. As such, recommendations are not included in the 2012 evaluation report and the reader is cautioned against making premature interpretations of the data. A separate report will present year two data for parents whose children attend the demonstration practices and practice-level CHIPRA performance measures for calendar year 2012.

# 2 Core Clinical Team — Survey

## Overview

As previously described, the 16 demonstration practices were required to nominate a three-person core clinical team to participate in the project. One member had to be a lead physician and the other two members could hold a clinical or non-clinical position within the practice. Core clinical teams were asked to complete a year two survey in August 2012 and given two weeks to return the survey by email. In addition to the two survey tools administered in year one (Medical Home Index (MHI), Practice Environment)<sup>12,13</sup> additional questions in year two addressed the Learning Collaborative model and staff engagement (**Appendix 2**).

When interpreting the core clinical team survey results the reader should be aware of the following:

- Aggregate results are presented for 16 practices in year two and 20 practices in year one.
- Year two results are compared against baseline

national benchmark data where available.

## Medical Home Index

The MHI has 25 themes that are divided into the following six domains:

1. Organizational capacity (7 themes)
2. Chronic condition management (6 themes)
3. Care coordination (6 themes)
4. Community outreach (2 themes)
5. Data management (2 themes)
6. Quality improvement (2 themes)

For each of the 25 themes, practices choose a level from 1 to 4 to determine whether they partially or fully met the criteria for that level; level 1 is basic pediatric care, level 2 is responsive care, level 3 is proactive care, and level 4 is comprehensive care. A mean score is calculated for each domain, ranging from 1 to 8. A raw mean score is calculated from the 25 themes and then

transformed to a 100-point scale to represent a summary MHI score. A MHI score of 100 represents the highest level of medical home-ness, with a practice fully offering comprehensive care for all 25 themes.

A 2003 study by Cooley et al. of 43 primary care pediatric practices across nine states showed that the MHI has excellent psychometric properties (e.g., overall alpha coefficient was 0.96; internal consistency reliability across the domains ranged from 0.81 to 0.91; interclass correlation between the summary scores and external reviewers was 0.98<sup>12</sup>). Mean domain scores from this study are used as the benchmarks in this report<sup>12</sup>.

## Key Findings

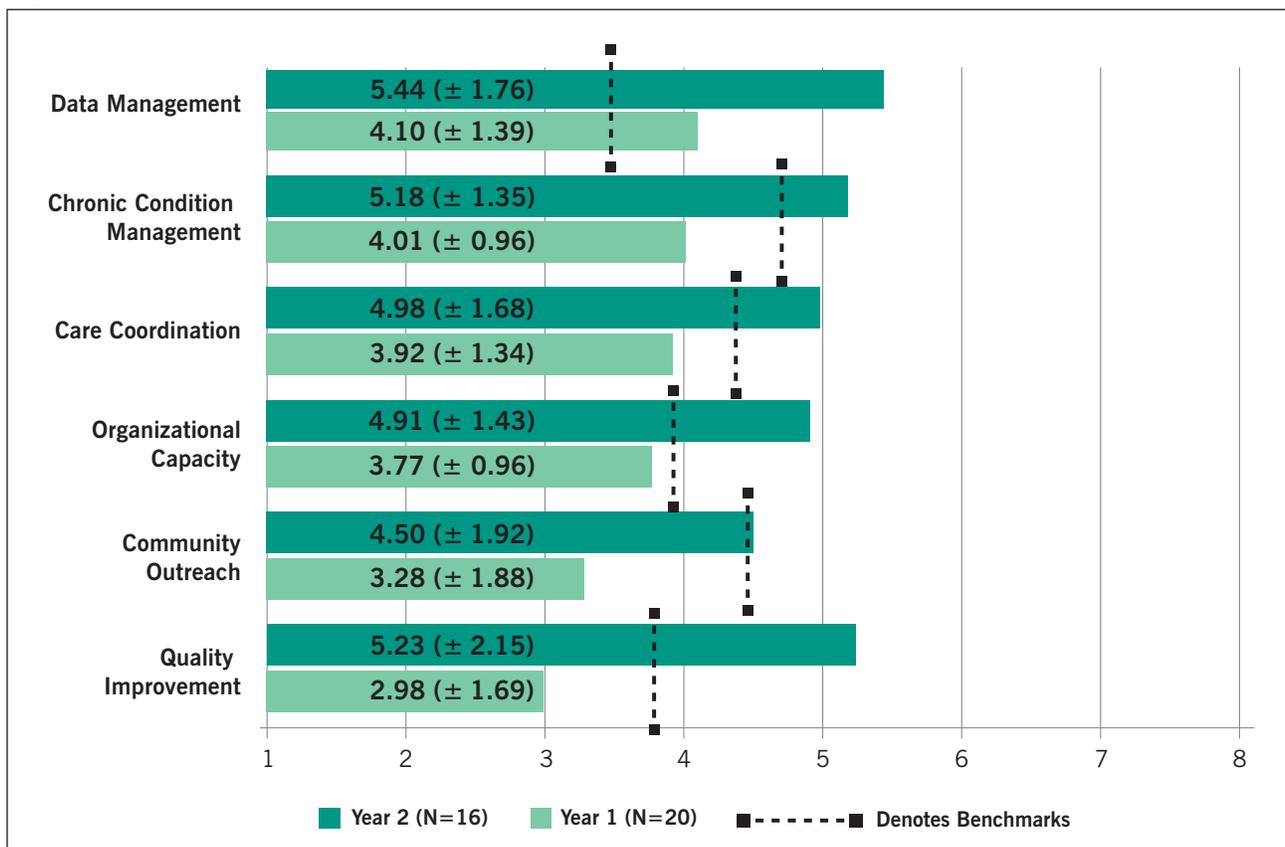
- The MHI mean score significantly increased from 39.8 in year one to 57.5 in year two ( $P < 0.01$ ; **Table 2**), surpassing the benchmark.
- All MHI domain scores in year two exceeded their respective benchmarks and were significantly higher than year one ( $P < 0.05$ ).

**Table 2. Overall MHI Score for the Demonstration Group, Year Two**

MHI SCORE	YEAR TWO (N=16)	BENCHMARK <sup>12</sup>
MHI Mean (± Standard Deviation (SD))	57.5 (± 20.7)  +18	43.9 (± 15.8)
Median	58.0  +21	41.7

\*Arrows denote the movement in mean and median scores from year one to year two.

Figure 10. MHI Mean Scores for Florida Demonstration Practices ( $\pm$  SD)



\*SD denotes Standard Deviation

Score increases were significant at the 1% level for four domains (QI, Data Management, Chronic Condition Management, and Organizational Capacity).

- The highest MHI domain score two years in a row is for Data Management (Figure 10).
- Practices report the most improvement since baseline for the QI domain, from 2.98 to 5.23.

■ There remains a large degree of variability between the Florida practices, both in terms of their individual MHI domain scores and their overall MHI score.

As discussed previously (Figure 7) there was attrition of four practices between years one and two. The Institute undertook a sensitivity analysis to see whether any observable changes in the MHI results between years one and two were due to attrition or not. Results of

the sensitivity analysis show that practice attrition did not significantly affect the results (Appendix 3).

### Adaptive Reserve

One of the largest, and the first, national assessments of the PCMH model began in 2006<sup>14-16</sup>. The National Demonstration Project, called TransformMED, recruited 36 practices across the United States and conducted a

**Table 3. Core Clinical Teams' Adaptive Reserve Score versus Benchmark**

	DEMONSTRATION GROUP				BENCHMARK MEAN ( $\pm$ SD)
	MEAN ( $\pm$ SD)	MEDIAN	MINIMUM	MAXIMUM	
<b>Adaptive Reserve</b>	0.74 ( $\pm$ 0.10) (+4.0 $\uparrow$ )	0.74	0.58	0.91	0.69 ( $\pm$ 0.35)

\*Arrow denotes the movement in mean score from year one to year two.

comprehensive evaluation. Results from the National Demonstration Project were published in 2010 and describe a number of practice, provider, and patient outcomes. One of the main findings from the study was that a practice's ability to adapt and make changes was an important factor in its ability to become a PCMH. Coined 'adaptive reserve,' this concept accounts for a number of characteristics including: relationship infrastructure, facilitative leadership, sense-making, teamwork, work environment, and culture of learning.

The lead physician from each core clinical team was asked to respond to 23 items about their practice's adaptive reserve on a five-point Likert scale (1=strongly disagree to 5=strongly agree). Negatively worded questions are reverse-scored. A raw mean score is calculated and then transformed to a scale from 0 to 1, where 0 represents the lowest score and 1 the highest score. The adaptive reserve score was shown by the National

Demonstration Project to have good psychometric properties (e.g., Cronbach alpha score was 0.97, denoting excellent internal consistency)<sup>16</sup>. The change in the mean practice adaptive reserve score at baseline from this study is included in Table 3 as a point of reference.

### Key Findings

- In year two, Florida's mean practice adaptive reserve score (0.74) is higher than the national benchmark of 0.69 (**Table 3**).
- Practice adaptive reserve scores are consistent between years one and two, with a slight but not statistically significant improvement of 0.4 points since baseline ( $P > 0.05$ ).
- There continues to be variability among Florida demonstration practices in terms of their self-reported abilities to adapt and make changes. In year two, the minimum adaptive reserve score for the 16 practices was 0.58 and the maximum was 0.91.

### Practice Environment

The Practice Environment Checklist developed by the National Demonstration Project measures four aspects of the practice's environment. All four factors have been shown to have acceptable psychometric properties<sup>13</sup> and are as follows:

1. Community knowledge (4 items),
2. HIT integration (4 items),
3. Cultural sensitivity (3 items), and
4. Patient safety culture (3 items).

The lead physician from each core clinical team was asked to respond to 14 items about their practice environment on a five-point Likert scale (1=strongly disagree to 5=strongly agree). Negatively worded questions are reverse-scored. For each of the four practice environment factors, raw mean scores are calculated and then transformed to a scale from 0 to 1, where 0 represents the lowest score and 1 the highest score. There is no benchmark data available from the National Demonstration Project for the four practice environment factors.

Figure 11. Core Clinical Teams' Practice Environment Mean Scores ( $\pm$  SD)

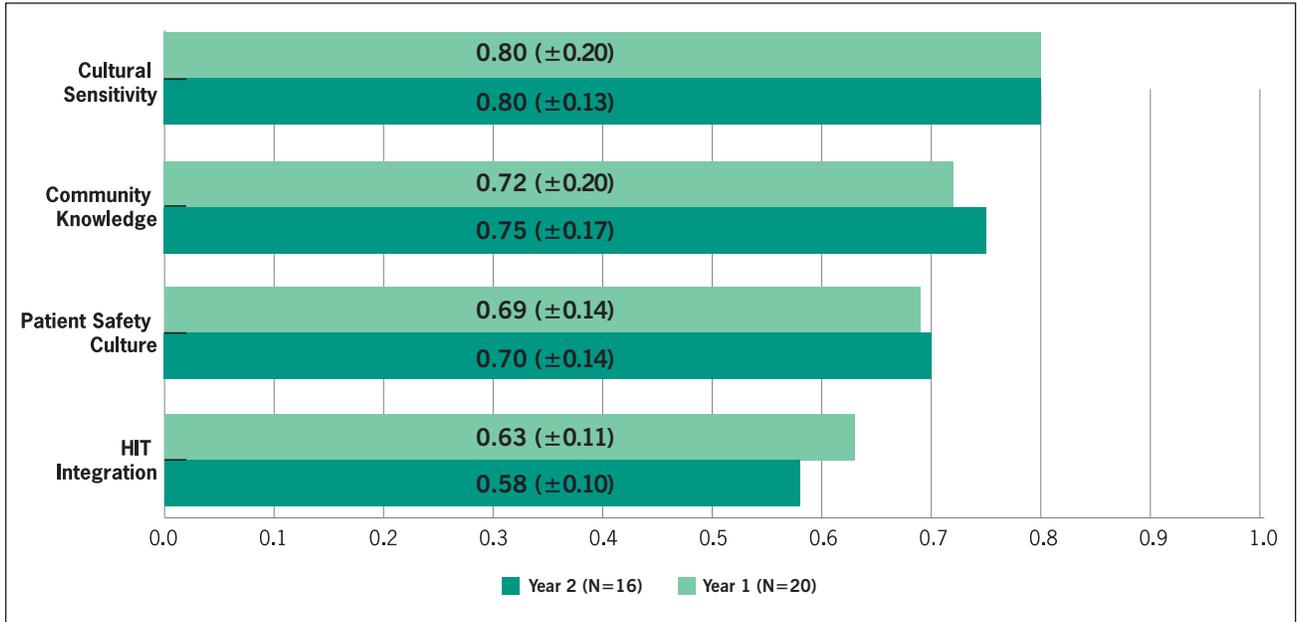
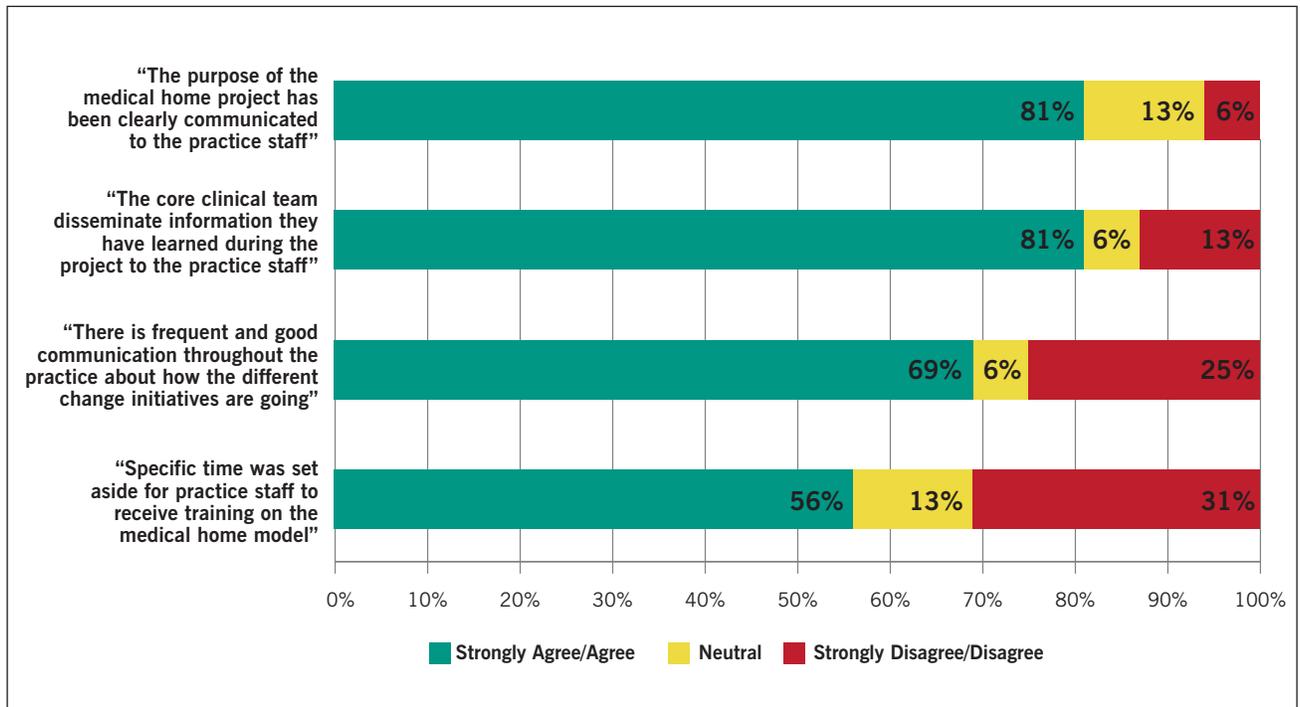
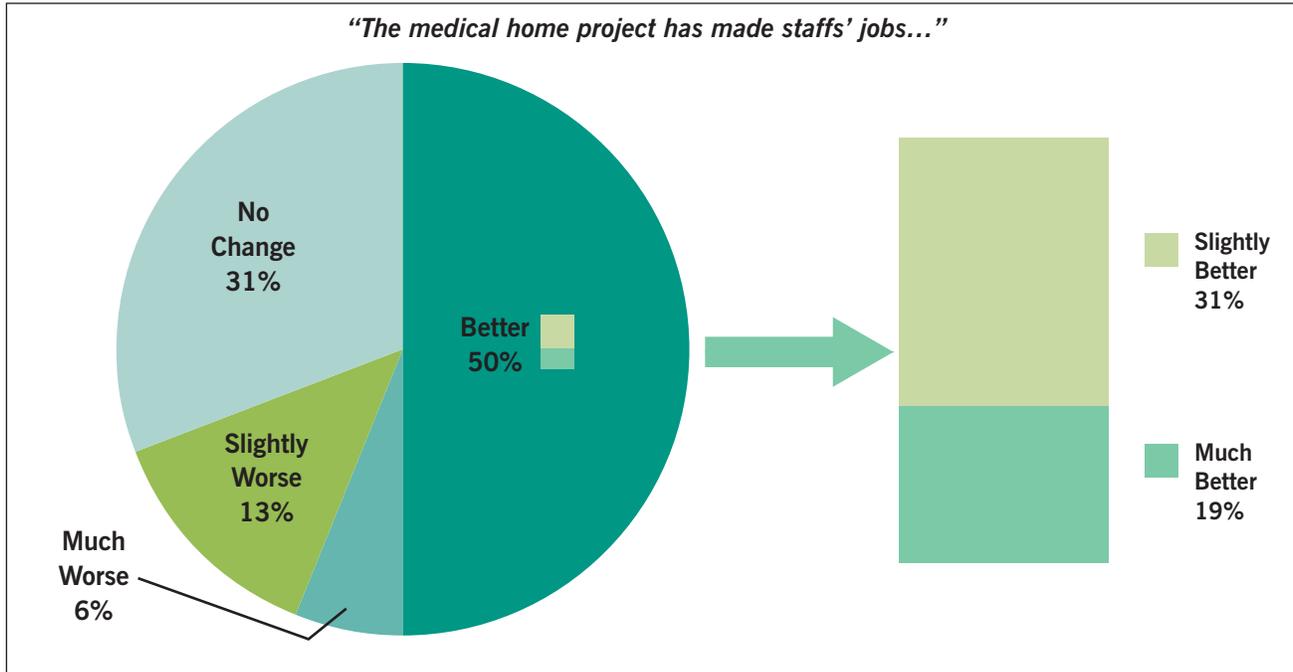


Figure 12. Core Clinician Teams' Perceptions of Practice Staff Communication



**Figure 13. Core Clinician Teams' Perceptions of Staff Job Satisfaction**



**Key Finding**

- The Florida demonstration practices continue to score highest on the cultural sensitivity domain, followed by the community knowledge, patient safety culture, and HIT integration domains.
- Mean domain scores remain roughly unchanged compared to last year (Figure 11), with only the HIT integration score significantly improving since year one ( $P < 0.05$ ).

**Practice Staff Engagement**

This year's practice survey included a number of new questions intended to measure

the success of the medical home initiative. Specifically, the intent of these questions was to gauge practices' internal communications and staff understanding of and engagement with the medical home project. The lead physician from each core clinical team was asked to respond to items regarding staff engagement on a five-point Likert scale (1 =strongly disagree to 5=strongly agree). Lead physicians were also asked whether or not the medical home project has improved everybody else's jobs, in their opinion, on a five-point Likert scale (1 =much worse to 5=much better).

**Key Findings**

- Thirteen of the sixteen core clinical teams (81%) agree that they have been able to communicate with the practice staff about the medical home project and disseminate information they have learned during the project to the practice staff (Figure 12).
- Only 9 of the 16 practices have allotted time for staff training on the medical home, indicating that there is room for improvement in this area.
- One-half of core clinical teams report that they think the medical home project has made the practice staffs' jobs better, 31% report no change,

and 19% report that staff's jobs are worse (**Figure 13**).

- Around two-thirds of the core clinical teams perceive that practice staff understand their role in the project and are enthusiastic about the medical home initiative (**Figure 14**)
- Encouragingly, only one core clinical team agrees that staff in their practice know very little about the medical home project.

## Communication with Community Stakeholders

This year's practice survey included a number of new

questions intended to measure the practices' interactions with community stakeholders (state-employed care coordinators and specialists). The lead physician from each core clinical team was asked to respond to three items regarding information exchange with the community stakeholders on a five-point Likert scale (1 =strongly disagree to 5 =strongly agree). Additionally, the lead physician was asked about the percentage of time that stakeholders provide all requested information to the practice and vice versa.

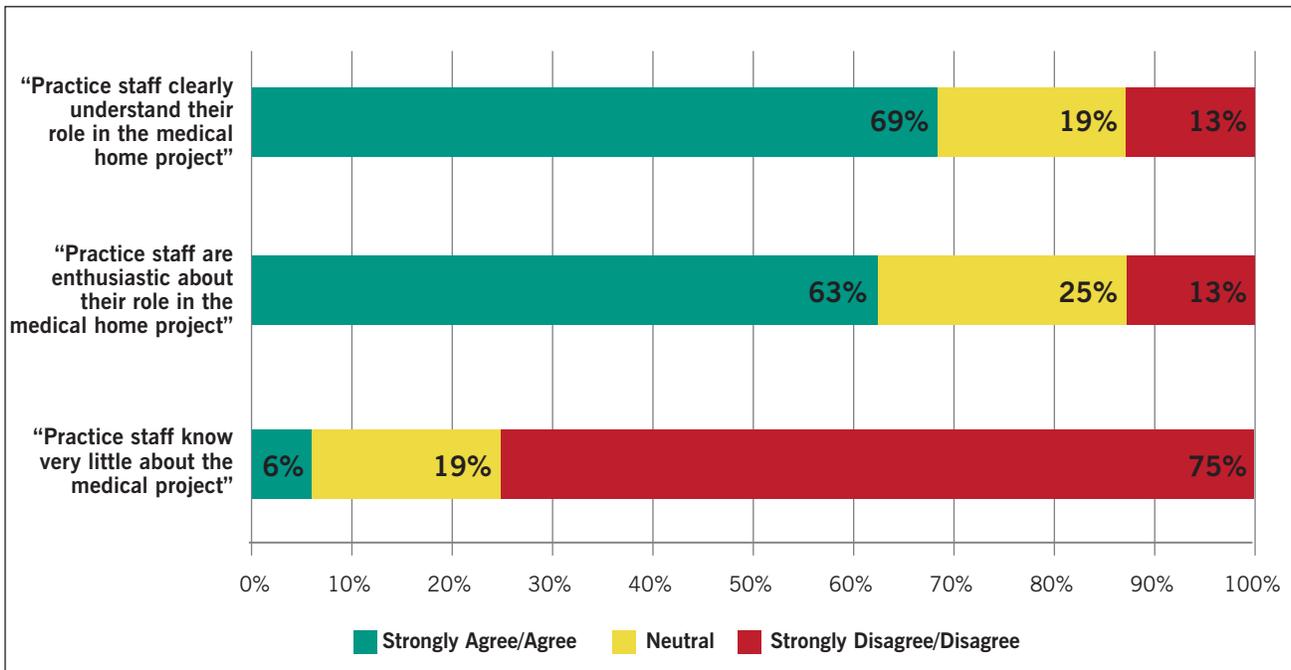
### Key Findings

- Less than two-thirds of practices agree that there

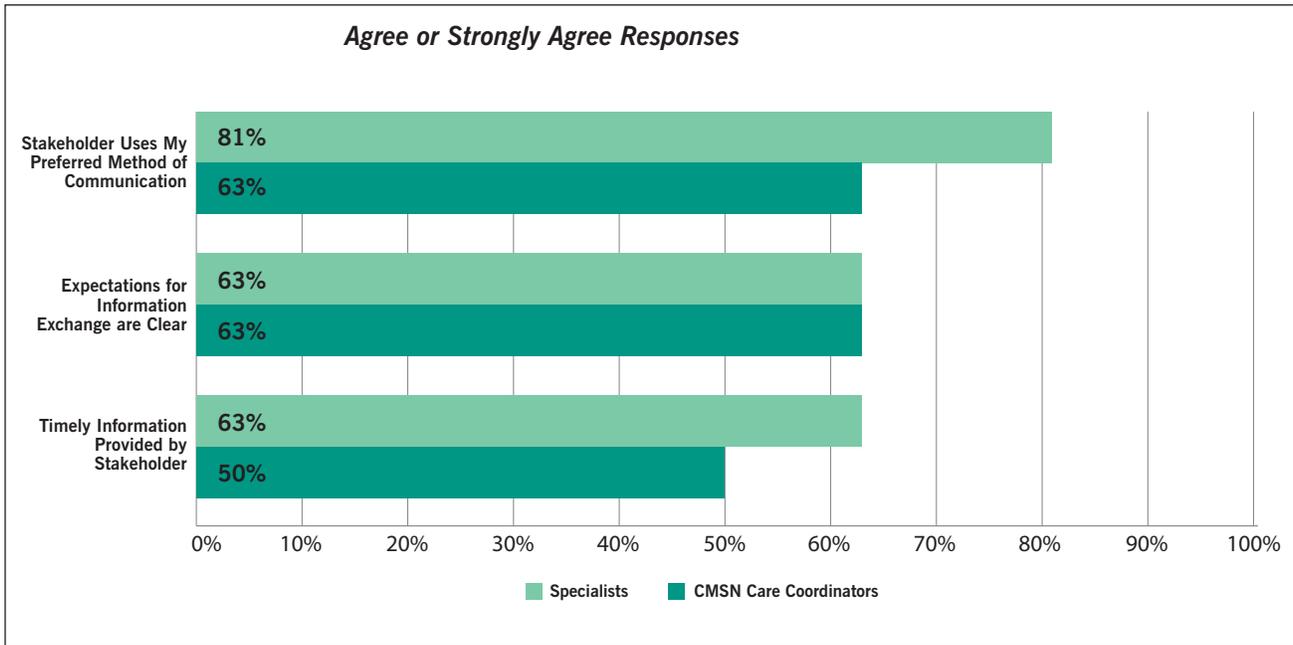
are clear expectations for information exchange between their practice and either specialists or CMSN Care Coordinators (**Figure 15**).

- More practices report that specialists use their preferred method of communication compared with CMSN Care Coordinators.
- Practices report that stakeholders supply all the information that is requested from them about three-quarters of the time (**Figure 16**), but that information is not always provided to their practice in a timely manner (**Figure 15**).

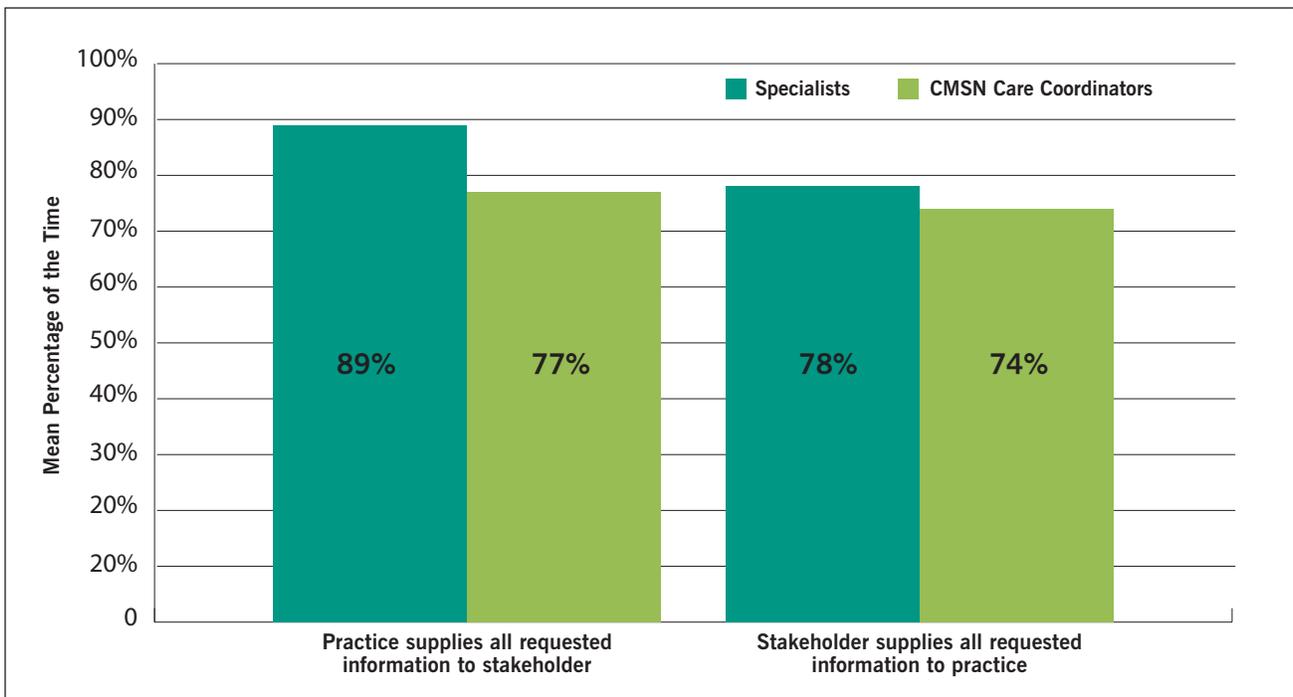
**Figure 14. Core Clinician Teams' Perceptions of Practice Staff Engagement**



**Figure 15. Ease of Communication with Community**



**Figure 16. Information Exchange between Practices and Stakeholders**



# 3 Core Clinical Team — Interview

## Overview

The second component of the practice assessment was an in-person qualitative interview. Questions for the year two core clinical team interview were modified to explore how practices had experienced the PCMH transformation process in their first year. While questions from year one explored factors that would affect the practices' transformation process, questions in the second year explored the practices' transformations more broadly. A new structured interview guide was created which included an interviewer script, structured questions, and standard prompts to elicit additional information. Interviews were completed with the 16 core clinical teams participating in the second phase of the QI project. Interviews were conducted with all core clinical team members at once in a private area of their practice, with one to two trained interviewers, while two audio recorders taped the interview. Questions were directed to the core clinical team as a whole, but allowed for each member to contribute individually.

The following four domains of PCMH transformation were covered in the interview:

1. Internal Processes
  - Sharing Information with the Staff
  - Practice Characteristics
2. Patient Interactions
  - Patient Communication
  - Care Coordination
3. Learning Collaborative Model
  - Thoughts about the Learning Collaborative Model
  - Expectations of the Project
  - Plans After the Learning Collaborative
4. Lessons Learned

Interviews averaged 43 minutes in length as team members typically took turns speaking, resulting in some cross talk. Audio-files were initially transcribed verbatim. In a second pass of the transcripts, personal and practice identifying information were removed and blinded. Core clinical team members' positions in their practice (e.g., physician, nurse, etc.) were left in the transcript to allow for the differentiation of experiences from each personnel based on their level of interaction with patients and staff.

A coding manual was developed by the Institute and provided to a subcontractor to conduct a thematic analysis for the ten domains. Atlas Ti® qualitative analysis software was used

by the Institute and the subcontractor.

Major themes are described below by the four domains of interest. This is not a comprehensive list of findings and does not account for emergent themes.

## 1. Internal Processes

### Sharing Information with the Staff

Engaging a practice in the PCMH transformation process requires the core clinical team to share information with the staff. The goal of sharing information is to spread knowledge but also to generate support for the transformation. Care was taken to distinguish between the way the core clinical team engaged staff, peers, and management.

### Generating Support within the Practice

All practices perceived that generating support within the practice was necessary for improving care, increasing compensation, and successfully establishing a medical home. About one-half of the practices reported some pushback or difficulties when attempting to generate support in their practice, attributing it to lack of knowledge of the medical home, poor communication, or feeling overwhelmed with simultaneous changes. Of the variety of

factors affecting support for the medical home, negative factors included having a busy practice, staff turnover, lack of training/knowledge/resources, and no simple measurement or “proof” regarding implemented changes. Positive factors included huddles, reviewing schedules regularly, motivation for recertification, and focusing on the benefits to the family from the medical home model.

*“Well, I mean yeah I think it’s very important because in order for anything to be successful, I mean you have to have the support of everybody that’s involved in it.”*

*“We’re committed to going forward so it’s just...it’s like for them it’s like one more thing, one more thing we’re asking them to do and that’s where the problem is, but I think now everybody knows we’re committed to becoming a medical home and a good one at that.”*

*“We’ve had a turnover of staff...it’s almost like we’re starting, setting goals, meeting and just trying to get ourselves together.”*

*“I think training...a lot of the staff,...first they don’t know what the concept means. I mean, now they all know, but need to understand...*

*what that is going to through that process.”*

*“I think our staff likes what they do, for one thing. I mean I think they like their jobs and if you can make it better for families and empathize, I think that helps.”*

*“The big thing...we do our huddles and we look at the schedules together and... we’re working on different projects and we do it all together.”*

#### **Engaging and Spreading Knowledge amongst Staff**

All of the practices perceived that staff had been successfully engaged on varying levels, but the majority of these practices were unsure or unconfident in their responses. Practices described different levels of engagement and types of obstacles depending on the staff members or type of staff. Only two practices specifically mentioned peer relationships with other physicians as being important for generating support for the medical home project.

*“[Staff] were acquainted with it, they kind of know what’s going on. That being said, you know, even as late as two to three weeks ago, I said something about don’t forget our medical home project, you still need to keep track of the*

*asthmatics and they go ‘what medical home project?’”*

*“It just depends, like the once a week [medical home] meetings tend to steer away from the Medical Home and more into like practice dynamics in the office, you know, like scheduling vacation, that kind of stuff. So, it’s just kind of been a balancing act, but I think it’s essential to have everyone on board.”*

*“Now, the providers, we have at times met. We had to because of trying to be on the same level with our medical records and so in the process of trying to do more comprehensive examinations, history...all of these things though are important as a part of medical home.”*

*“It’s hard because our physicians don’t rotate through here very often... The ones that are here maybe once every six months or it’s harder for them to get more involved. But the ones that are here frequently, yes [they are engaged].”*

Almost one-third of practices mentioned actively engaging upper-level management in the PCMH transformation process. Management’s level of participation varied from acknowledgement of

the transformation to an active role in the practice. Two practices reported a lack of communication with management or reported that increasing communication with management was a future goal.

*“We really do have the directorship up here and the leadership team engaged in it. They’re probably more engaged at that corporate, operational level of it being implemented, NCQA, up north than they are in the day to day, in what’s happening [at this location]. But they certainly understand what we’re doing there, is informing process change.”*

*“Administration is now responding. It’s taken me a year to probably do that but now they’re actually initiating medical home topics with me cause they know I’m working on it.”*

### **Staff Experiences**

When asked, all practices were able to provide an example of a transformative experience with the staff. Common themes included a number of improvements due to the implementation of EHRs, planned huddles, and pre-visit questionnaires/meetings. Other positive staff experiences included increasing patient compliance through empathic/compassionate communication,

developing a mailing list for patients, adding same day appointment slots, and keeping patients with the same provider.

*“We have a roundtable meeting so everybody can kind of contribute: ‘Hey, how do you think this would work?’”*

*“So that when somebody comes in, because we have a couple of families, you know, the child comes in on a stretcher or maybe with a trach or things like that, are we accommodating them? Do we know those kids are going to take an extra hour or something of that sort? So they do, [the nurses and clinical staff] get together 48 hours ahead of time and look at what the needs are and maybe what the language needs are and that sort of thing.”*

*“We’re able to communicate with each other by putting that important medical information into the electronic records and so that makes a tremendous difference.”*

### **Practice Characteristics**

While the 16 remaining practices remained committed to the PCMH transformation process, not all practices possess the same features and resources. Respondents were

asked what type of practice characteristics, in their opinion, hinder or aid the PCMH transformative process.

### **Hindered the Transformation Process**

Practice characteristics that were most commonly reported as hindering the transformation process were an inability to make changes at higher management levels, overburdened staff, the process was too slow or costly, and patient population characteristics (e.g., not tech savvy, no transportation, special needs, and language barriers). And while these characteristics were the most frequently cited, no single problem was cited by more than one-quarter of the practices. Four practices reported frustration with slow or costly changes or inability to make change. Four practices reported feeling overburdened with the number of changes and felt they did not have enough staff to make these changes. Three practices mentioned patient population characteristics that hindered the transformation process. Other hindering characteristics included call system routing issues, problems with referrals, and Medicaid changes.

*“You know that you want to make one change [to the EHR], then you have to talk to*

five different people to make that change happen...or they tell me, 'It costs you \$10,000 to change it,' so then I can't change it."

"Sometimes I feel that I am overwhelmed because it's a lot of changes and still I have a lot of backup. I do have a lot of backup."

"I think also our patient population as far as being, um, technology savvy, you know, has also hindered [us] in the sense that some of them, even just to get them on the phone..."

"The hindrance is that we have so many special needs patients and then some of the education of some of these parents is just really difficult to get them to understand that they've got to go to all of the specialties that they need to go to."

### **Aided in the Transformation Process**

The most commonly reported practice characteristics that helped the transformation process were practice size, location, diversity, and coordination or collaboration efforts. Five practices reported that the smaller size of their office was a facilitator for change. Two practices mentioned that their diverse staff

contributed positively to the transformation process. Three practices attributed their success to staff coordination/collaboration. Additional characteristics that the teams identified as assisting in the transformation process included physician support, access to specialists, flexibility for change, and implementing EHRs.

"I think being a small practice is easier to do it this way because again, it's hard to change ways of other physicians and you may, you have a-if you had seven physicians all in one place you know and two of you are like gung-ho, onboard and one is kind of 'Eh, maybe, maybe not' and the other two are like 'I'm not doing that'. You're not going to get the cooperation because the staff is going to align themselves with certain physicians."

"Here in a university academic system we have pretty much all the resources as far as you have all the specialties on hand."

"We're right in an area where people who might be in need of transportation, they have transportation all around us. There's many ways to get here along with us having a van."

"We have a diverse mix really, I think. And we have some

Spanish-speaking patients or parents that don't speak English. So that comes into play once in a while but we do have two physicians that speak Spanish and then two medical assistants."

"And we work very much like a family here, you know, we all really try to take care of each other and genuinely care about not only what goes on here but what's going on at home and that kind of stuff."

When asked to speculate on the effect that practice type would have on medical home transformation, seven hospital-affiliated or non-private group practices perceived that hospital-affiliated practices had limited control over changes and had more difficulty making changes due to practice size. Within independent/non hospital-affiliated groups, six practices perceived that independent practices did not have as many resources or manpower to make simultaneous changes or focus on the medical home project.

"If you have an independent practitioner who's then in full control over who's referring what the policies are and what the procedures are versus a practice like ours which is a group practice...the hospital affiliated group where the hospital sets the rules and

regulations and even they don't have control over it."

*"In my private practice, when we would have a crisis meeting in the hallway, if we decided that we were going to start doing x tomorrow, we would start doing x tomorrow. Here, even though we have a lot of committees and we decided we were going to do it, it involves finding someone to do it, get the message out 80 different ways because we have a million people."*

*"[At a hospital-affiliated practice] they'll have somebody dedicated to do this...they can do seminars and all that. So I think it might be relatively easier and faster for hospital-affiliated large group than, um, a solo practice."*

## 2. Patient Interactions

### Patient Communication

Two-thirds of practices had implemented a system for patient feedback, most commonly via surveys with one practice using a suggestion box. Five practices had not yet implemented a working system for patient feedback or felt that the process was largely informal. Several practices also mentioned having meetings with parents and staff in order to get parental feedback and input

regarding their children's care and/or the medical home.

*"Actually one of our parent partners made up the survey. She says, you know, this is what was most important to her as a parent of a child with a special health care needs."*

*"Now we're offering [a survey to patients] and saying, 'If you have an interest, please go ahead and fill this. If you don't...' And it's also from the toolkit that was given to us through the learning sessions."*

*"I have patients sometimes who call and just let me know about things and say 'I know how your practice is and I don't think you would want this to happen'. But we haven't setup an actual system of feedback, we haven't."*

*"The parents who came, the case manager and the provider sat with them and they talked and they discussed their conditions and things. They both had very positive things to say, uh, about that meeting and how appreciative they were of it."*

*"We actually invited...several moms from kids with special health care needs and we did a morning breakfast and did just a talk on medical home and we also gave them*

*homework to talk to us about how best we could do a family care plan because I was feeling frustrated, too."*

Ensuring that patients understand what is being communicated to them is an important component of coordinated care. The majority of practices were able to describe ways that their team works to ensure that information is understood by families. These practices mainly used handouts to communicate more efficiently with patients, and some also mentioned providing handouts in different languages. Six of these practices reported using verbal explanations as a way to ensure patients' understanding. Two remaining practices stated they did not have a formal system for patient communication.

*"We have handouts for ADHD. We have, of course, the asthma is still going on. We have handouts for allergies. We have obesity handouts. We have the milestone handouts for speech and language progression. We have handouts for hearing."*

*"We thought that we were doing a much better job communicating with our patients and I think we... we didn't really follow through and make any formal plans to address that."*

## Care Coordination

Care coordination involves helping patients find and access a variety of service providers and ensuring that information is effectively shared between the medical home and outside providers. Practices were asked to describe their care coordination efforts within the practice, with care coordinators, as well as coordinating with outside providers, such as medical and behavioral specialists, community service agencies, hospitals and/or emergency rooms (Table 4).

## 3. Learning Collaborative Model

### Thoughts about the Learning Collaborative Model

Collaborative learning is a common model in higher education and as such we wanted to see how the various participating practices viewed the AAP’s collaborative in comparison to any previous held beliefs about Learning Collaborative events. Over the course of the Learning Collaborative, several methods of information dissemination

were utilized: face-to-face learning sessions, webinars/teleconferences, and listserv/emails. Reception to these methods of learning differed for various reasons (Table 5). Whether a respondent was a physician or not oftentimes affected their viewpoint, with many physicians reporting that they felt the face-to-face sessions were blocked-off/protected time whereas the other modalities (telephone, online) could cause interruptions to their day.

**Table 4. Care Coordination**

PROVIDER	RESULTS	QUOTES
Practice Care Coordinator	Four practices reported having a full time care coordinator position. An additional three practices felt this role was filled by a CMSN care coordinator. Five practices reported that they did not have the funds or resources to open a full time position for this role, but were able to identify some staff members that assisted with care coordination.	<p>“I think they noticed that...she was an asset and that it was necessary to have her because they didn’t have that kind of person and so they needed it so created the position.”</p> <p>“She’s full time at CMS[N]. She’s here four days a week.”</p> <p>“We have one of our nurses here in the office has been doing the clinical coordinator workshops that medical home has offered. So she’s been getting that and then she kind of just gives out the information she gains from that and we try to go from there. But we don’t, we’re too small to have a care coordinator position.”</p>
CMSN	Five practices discussed their care coordination efforts with CMSN Care Coordinators. Three practices reported positive and ongoing interactions, including scheduling meetings to discuss care plans for complex patients. The remaining two practices reported little to no interaction with CMSN Care Coordinators.	<p>“And it went really well and one of the kids I had with complicated...he has autism and he has big-time behavioral issues with it and he was having a hard time getting into a psychiatrist and all this stuff and that meeting led to him getting plugged into this local place [Name of Facility] so it really...Having sort of for the most complicated kid these sort of care team meeting things, we’ve tried to do that.”</p> <p>“Yeah, if they need something specific and right away, they’ll call us and ask for it. Otherwise they just send their faxes and we sign them and send them back or we have a referral form if we want to send somebody to CMS[N] for the first time or a new specialty.”</p>

**Table 4. Care Coordination continued**

PROVIDER	RESULTS	QUOTES
<b>Community</b>	Four practices discussed their care coordination efforts with the community. Their responses included inviting local physicians, social workers, or other relevant speakers to meet with their team or present information to patients/family members. One practice mentioned partnering with various organizations. Another practice felt that certain physicians had close ties to the community and that the office remained connected via these staff members.	<p>“The other such thing that we are trying to be a little ahead on is the Nathaniel’s Hope event that happens in June or July every year. It has the features of a benefits fair and they invite all kinds of service providers who have booths and goodies and things and they invite all the special needs kids.”</p> <p>“We’ve invited a few of the outlying community physicians and organizations to come in and talk with us and so I think that’s probably just raised our awareness of making sure that we reached out to them.”</p>
<b>Emergency</b>	Four practices mentioned their care coordination efforts with emergency rooms. Three of these practices reported receiving an auto fax or notification of all the patients who had visited the emergency room. One practice reported providing detailed patient notes for emergency room visits.	<p>“You know I do frequently talk to, you know, the emergency room and making sure that, you know, everything’s working as far as through our EMR and they’re happy with that and that there’s no issues.”</p> <p>“So, ‘we know that you were in the emergency room. What’s going on? You need to come in for a follow up or something.’”</p> <p>“When we send a patient to the emergency room, I try to print the notes, so they can take them with them.”</p>
<b>Hospitals</b>	Four practices mentioned their care coordination efforts with hospitals. One practice perceived that their local hospital was not interested in quality-based care. Another practice reported they had not attempted to develop a relationship with nearby hospitals. One practice reported a positive connection due to frequent communication or notifications. Another practice felt that certain physicians had close ties to the hospital and that the office remained connected via these staff members.	<p>“The quality of care being delivered at the pediatric or children’s hospital here has certainly really spiraled downward...despite many efforts on our part to try to bring attention to some of the quality issues.”</p> <p>“[Local Hospital] is very good. We haven’t worked with them through this project, but maybe they’re doing it on their own. Every time a patient of ours crosses the door of any [Local Hospital] facility we get an automatic fax with the patient’s name, date, information on why they are there.”</p>
<b>Specialists</b>	Six practices mentioned their care coordination efforts with specialists. Only one practice reported negative pushback (specialists refuse to send consults in timely manner). The remaining five practices reported some progress regarding specialists and referrals, citing efforts like referral tracking, creating a list of specialists/insurances, and contacting specialists when patients were unable to provide a report.	<p>“I’m more aware about the referrals and I try to help the doctor the most I can before they can come to the room to talk to him, so I can keep track if they went to the specialist.”</p> <p>“What has changed, though, is that now we’re able to track our referral.”</p> <p>“I would say routinely I get an outrage from someone saying, ‘Dr. So-and-So’s office is refusing to send us the consult letter, um, and they’re very rude, and we’ve asked them multiple times, will you please reach out.’ So it, it doesn’t surprise me, but it’s still, it’s still bad.”</p>

In comparison to other QI projects undertaken by the practices, five practices perceived that the Learning Collaborative Model received more support from staff. Another five practices did not perceive a difference in support between other projects and this one or did not have any other projects to use as a comparison. Three practices perceived that previous projects were easier to implement and therefore received more support/buy-in from staff.

*“I have never in my life received so much support to develop my office as I have now and I wish I had had this knowledge when I was 28 years old, so...and I had the instruments to have developed an office this way.”*

*“I think it’s easier when it’s internal because they know that they have somebody to answer to and someone who’s watching and ensuring that changes are made whereas,*

*you know, we bring up Medical Home and I assure you there are some people that would look at us like we had three heads if we brought it up to them again.”*

Practices were also asked to list the pros and cons of the PCMH project. Seven practices reported at least one con including not enough staff, funds, or time to achieve all the desired changes. Other cons were disjointed resources and

**Table 5. Methods of Learning**

METHODS OF LEARNING	PRACTICE PREFERENCES	QUOTES
<b>Face-to-Face Learning Session</b>	All of the practices reported positive experiences with face-to-face learning sessions or stated that they preferred this method over others while acknowledging that these meetings were difficult to arrange.	<p>“If you go face to face, then you can network with people. You can see what other people are doing. You are in a concentrated learning time for you only concentrate on that.”</p> <p>“I think people come out more enthused about the project.”</p> <p>“It has been met above my expectations. I mean, I’ve been to both of the learning sessions and when I left I was just really hyped and I felt empowered and, you know, I felt like I got enough information to assist my team with implementing some of the changes that they wanted to do out of the session.”</p>
<b>Webinars/Teleconferences</b>	Ten practices reported positive experiences with webinars or stated that they preferred this method over others. Although most practices thought the webinars were useful, physicians often reported that they could cause interruptions to their day.	<p>“Yeah, I mean I think the calls happen, because you can’t meet face to face all the time.”</p> <p>“Webinars are, are nice, but again, I find it hard to carve out the time for the webinars.”</p> <p>“I have time to sit on the computer and do stuff at night when my kids are in bed, so that’s when I go online and I could much more easily sit there and listen to a webinar and then answer like four or five questions at the end [rather than participate in a webinar in the middle of the day].”</p>
<b>Listserv/Emails</b>	Four practices reported positive experiences with the listserv, but only one of these practices said they preferred this method over others. Three practices reported negative experiences with the listserv.	<p>“The listserv is wonderful because you can share advice.”</p> <p>“To me it becomes a lot of emails to go through and look at you know and I’ll ignore some of them...”</p>

time-consuming chart reviews. Four practices reported pros of the Learning Collaborative Model stating that the general sentiment was that QI was important and/or the outcome would be worth the effort.

*“It’s just a lot more work that you have to do to get there, so if you don’t have the staff and you don’t have dedicated people working for you it’s going to be harder to do.”*

*“You cannot expect for this to run and pilot by itself even though they teach you all the training and they teach you... all the tools. You have to make sure you do it.”*

### **Expectations of the Project**

Given the broad range of changes associated with the PCMH transformation, the study team attempted to ascertain whether the core clinical team’s expectations had changed during the course of the project. Twelve practices perceived that their expectations had changed with the majority of those responding that they initially thought the transformation would be easier. Four practices felt their outlook changed once they processed all the information and “figured out what to do”. Five practices perceived that their expectations had not changed. Of these, three practices stated that their expectations had been met and

one practice reported not having any initial expectations.

*“I thought it would be a lot easier. I was disappointed with how difficult it was to set aside time to get this project done.”*

*“I thought it was going to be a very simple, easy...I thought they were going to send the medical home coordinator and they’ll do everything and then here we are.”*

*“I said ‘Oh, this is what I should have done.’ Because my mind was not focused on what—the things you put together for us are excellent. And it was just a matter of getting that information to our brain and using it.”*

*“You know, first I wanted to just see how it goes, but now I know that it works and that is a benefit.”*

### **Plans after the Learning Collaborative**

The core clinical team was asked to discuss whether they had plans after the Learning Collaborative ended. Eleven of the 16 practices mentioned plans to pursue certification through NCQA.

*“It’s on the agenda, yes. We want to be certified for that [NCQA]. Uh, I cannot educate people if I don’t qualify for all those things, so I have to achieve that and I cannot*

*offer them a place that is not fully certified.”*

*“I think we feel like we’ve put in so much effort, why not, and we definitely should do it.”*

Aside from NCQA certification, 12 practices mentioned plans other than NCQA certification aimed at bettering their practices. Eight of these practices stated that they would continue working on making improvements in order to create sustainable changes. Specific areas of improvement mentioned included comprehensive care plans and 24-hour patient access. Two of these practices reported plans for hiring another physician. Two of these practices reported plans for hiring an auditor or a person responsible for keeping track of changes.

*“Well, that’s the big thing is making some of this stuff sustainable, even the changes we’ve made already.”*

*“Yeah, that we’re going to continue to improve, you know, on the things we’ve started. We’re going to try and get feedback and... change accordingly.”*

*“My next big thing as far as developing the practice was to try to bring on another provider.”*

*“We made a commitment to hire, for want of a better*

name, an auditor, so somebody whose job it's going to be is to look at quality and look at standards and look at compliance."

#### 4. Lessons Learned

Interviewers asked each practice what advice they would give to practices that were looking to undergo the PCMH transformation process. The most common piece of advice put forth by almost one-third of practices suggested it was most important to understand that every practice is different and that an individualized approach should be taken when undergoing this transformation. They felt that if a practice gathered data specific to their office/population, they could better identify where feasible improvements could be made.

*"Each practice is a little different but I think basics is preparing yourself for looking at your practice. You need to step back from your practice and look at it but everybody is going to have a different kind of setting."*

*"What would be ideal I guess...would be to sort out practices that may have three practitioners, six practitioners and residency programs and say okay this is what we need to do because I would*

*think that the data you get from each of those types of practices is going to be a lot different than comparing all of them across the board."*

Four practices advised making changes one at a time instead of attempting to do everything at once. Three practices advised talking to peers and seeing examples of other medical homes. Three practices advised having an initial meeting with the staff in order to explain the definition of a medical home. Three practices felt it was important to remember that the outcome/payoff was worth the effort. Additional advice provided by some practices mentioned the importance of documenting efforts as well as the necessity to educate specialists.

*"Go slow, small changes, small changes at a time. It's overwhelming."*

*"I would say interview, kind of all of the practices that have done it...and implemented it and find out how they are doing, what they have done. I mean you pick a practice that's similar to yours."*

*"I think the [learning session] meetings that we have in Orlando is a big help because you get everybody's opinion and everybody's ideas."*

*"A lot of people were like totally clueless, so I think for anybody who's getting started I think it would be a great resource for them to just say, '...what is a medical home, first of all, and how do you kind of get to there, like how do you take the little steps?'"*

*"It's a lot of work but it's worth it, you know, in the long run."*

*"I'd say do it. I think the payout is way, way better than the struggle."*

At the end of the interview the core clinical team was asked to speculate how they felt this project would be used to affect other practices in Florida. Four practices felt that improving legislation and funding for medical homes is a crucial step. Three practices felt that existing medical homes could become facilitators for other practices interested in this model while two practices felt that the ultimate goal was to organize care for patients and minimize the need to travel all over the state for care. Other comments suggested that the State should acknowledge patients/family feedback, sub-specialties should be on board/more educated about the medical home, funding should be increased for medical homes, and medical home awareness should be more present in the media.

# 4 Practice Staff Survey

## Overview

Although the core clinical team is directly involved in the project, the entire staff at the practice should be engaged if the PCMH is to be fully implemented. Impact of the PCMH on staff will vary. For example, a daily huddle might be used to help organize the operations and expectations of staff and this may impact staff in a minimal way. Alternatively, practices might move away from a physician-lead approach to a team-based approach whereby traditional physician tasks are delegated to other staff. This may constitute a major change in staff expectations and tasks. Given the importance of the staff in this project, Florida chose to include a staff survey in its evaluation plan.

Staff surveys were administered between September and November 2012. All staff members, including physicians, were invited to participate in the staff survey regardless of their position. Two, four, and six weeks later one member of the core clinical team was contacted via e-mail and asked

to remind the staff to complete their surveys. Only staff at the 16 practices participating in the second phase of the QI project was surveyed in year two.

Three hundred and seventy-five surveys were distributed and 209 returned. Twenty-nine percent of respondents were physicians (MD/DO or residents) and 71% were non-physicians (front office/administrative staff, nursing staff, social workers, medical records, etc.)<sup>ii</sup>. Across practices, the average response rate was 64%, with a minimum response rate of 27% and a maximum response rate of 100%.

When interpreting the practice staff survey results the reader should be aware of the following:

- Year two scores are delineated by respondent type as follows: (i) Staff who are physicians, (ii) Staff who are non-physicians.
- Year two scores are compared against baseline national benchmark data where available.

- Cross-sectional data for each survey year is reported for all respondents, regardless of whether they participated in the survey in only one of the two survey years<sup>iii</sup>.
- Wherever the sample size permits<sup>iv</sup>, analyses were undertaken at the individual practice level as well as at the aggregate practice level.

## Adaptive Reserve

Staff was asked the same adaptive reserve items from the TransformED Practice Environment Checklist as the core clinical team. Analyses and reporting methods for the 23-item adaptive reserve scale have been described previously in this report (see page 18).

## Key Findings

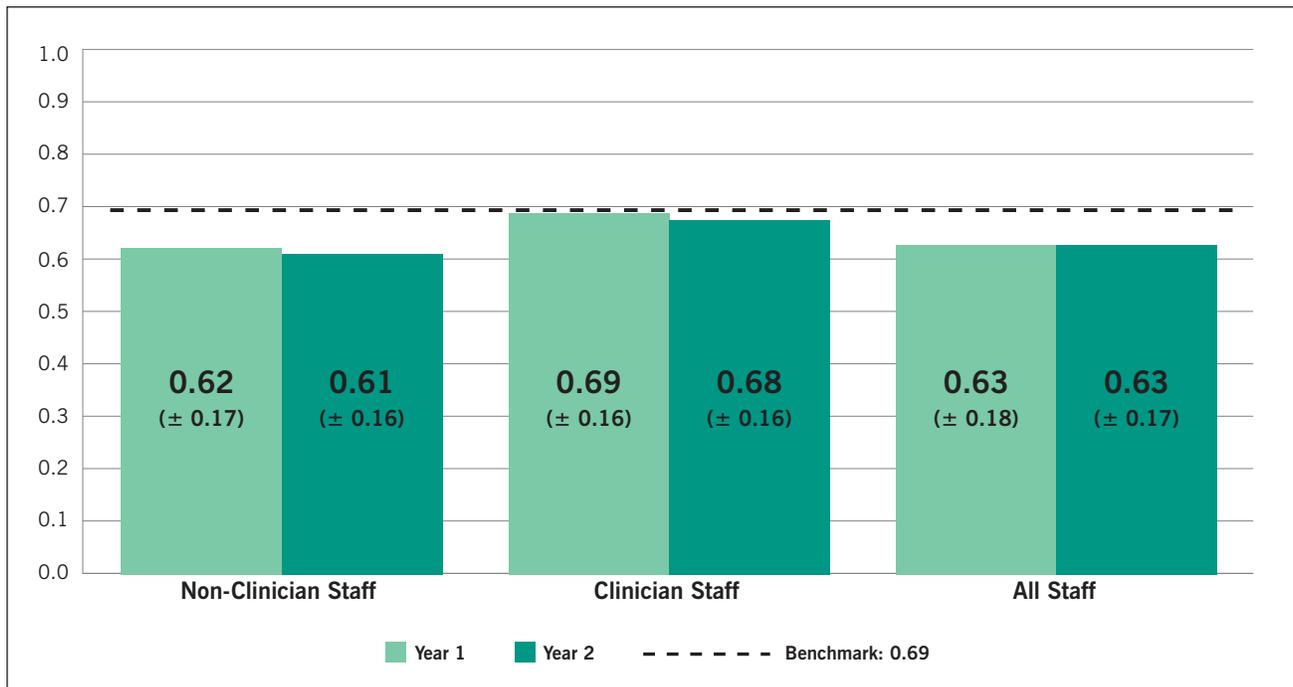
- The mean practice adaptive reserve score reported by all staff members in year two (0.63) is consistent with year one levels ( $P > 0.05$ , **Figure 17**); and remains below the national benchmark (0.69).
- In both years one and two, non-physician staff report a

<sup>ii</sup> Five respondents did not answer the question that was used to classify staff into physician and non-physician staff.

<sup>iii</sup> Practice staff was surveyed in years one and two and their responses tracked over time using a personal identification number (ID). Per the UF's IRB instructions, practice staff generated their own ID (first initial of their name; last four digits of their telephone number) and retained their ID on a postcard for future reference. The number of IDs that linked across years was less than 20%, either due to staff turnover (20% of respondents report that they have worked at a demonstration practice for less than one year), issues related to remembering the ID number, or lack of interest. As a result the Institute has compared practice-level results across years instead of individual-level results.

<sup>iv</sup> Practice size varies across demonstration practices, ranging from 4 to 70 staff members with a median of 18 staff members per practice.

**Figure 17. Staff Adaptive Reserve Score ( $\pm$  SD), by Year and Staff Type**



\*Benchmark: 0.69

significantly lower adaptive reserve score than physicians ( $P < 0.02$ , both years).

- At the individual practice level, two practices showed statistically significant changes in their adaptive reserve scores for all staff members between years one and two ( $P < 0.05$ ; *one practice's score increased, the other's decreased*).

## Practice Environment

Staff was asked to respond to the same practice environment items from the TransformED Practice Environment Checklist

as the core clinical team. Analyses and reporting methods are identical to those described in the core clinical team section of this report (see page 19). There are no benchmarks for the practice environment scores.

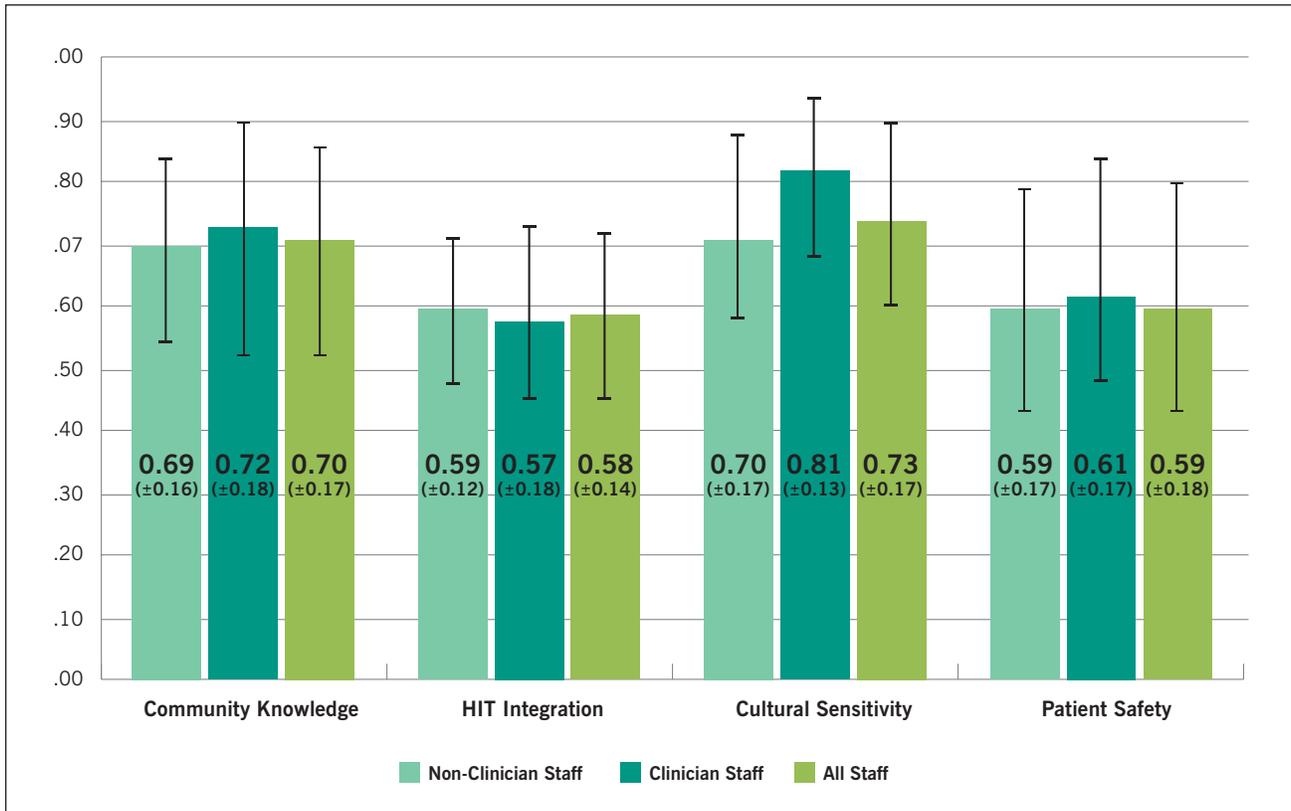
### Key Findings

- For all four practice environment factors, there are no statistically significant differences in total scores between years one and two ( $P > 0.05$ ).
- Staff in the demonstration group continues to rate their practices highest for cultural sensitivity, followed

by community knowledge, patient safety culture, and HIT integration. This order remains the same for both the physician staff and the non-physician staff (**Figure 18**).

- Physicians rate their practice's cultural sensitivity significantly higher than non-physician staff in both years one and two ( $P < 0.02$ ), but do not differ with respect to the other three practice environment scores.
- At the individual practice level, four practices report significantly lower practice environment scores in year

**Figure 18. Staff Practice Environment Mean Scores ( $\pm$  SD)**



two for all staff members compared with year one ( $P < 0.05$ ). HIT integration scores were lower for two practices, cultural sensitivity and community knowledge scores were lower for one practice apiece.

### Job Satisfaction

Practice transformation to a PCMH is hard work. Transformation is not immediate. As such, burnout and decreased job satisfaction

may affect the staff. This is especially critical in the area of primary care where, as compared to specialty care, compensation and work hours are often suboptimal<sup>17</sup>. A 2012 review noted that greater job satisfaction has been linked to improved patient care, greater adherence to treatment regimes, and more QI activities for physicians<sup>18</sup>. Therefore, monitoring these phenomena over time is an important evaluation component in Florida’s project.

Warr’s 10-item job satisfaction scale was included on the staff surveys<sup>19</sup>. Items cover factors ranging from work hours to peers. All items are rated on a seven-point Likert scale (1=extreme dissatisfaction to 7=extreme satisfaction). Warr’s scale was developed in 1979 and has been used in many studies to assess job satisfaction over a diverse group of industries. The last item is a global job satisfaction question that asks, “*Taking everything into consideration, how do you*

**Table 6. Job Satisfaction Scores Change from Year 1 by Staff Type**

JOB SATISFACTION	NON-PHYSICIAN STAFF		PHYSICIANS	
	SCORE	CHANGE	SCORE	CHANGE
Hours of work	5.53	+0.05 ↑	5.24	-0.40 ↓
Physical working conditions	5.52	-0.06 ↓	5.83	-0.38 ↓
Opportunities to us abilities	5.47	+0.03 ↑	5.93	-0.22 ↓
Colleagues and fellow workers	5.47	+0.04 ↑	6.19	+0.13 ↑
Freedom of working method	5.44	+0.02 ↑	5.51	-0.13 ↓
Amount of responsibility	5.31	-0.06 ↓	5.81	-0.19 ↓
Global job satisfaction item	5.27	-0.16 ↓	5.83	-0.17 ↓
Amount of job variety	5.21	-0.23 ↓	5.97	-0.22 ↓
Recognition of work	4.66	-0.02 ↓	5.31	-0.01 ↓
Remuneration	4.33	-0.04 ↓	5.07	-0.51 ↓

feel about your job?” Global satisfaction scores range from 5.33 for blue collar males in a manufacturing industry<sup>19</sup> and from 5.0 to 5.6 for some physician studies<sup>20,21</sup>.

### Key Findings

- Of the 10 items, non-physician staff rate their hours of work as the best facet of their job and physicians are happiest with their colleagues/fellow workers (**Table 6**). For two years in a row, non-physician staff are least satisfied with their remuneration.
- Non-physician staff rate their satisfaction significantly lower than physicians for seven of the 10 items ( $P < 0.05$ ); there are no statistically significant differences between the two groups for hours of work, physical

working environment, and freedom of working method ( $P > 0.05$ ).

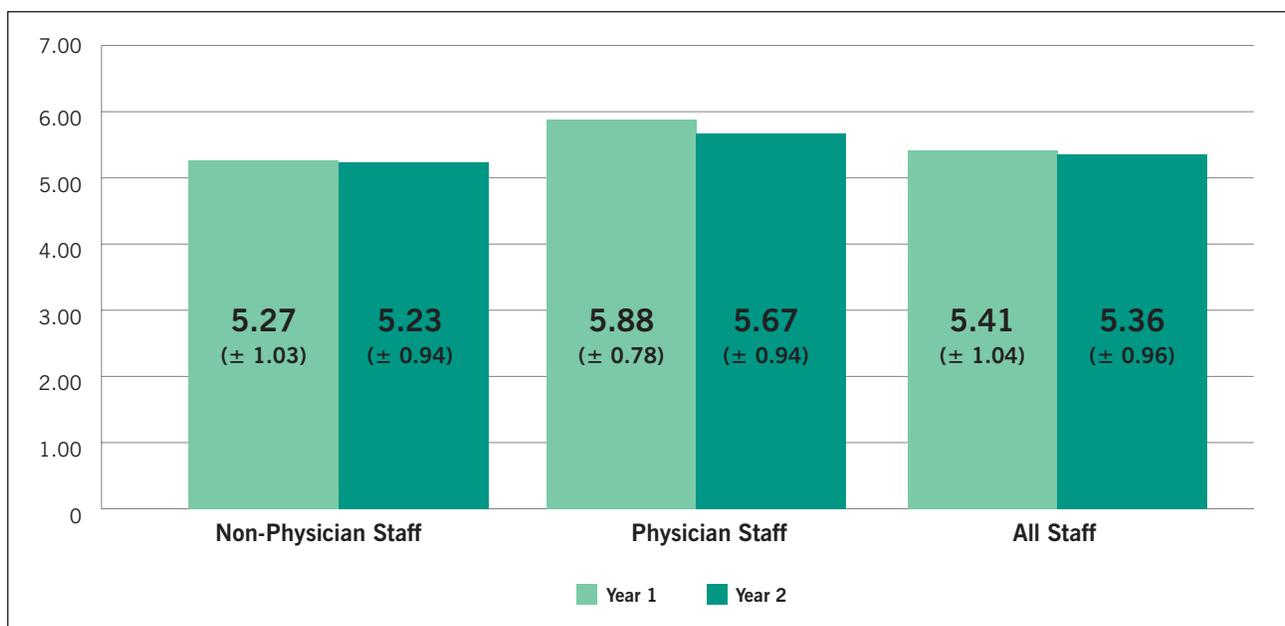
- In year two, staff has a 10-item mean score of 5.36 ( $\pm 0.96$ ) indicating that they are still satisfied with their working conditions (**Figure 19**). Job satisfaction has decreased slightly from year one to year two, but not significantly ( $P > 0.05$ ).
- At the individual practice level, three practices showed statistically significant changes ( $P < 0.05$ ) in their mean job satisfaction scores for all staff members between years one and two (*one practice’s score increased, the other two decreased*).

### Job Burnout

Job burnout was assessed on the staff survey by the Maslach

Burnout Inventory – General Scale (MBI-GS). Workers experiencing burnout are characterized by exhaustion, cynicism, and are doubtful of their capacity to perform in their jobs. The MBI-GS is a 16-item instrument that produces scores for three subscales: exhaustion (*five items*), cynicism (*five items*), and professional efficacy (*six items*)<sup>22</sup>. The three-factor structure of job burnout has been validated in psychometric studies, and is thought to describe burnout better than a combined total score. Staff was asked to respond to 16 items on a six-point scale about how frequently they experience burnout symptoms (0=never to 6=daily). Negatively worded items were not reverse-scored per the authors’ instructions. Mean scores were calculated for each subscale on a scale of 0 to 6. A high degree of

**Figure 19. 10-Item Mean Job Satisfaction Scores ( $\pm$  SD), by Year and Staff Type**



burnout is reflected in high scores on the exhaustion and cynicism subscales and low scores on the professional efficacy subscale. Subscale scores can be interpreted using the guidelines in **Table 7**. These guidelines were established for a North American sample of 3,727 participants, where the normative distribution was partitioned into thirds and scores were attributed as either “high”, “average”, or “low” burnout<sup>22</sup>.

### Key Findings

- Staff report average levels of exhaustion, cynicism and professional efficacy in year two (**Table 8**). There are

no statistically significant changes in staff burnout scores between years one and two at the aggregate practice level ( $P > 0.05$ ). Although not shown here, there are no statistically significant differences between physician and non-physicians’ burnout scores in year two ( $P > 0.05$ ).

- At the individual practice level, two practices showed statistically significant changes in their burnout scores between years (*one practice increased its professional efficacy score and one practice decreased its exhaustion score*).

### Practice Staff Engagement

Similar to the practice survey, this year’s staff survey incorporated new questions intended to measure the level of practice staff engagement with the medical home initiative. These questions measure internal practice communication about the project, and understanding of the medical home concept among staff. Staff from each core clinical team was asked to respond to items regarding staff engagement on a five-point Likert scale (1=strongly disagree to 5=strongly agree). Staff were also asked whether

**Table 7. Cut-off Thresholds for the MBI-GS Subscales**

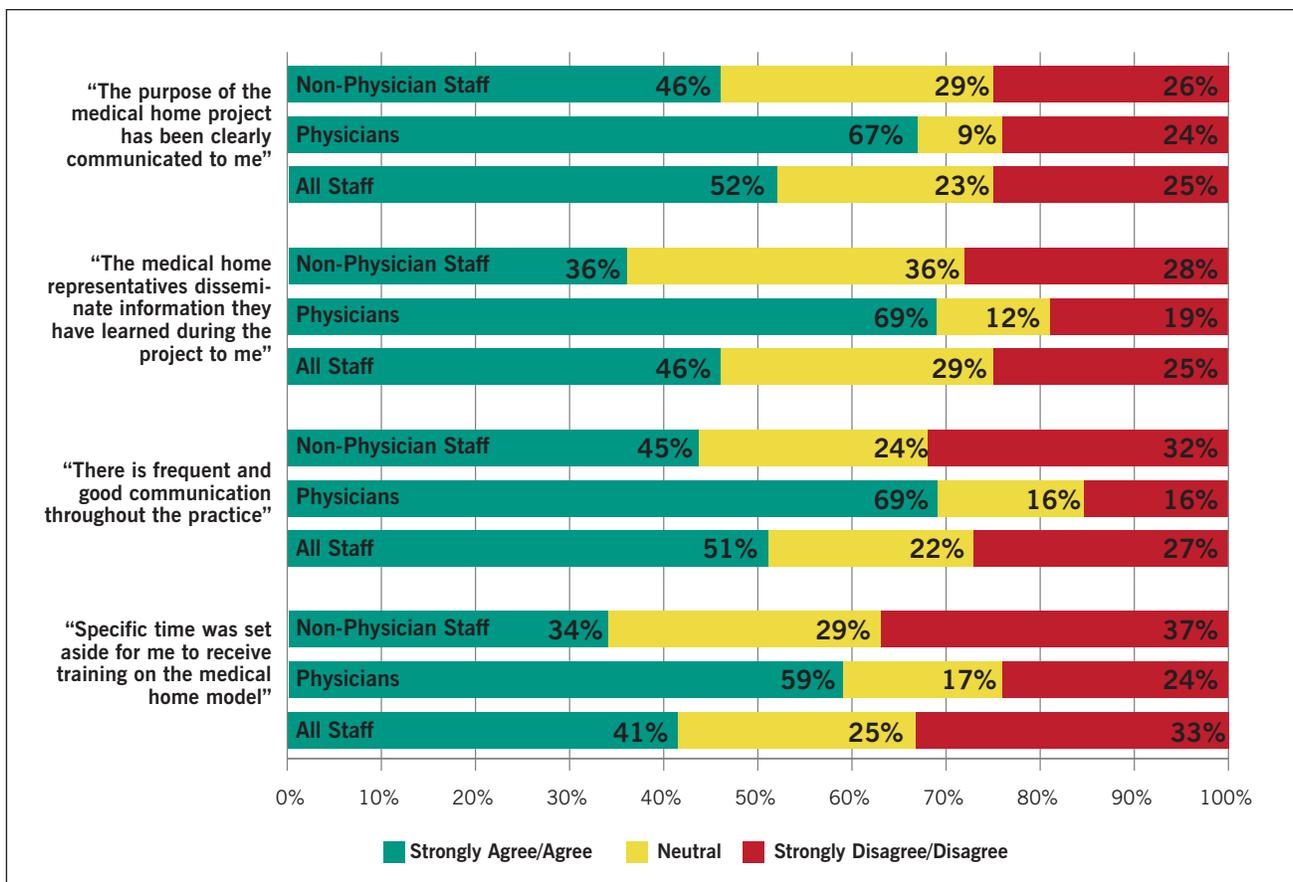
MBI-GS SUBSCALE	LOW BURNOUT	AVERAGE BURNOUT	HIGH BURNOUT
Exhaustion	0 – 2.00	2.01 – 3.19	3.20 – 6.00
Cynicism	0 – 1.00	1.01 – 2.19	2.20 – 6.00
Professional Efficacy	6.00 – 5.00	4.99 – 4.01	4.00 – 0.00

**Table 8. Staff Job Burnout**

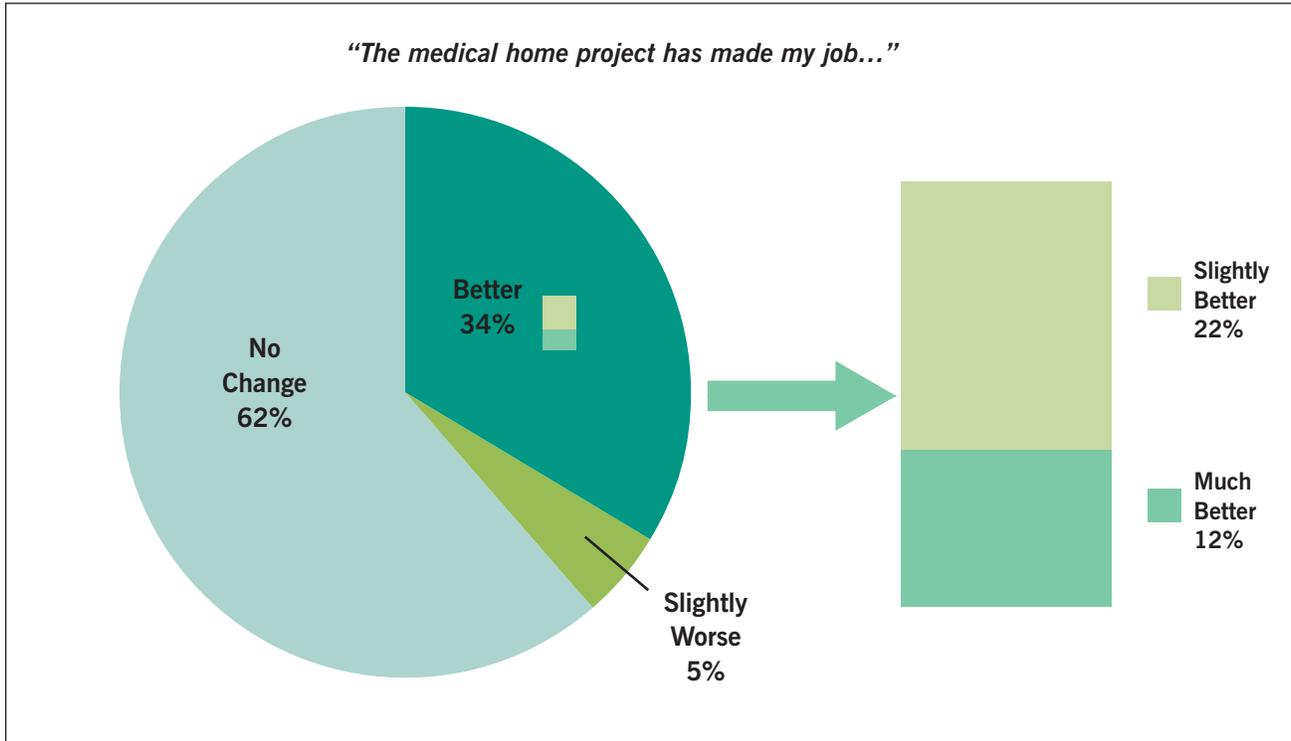
BURNOUT DOMAIN	STAFF MEAN ( $\pm$ SD)	BURNOUT RATING
Exhaustion	2.54 ( $\pm$ 1.39) +0.23 $\uparrow$	Average Burnout
Cynicism	1.28 ( $\pm$ 1.23) -0.01 $\downarrow$	Average Burnout
Professional Efficacy	4.90 ( $\pm$ 0.91) -0.13 $\downarrow$	Average Burnout

\*Arrows denote the movement in mean scores from year one to year two.

**Figure 20. Staff Perceptions of Communication with Medical Home Representatives**



**Figure 21. Staff Perceptions of Job Satisfaction**



or not the medical home project has improved their jobs on a five-point Likert scale (1=much worse to 5=much better).

**Key Findings**

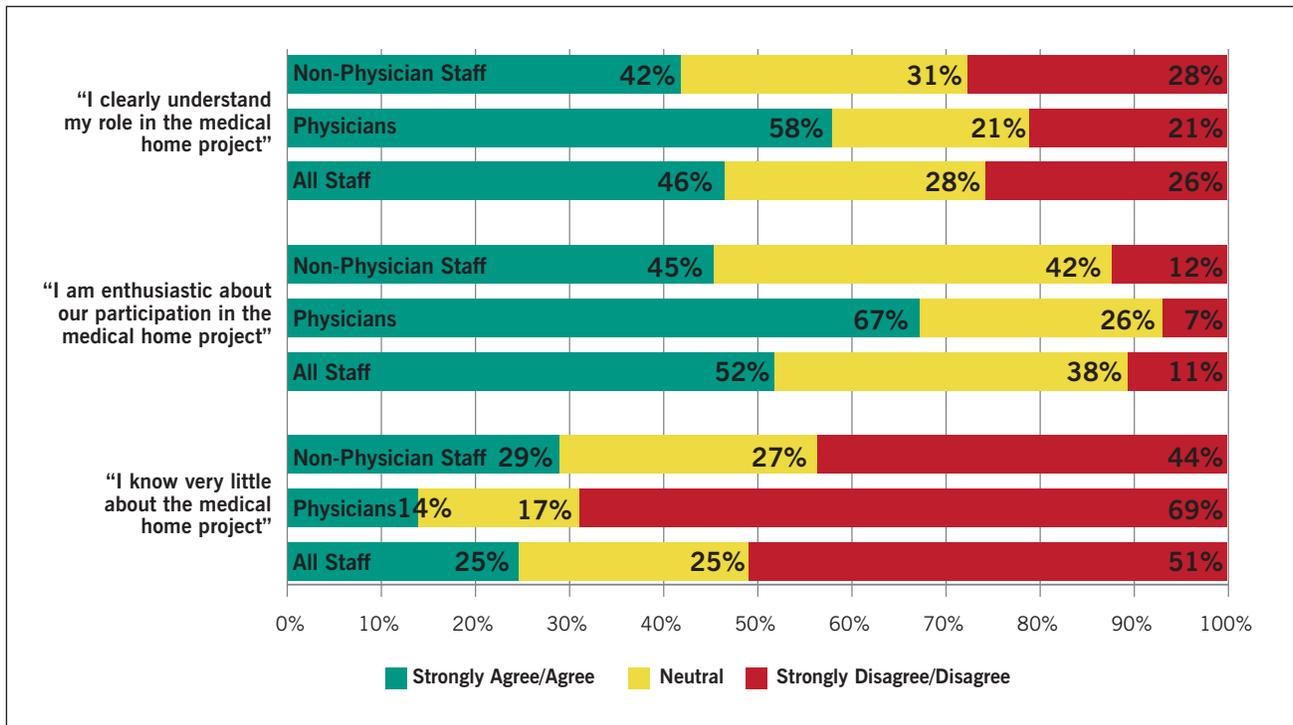
- Sixty-nine percent of all staff report that they know who their medical home representatives are in the practice; physicians report significantly higher levels of knowledge than the non-physician staff ( $P < 0.03$ ).
- For all four measures related to communication about the medical home

project there is considerable room for improvement (Figure 20), especially for non-physician staff.

- Physicians indicate significantly higher levels of program communication and understanding than non-physician staff for all four measures ( $P < 0.01$ ). For instance, two-thirds (69%) of physicians report that the medical home representatives disseminated information to them compared with one-third (36%) of non-physician staff.

- The majority of staff (62%) report that the medical home project has resulted in no change to their job satisfaction (Figure 21); one-third of all staff report that their jobs are slightly or much better as a result of the project. There are no statistically significant differences between physicians and non-physicians for this measure ( $P > 0.05$ ).
- Around one-half of all staff agree that they understand their role in the project and are enthusiastic about

**Figure 22. Staff Perceptions of Medical Home Project Engagement**



the medical home initiative (Figure 22). Physicians report significantly higher levels of enthusiasm about the project than non-physician staff ( $P < 0.02$ ).

- One-quarter of all staff agree that they know very little about the medical home project (Figure 22). With non-physician staff having significantly less knowledge about the project than physicians ( $P < 0.01$ ).

# 5 Community Stakeholder Survey

## Overview

As practices begin to adopt the PCMH model, the transformation should be evident to stakeholders outside of their practices. Individuals who interacted with the practice to coordinate care should begin to see changes in both communication and coordination with each practice. To gauge this change, a short survey was developed and sent out to stakeholders within each practice's community. It was administered in the second year and will be carried out again in the fourth year. Stakeholders were identified in two groups: 1) State-employed care coordinators working at CMSN offices across the state, and 2) Specialists who saw children in the demonstration practices.

### CMSN Care Coordinators

In August 2012, supervisors at nine CMSN area offices were contacted for the number of employed CMSN Care Coordinators. As a result, 437 surveys were mailed to 247 care coordinators in September. Of these 247, 110 were asked to complete separate surveys for more than one demonstration practice in their area. Care coordinators choosing to participate were asked to mail

back their surveys directly to the Institute within two weeks. Information was not collected for six of the 20 demonstration practices that already had a CMSN employee located in-house to coordinate care for all CMSN patients.

### Specialists

In October 2012, the Institute used administrative claims/encounter data to identify specialists who had had contact in the last year with Medicaid or CHIP children attending the 20 demonstration practices<sup>v</sup>. As a result, 2158 surveys were mailed to 1537 specialists in November 2012. Two hundred and twenty two surveys were returned to sender because of bad contact information.

### Response Rate

Out of 437 surveys mailed out to CMSN Care Coordinators a total of 231 responses were received by mail, a 53% response rate<sup>vi</sup>. Of those 231 respondents, 64% report that their caseload of children did not include any patients from a demonstration practice (**Figure 23**) and were excluded from the rest of the analysis. Therefore, the total number of completed surveys used in the analysis was 84.

Of the 1936 surveys that reached specialists, 105 surveys were returned, and of those 47% report that their caseload of children did not include any patients from a demonstration practice (**Figure 23**). Therefore, the total number of completed surveys used in the analysis was 55.

Approximately 95% of all responding stakeholders had been employed with their current organizations for more than 12 months.

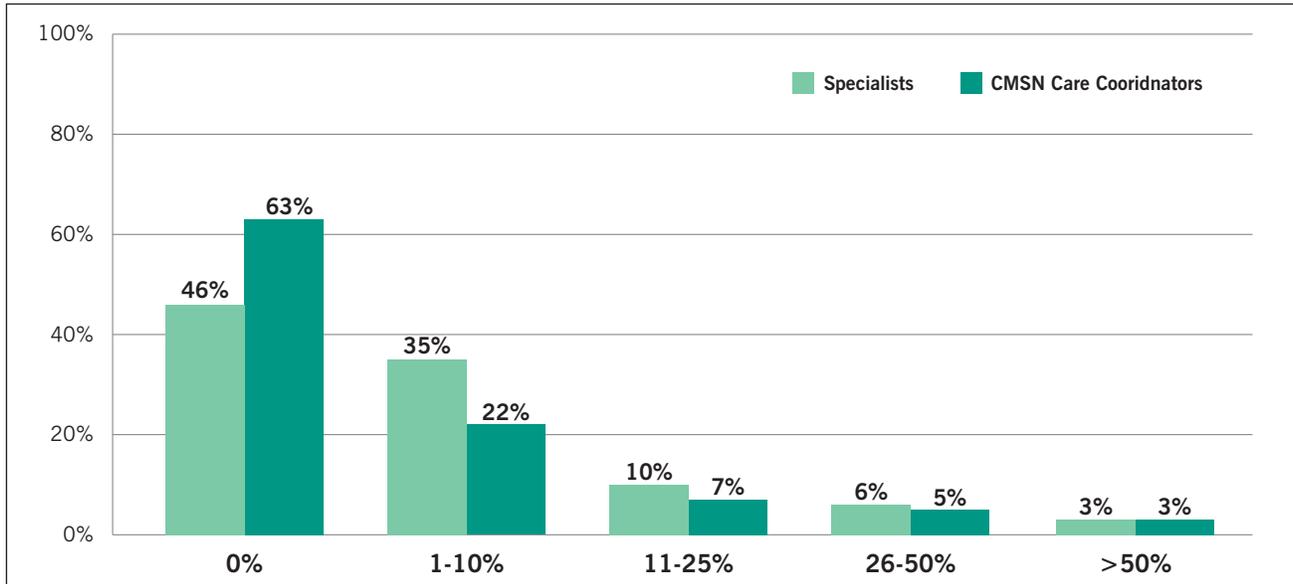
## Ease of Communication

Stakeholders were asked to respond to six statements about their ease of communication with the demonstration practices, using a five-point Likert scale (1=strongly disagree to 5=strongly agree). Responses that indicated the participant either agreed or strongly agreed with each statement were collapsed and are reported in **Figure 24**. Almost one-half of CMSN Care Coordinators report that the practices they interact with are typically not available after business hours suggesting there may be some room for improvement.

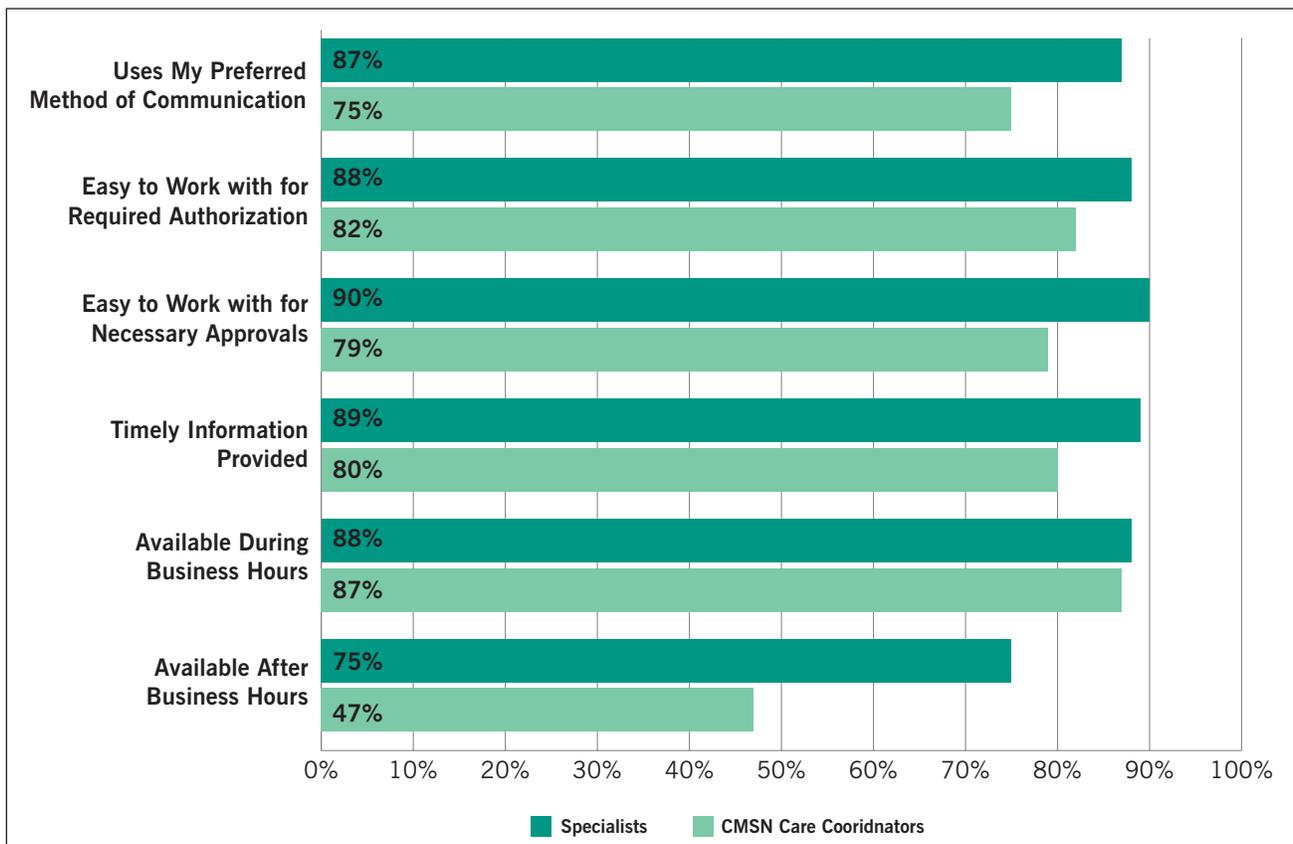
<sup>v</sup> Common specialty occupations were occupational therapy, speech therapy, otolaryngology, professional early intervention services, pediatric cardiology, psychiatry, dermatology, and neurology. This list is not exhaustive.

<sup>vi</sup> The response rate by demonstration practice varied from 35% to 88%.

**Figure 23. Percentage of Caseload Treated at Demonstration Practices**



**Figure 24. Ease of Communication with Demonstration Practices**



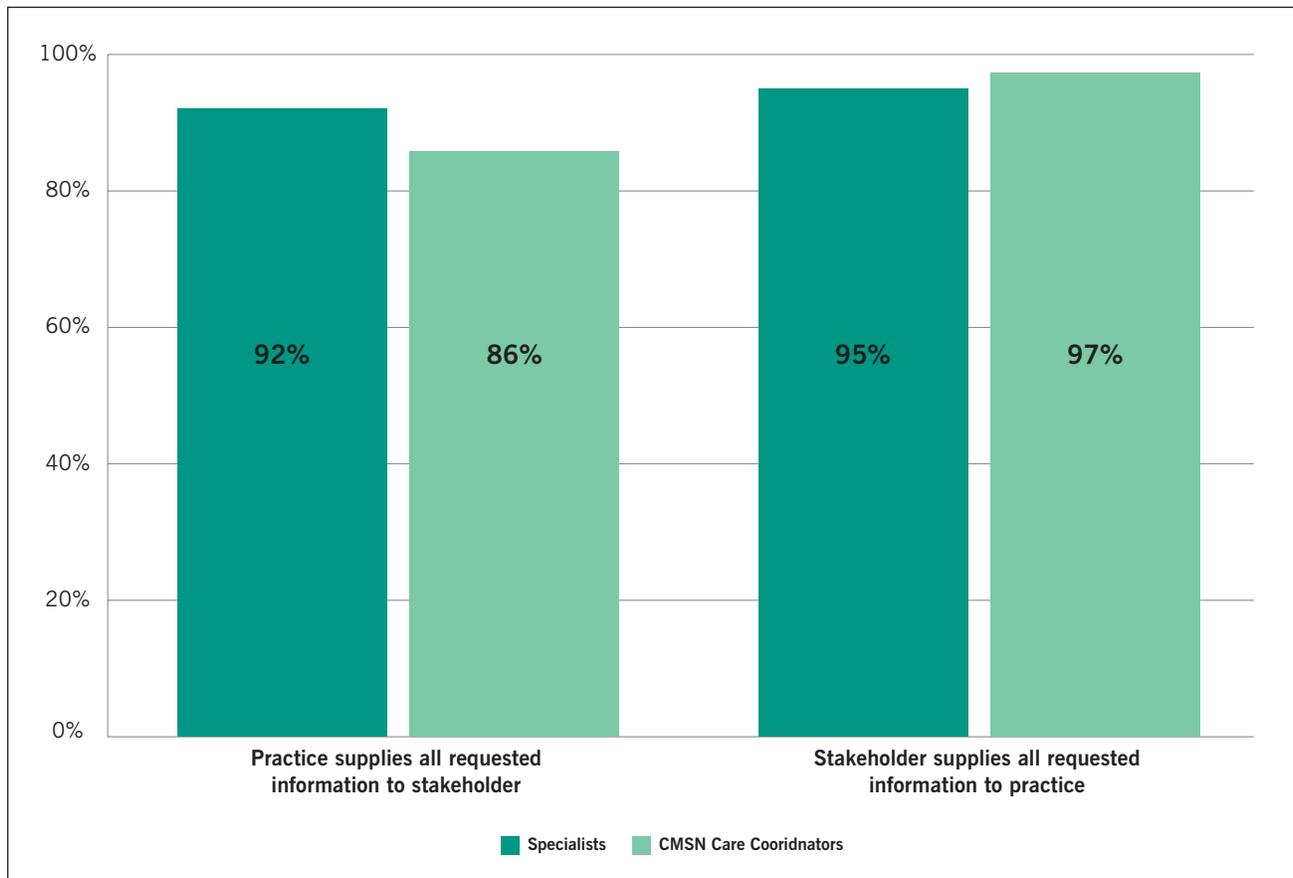
## Information Exchange

Stakeholders report that practices perform very well in supplying all the information that is requested from them. Stakeholders similarly rank themselves highly in providing all requested practices with the information (Figure 25). Both CMSN Care Coordinators and specialists self-report that they supply requested information to practices more of the time than they receive information back from the practices.

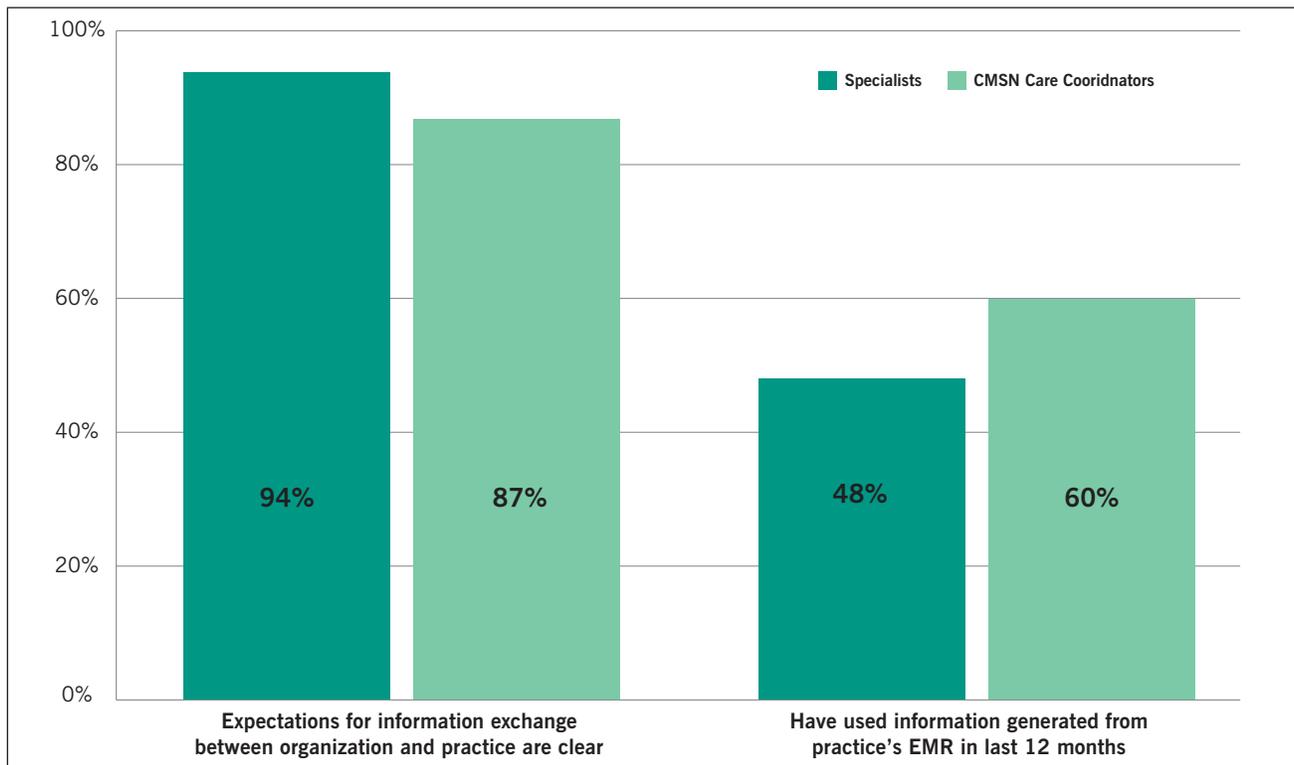
Both specialists and CMSN Care Coordinators generally agree that the expectations for information exchange between organization and practice are clear (Figure 26). Of those practices that had an Electronic Medical Records (EMR) service, nearly 60% of CMSN Care Coordinators surveyed report that they have used information generated from a practice's EMRs within the last year; and nearly 50% of specialists have used such records (Figure 26).

Stakeholders reported being in touch with practices primarily via phone (95%) and fax (92%), and were more likely to use several means of communication rather than a single mean. The frequency of contact varied but about half of responding stakeholders communicated with practices either monthly or every 1-2 weeks. Responses from stakeholders also seem to indicate that practices are equally effective at communicating as they are at coordinating services (Figure 27); however, there is room for improvement.

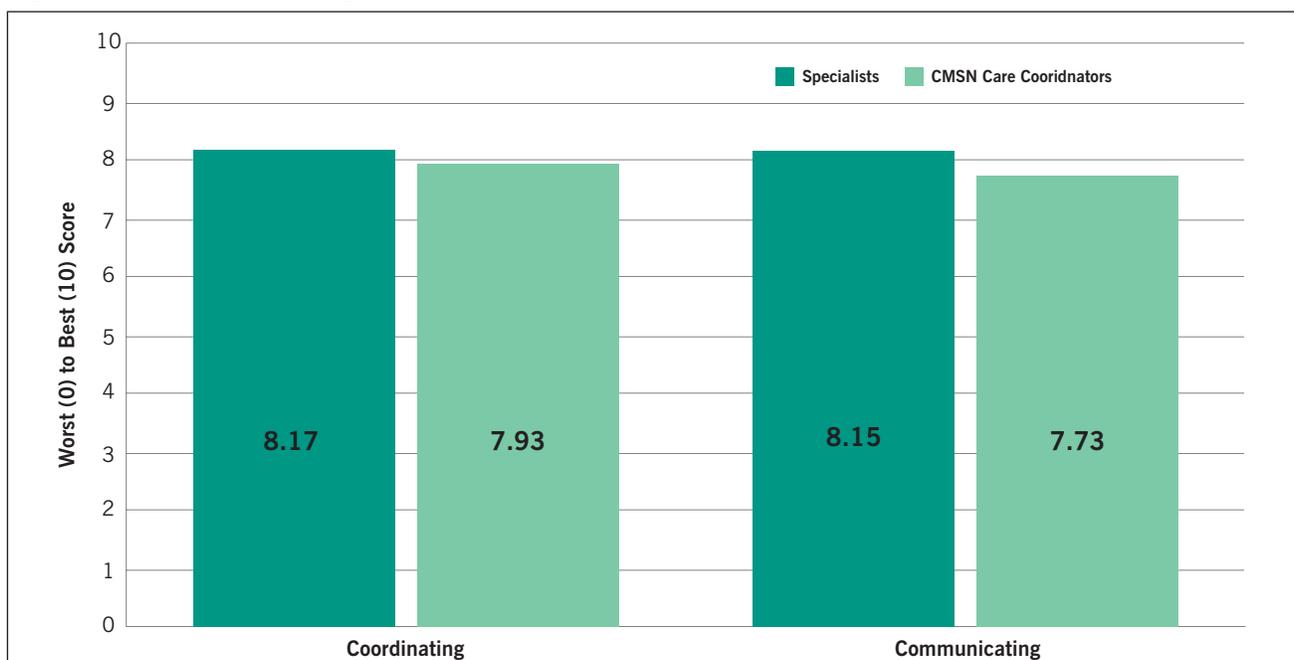
Figure 25. Transfer of Information



**Figure 26. Clarity and Use of Exchanged Information**



**Figure 27. Stakeholder Ratings of Demonstration Practices**



# 6 Parent Survey

## Overview

The final section of the report describes the health care experiences of parents whose children are enrolled in Medicaid or CHIP and (i) receive care at a Florida demonstration practice, or (ii) are in the control group. Two standardized survey instruments were used to assess parental perceptions of medical homeness: the Consumer Assessment of Healthcare Providers and Systems — PCMH (CAHPS-PCMH) and the 2005/2006 National Survey of Children with Special Health Care Needs (NS-CSHCN). Sternberg et al.'s 2011 review of quality measures endorsed the CAHPS survey tool as the most feasible for inclusion in the CHIPRA core measurement set because it has “*known reliability and performance characteristics, and most closely reflects the aims of the medical home.*”<sup>23</sup>

## Data Sources

Data sources for the demonstration and control groups are described below.

### Demonstration Group

Practices supplied the Medicaid Provider Numbers (MPNs) and National Provider Identifiers

(NPIs) for all providers employed at their practices. MPNs and NPIs were matched to claims and encounter datasets supplied by the Florida AHCA<sup>vii</sup> and the Florida Healthy Kids Corporation. Children who saw a listed provider during the time period July 1, 2010 to June 30, 2011 were eligible to participate. If siblings attended the same practice, one child per household was randomly selected. Next, the sample was stratified depending on whether children were enrolled in CMSN, the State's Title V Program for CSHCN<sup>viii</sup>. The goal was to target 50% CSHCN, but not all practices had sufficient sample sizes.

In year one, a random sample of parents whose children met the mentioned criteria were sent a letter inviting them to participate in a telephone survey. In order to reduce attrition and increase year two response rates, an outreach letter containing a reply-paid post card was sent six months after the initial survey for parents to update their phone numbers. A small first aid kit was included with each letter as a token of appreciation. After one year, those families were sent another letter inviting them to participate in a year

two telephone survey. Searches were conducted to update outdated contact information, and families were again contacted a maximum of 25 times and. Telephone surveys with families were conducted from 10 AM to 9 PM, seven days per week from October to December 2012. Surveys were conducted in both English and Spanish. The respondent was identified by asking to speak to the individual most familiar with the targeted child's health in the household. All parents were asked to confirm that their child had attended the same Florida demonstration practice in the last 12 months. Parents completing the survey received a \$15 gift card of their choice to either Starbucks or Wal-Mart.

As some parents were not responsive or no longer eligible to participate in the survey in year two, a demonstration replacement group was obtained using the same process as the original demonstration group. An analysis of the demographics of the families who dropped out after year 1 showed that they did not share any specific characteristics. Therefore children for the replacement group were again randomly selected from children who saw a listed provider during the time

<sup>vii</sup> Data supplied by AHCA include claims and encounters for children enrolled in Primary Care Case Management (Medipass), Fee-For-Service, Health Plans (Health Maintenance Organizations, Provider Service Networks), Title XIX CMSN, and Medikids.

<sup>viii</sup> Claims and encounter data are not available for children enrolled in CMSN Title XXI.

**Table 9. Year 2 Response and Cooperation Rates**

	PARTICIPANTS	RESPONSE RATE	COOPERATION RATE
<b>Demonstration Group</b>			
Original Cohort	474	73.9%	91.2%
Replacement Cohort	432	36.0%	62.7%
<b>TOTAL</b>	<b>906</b>		
<b>Control Group</b>			
Original Cohort	542	76.0%	90.1%
Replacement Cohort	373	38.3%	69.5%
<b>TOTAL</b>	<b>915</b>		

period July 1, 2011 to June 30, 2012. Once the original cohort was exhausted, replacement surveys were conducted from January to March 2013.

### Control Group

Claims and administrative data for Florida’s publicly-insured pediatric population were used to obtain a matched control group based on the following child characteristics: age, race/ethnicity, gender, plan (Medicaid, Medikids, Title XXI), and SHCN or not. Nearest-neighbor propensity-score matching SAS® code was used to generate the matched control group<sup>24</sup>, stratified by whether the child had a SHCN or not. Multiple control children were matched for each child in the demonstration group and assigned as match 1, match 2, match 3, etc. based on their propensity-score (the higher the propensity score, the better the match). Recruitment was staggered to allow recruitment

of the best-matched sample first, before release of second-tier matches.

Telephone surveys were conducted with families from January to March 2013 using the same approach and incentives as for the demonstration group. Parents were asked to respond to the survey questions about the primary care provider their children saw most often in the last 12 months. A primary care provider was defined as the provider their child would see if he or she needed a checkup (e.g., for preventive care, immunizations, or well child visits) or got sick or hurt.

As with the demonstration group, a control replacement group was needed and surveyed from March to May 2013.

### Response Rates

Florida’s goal was to obtain 50 completed surveys for

each demonstration practice, or 1,000 overall. Both the demonstration and control groups had 990 families participate in year one. In year two, the number of families participating in the demonstration group parent survey totaled 906, with 474 returning participants and 432 replacement participants. For the control group, 915 participants were surveyed, with 542 returning families and an additional 373 replacement families surveyed. Using American Association for Public Opinion Research guidelines<sup>25</sup>, response and cooperation rates were calculated for all four groups (**Table 9**).

Statistical tests reveal that the control and demonstration groups do not differ for four of the five child characteristics of interest ( $P > 0.05$ ) (**Table 10**). A statistically significant higher proportion of parents whose children are enrolled in

**Table 10. Representativeness of the Matched Control Group**

	DEMONSTRATION GROUP RESPONDERS (n=160)		CONTROL GROUP NON-RESPONDERS (n=119)		
	N	%	N	%	
<b>Child's Gender</b>					
Male	465	51.3%	508	55.5%	NS
Female	441	48.7%	407	44.5%	
<b>Child's Race/Ethnicity</b>					
Black non-Hispanic	180	21.6%	170	18.8%	NS
White non-Hispanic	216	25.9%	229	25.3%	
Hispanic	181	21.7%	194	21.5%	
Other or Unknown	256	30.7%	311	34.4%	
<b>Child's Insurance</b>					
Medicaid	697	76.9%	760	83.1%	S
CHIP	209	23.1%	155	16.9%	
% Special Health Care Needs	308	34.0%	322	35.2%	NS

NS= Not Significant, S= Significant

CHIP seem to respond in the Demonstration Group than in the Control Group ( $P < 0.01$ ). Children's mean ages for the demonstration and control groups as of January 1 2013 were 9.55 years ( $\pm 0.19$  years) and 9.26 years ( $\pm 0.18$  years), respectively.

## CAHPS

The CAHPS-PCMH is an expanded version of the existing Clinician and Group CAHPS (CG-CAHPS) Survey<sup>26</sup>. The CG-CAHPS was developed by the Agency for Healthcare Research and Quality (AHRQ) to assess respondents' experiences with health care providers and staff in doctor's offices<sup>27</sup>. Topic

areas covered by the CG-CAHPS survey include doctor communication, anticipatory guidance, accessibility of services, and customer service by office staff. The CAHPS-PCMH expands the survey to include other topic areas relevant to the PCMH. The Institute was granted permission to use the pilot beta-version of the CAHPS-PCMH in 2010<sup>ix</sup>.

### Analyses and Reporting

CAHPS-PCMH survey results may be analyzed at the individual item level or by composite. Composites represent the combination of two or more closely related individual survey items.

There are six CAHPS-PCMH composites:

- Getting Timely Appointments, Care, and Information
- How Well Providers Communicate With Patients (Doctor-Patient Communication)
- Helpful, Courteous, and Respectful Office Staff (Courteous and Helpful Office Staff)
- Provider's Attention to Your Child's Growth and Development (Child's Growth and Development)
- Provider's Advice on Keeping Your Child Safe and Healthy (Child's Health and Safety)

<sup>ix</sup> Question wording changed slightly between the CAHPS beta-version and the final version of the CAHPS-PCMH.

**Table 11. CAHPS Composite Measures (Always, Usually, Sometimes, Never)**

<b>CAHPS COMPOSITE MEASURES</b>	
<b>Getting Timely Appointments, Care and Information</b>	<p><i>In the last 12 months, how often did the following occur:</i></p> <ol style="list-style-type: none"> <li>1. When you phoned this provider’s office to get an appointment for care your child needed right away, how often did you get an appointment as soon as you thought your child needed?</li> <li>2. When you made an appointment for a check-up or routine care for your child with this provider, how often did you get an appointment as soon as you thought your child needed?</li> <li>3. When you phoned this provider’s office during regular office hours, how often did you get an answer to your medical question that same day?</li> <li>4. When you phoned this provider’s office after regular office hours, how often did you get an answer to your medical question as soon as you needed?</li> <li>5. Wait time includes time spent in the waiting room and exam room. How often did your child see this provider within 15 minutes of his or her appointment time?</li> </ol>
<b>Doctor-Patient Communication</b>	<p><i>In the last 12 months, how often did this provider:</i></p> <ol style="list-style-type: none"> <li>1. Explain things about your child’s health in a way that was easy to understand?</li> <li>2. Listen carefully to you?</li> <li>3. Give you easy to understand instructions about taking care of these health questions or concerns?</li> <li>4. Seem to know the important information about your child’s medical history?</li> <li>5. Show respect for what you had to say?</li> <li>6. Spend enough time with your child?</li> </ol>
<b>Courteous and Helpful Office Staff</b>	<p><i>In the last 12 months, how often did clerks and receptionists at this provider’s office:</i></p> <ol style="list-style-type: none"> <li>1. Be as helpful as you thought they should be?</li> <li>2. Treat you with courtesy and respect?</li> </ol>

*Note: All questions are measured with a response of “Always”, “Usually”, “Sometimes” and “Never”*

■ **Provider’s Support You in Taking Care of Your Own Health.**

The first five CAHPS composites are derived from the CG-CAHPS, with the last composite, ‘Provider’s Support You in Taking Care of Your Own Health’, unique to the CAHPS-PCMH dataset. The first three CAHPS composites ask parents to respond how often (*always, usually, sometimes, never*) a given health care experience

occurs (**Table 11**). The last three CAHPS composites ask parents to respond whether or not (*yes, no*) they receive provider support and anticipatory guidance (**Table 12**). CAHPS composites are reported using a 100-point global proportion, which represents the mean proportion of respondents selecting a particular response (e.g., *always, usually, sometimes/never* or *yes, no*) across items of the composite.

The CAHPS-PCMH survey also includes seven single-item PCMH questions that are scored individually<sup>26</sup>; however, results are grouped within three theme areas:

- Access to Care
- Attention to Care From Other Providers
- Information About Care and Appointments

**Table 12. CAHPS Composites Measures (Yes/No)**

CAHPS COMPOSITE MEASURES	
<b>Child's Growth and Development</b>	<p><i>In the last 12 months, did you and anyone in this provider's office talk about:</i></p> <ol style="list-style-type: none"> <li>1. Your child's learning ability?</li> <li>2. The kinds of behaviors that are normal for your child at this age?</li> <li>3. How your child's body is growing?</li> <li>4. Your child's moods and emotions?</li> <li>5. How much time your child spends on a computer and in front of a TV?</li> <li>6. How your child gets along with others?</li> </ol>
<b>Child's Health and Safety</b>	<p><i>In the last 12 months, did you and anyone in this provider's office:</i></p> <ol style="list-style-type: none"> <li>1. Talk about things you can do to keep your child from getting injured?</li> <li>2. Give you information about how to keep your child from getting injured?</li> <li>3. Talk about how much or what kind of food your child eats?</li> <li>4. Talk about how much or what kind of exercise your child gets?</li> <li>5. Talk about whether there are any problems in your household that might affect your child?</li> </ol>
<b>Provider's Support in Taking Care of Your Own Health</b>	<p><i>In the last 12 months, did anyone in this provider's office:</i></p> <ol style="list-style-type: none"> <li>1. Work with you to set specific goals for managing your child's health?</li> <li>2. Talk about the things that make it hard for you to manage your child's health?</li> </ol>

Last, the CAHPS-PCMH survey includes an overall provider rating on a scale of 0 to 10. The overall provider rating is collapsed into three categories: (i) response of 9 or 10, (ii) response of 7 or 8, and (iii) response of 0 to 6, which are reported on a 100 percentage point scale.

The 2010 national averages from the AHRQ CAHPS Benchmarking Database for the CG-CAHPS Child Primary Care Survey composites (percentage selecting Usually + Always or Yes) are provided as a benchmark<sup>28</sup>. CAHPS-PCMH benchmark data for publicly-

insured children is not currently available.

### CAHPS Core Composites (*Always, Usually, Sometimes, Never*)

#### Overview

Parents are asked to respond how often (*always, usually, sometimes, never*) a given health care experience occurs (**Table 11**).

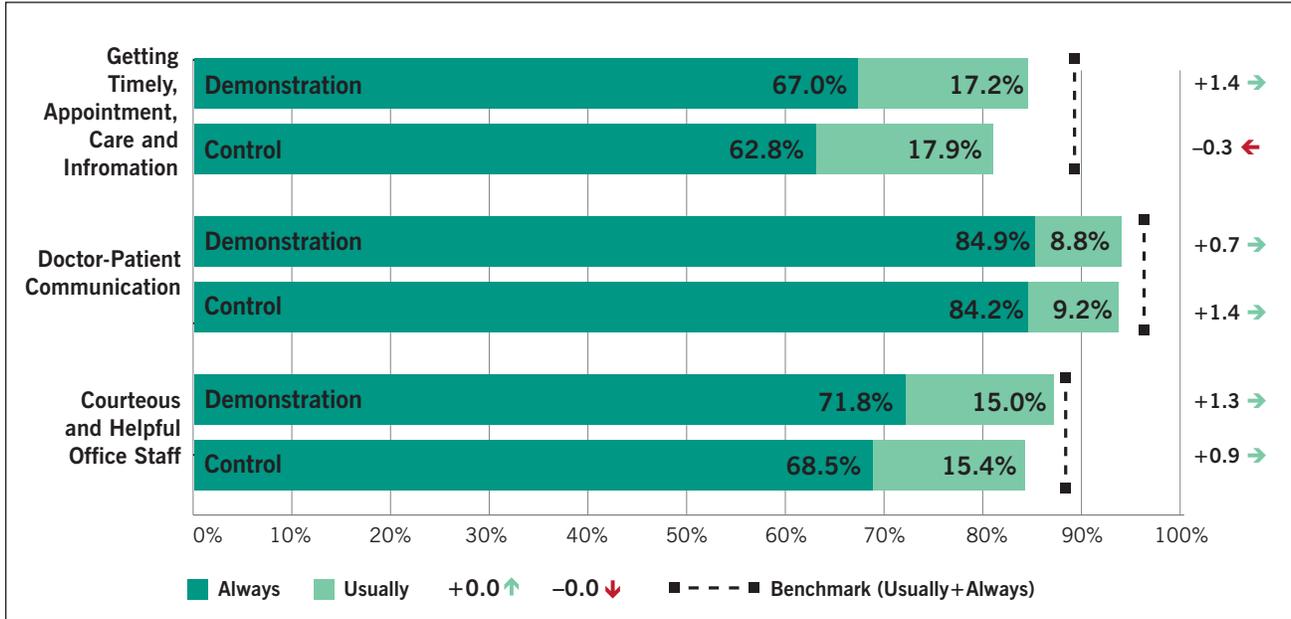
#### Key Findings

- Over ninety percent of parents indicate that they are usually or always

satisfied with doctor-patient communication (**Figure 28**).

- Over eighty percent of parents indicate that they are usually or always satisfied with both the timeliness of the care they receive, as well as the courteousness and helpfulness of office staff.
- Global proportions for the 'usually+always' category are comparable between the demonstration and control groups.
- Although none of the CAHPS composites reach 2010 benchmarks, there are small

Figure 28. CAHPS Composites (*Always, Usually, Sometimes, Never*)



improvements from year one in nearly all global proportions of ‘usually+always’.

### CAHPS Core Composites (*Yes/No*)

#### Overview

Three CAHPS composites relate to provider support and anticipatory guidance as detailed in Table 12. Parents are asked to respond yes or no to a series of questions. Benchmark data is not currently available.

#### Key Findings

- Over one-half of parents, in both the demonstration and control groups, report that providers offer anticipatory guidance regarding their

children’s growth and development, as well as their children’s health and safety (Figure 29).

- Parents are in least agreement with the notion that providers support them in taking care of their children’s health.
- For each measure, the demonstration group reports a higher level of satisfaction than does the control group.
- Compared to year one, improvements are made across each CAHPS Core Composite and among each group of parents.

### Single-Item Measures: Attention to Care from Other Providers

#### Overview

- Three questions are asked that relate to provider’s attention to care from other providers.
- In the last 12 months, how often did this provider seem informed and up-to-date about the care your child got from specialists? (*Always, Usually, Sometimes, Never*)
- In the last 12 months, when this provider ordered a blood test, x-ray or other test for your child, how often did someone from this provider’s

Figure 29. CAHPS Composites (Yes/No)

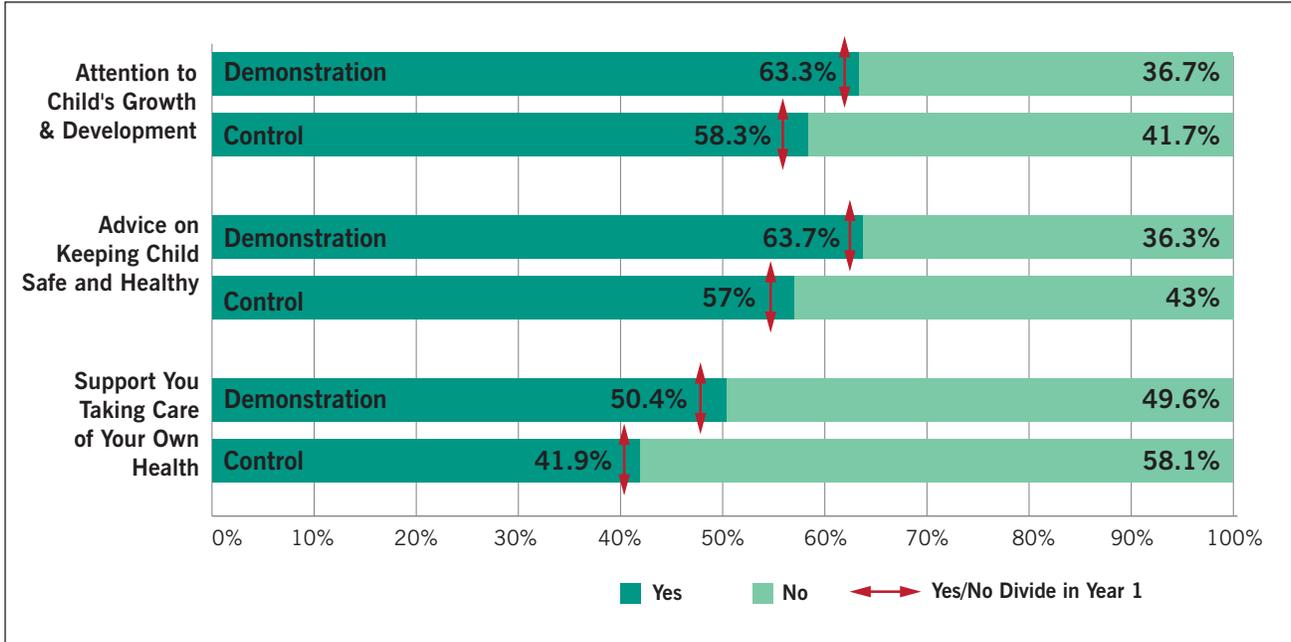
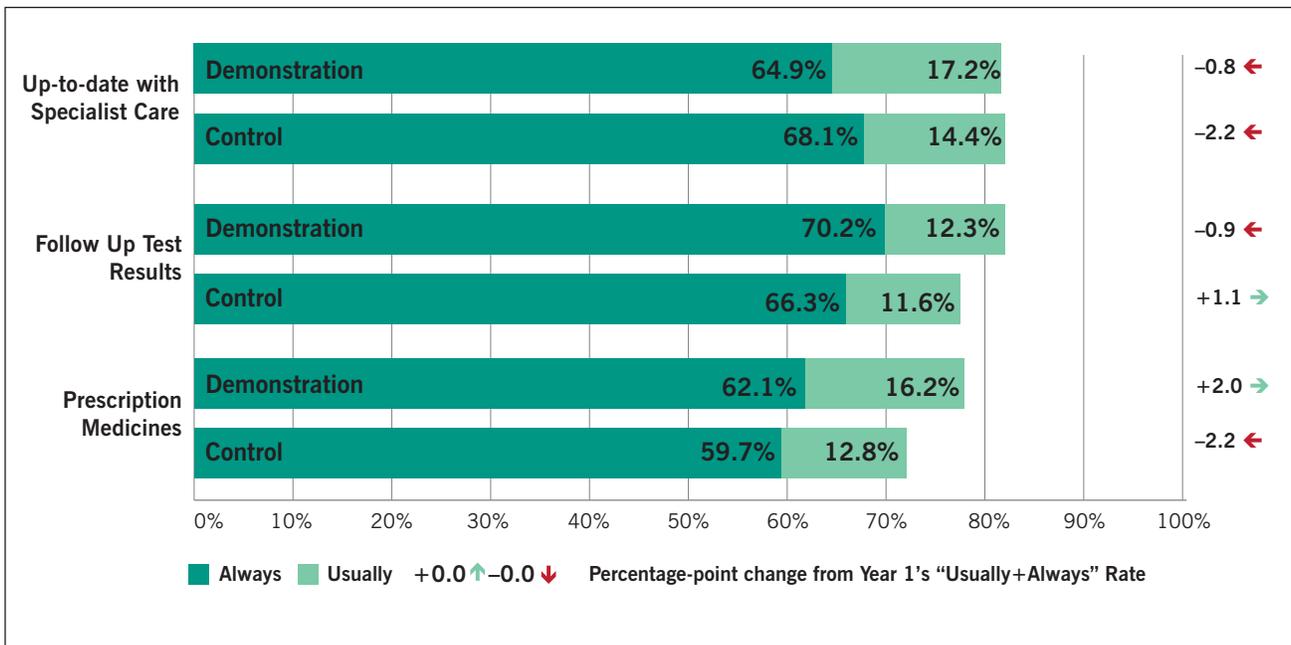


Figure 30. Attention to Care From Other Providers



office follow up to give you those results? (*Always, Usually, Sometimes, Never*)

- In the last 12 months, how often did you and anyone in this provider’s office talk about all the prescription medicines your child was taking? (*Always, Usually, Sometimes, Never*)

### Key Findings

- More than three-quarters of parents in the demonstration and control groups report that their child’s provider is usually or always being up-to-date with specialist care and follows up on test results (**Figure 30**).
- Less than three-quarters of parents in the control group report usually or always

talking with individuals in the provider’s office about their child’s prescription medicines, though more parents in the demonstration group report doing so.

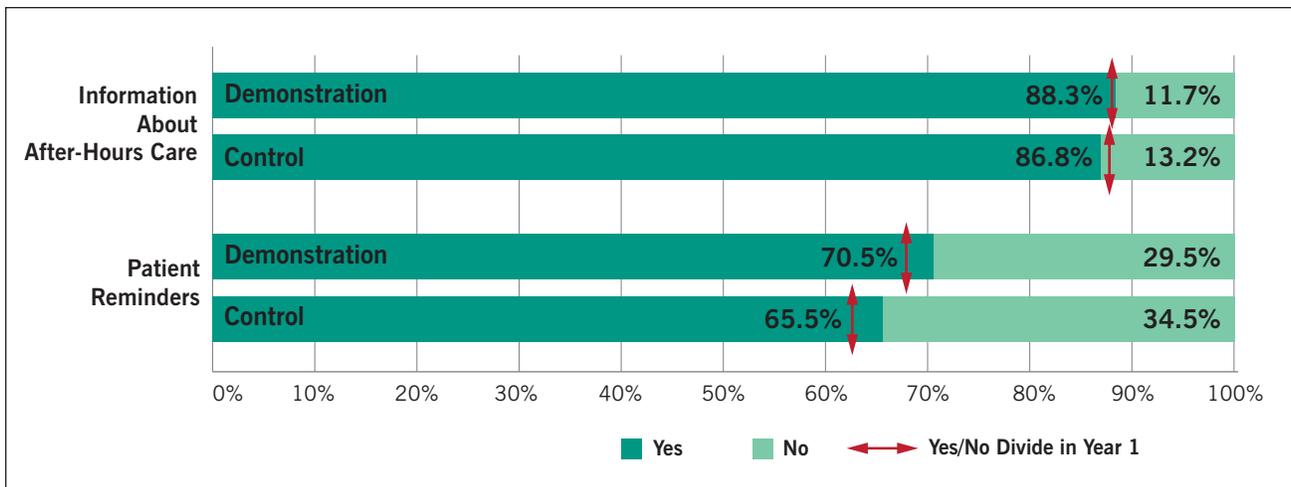
- While the demonstration group rates follow up with test results and discussion of prescription medicines more favorably than the control group, the control group indicates that their providers stay slightly more up-to-date with specialist care.
- Compared to year one, the demonstration group’s satisfaction with attention to care from other providers falls in all areas other than prescription medicine communication.

## Single-Item Measures: Information about Care and Appointments

### Overview

- Two questions are asked that relate to information about care and appointments.
- Did this provider’s office give you information about what to do if your child needed care during evenings, weekends or holidays? (*Yes, No*)
- Some offices send patients reminders between visits about tests, treatment or appointments. In the last 12 months, did you get any reminders about your child’s care from this provider’s office between visits? (*Yes, No*)

Figure 31. Information About Care and Appointments



**Table 13. Access to Care**

ACCESS TO CARE	DEMONSTRATION GROUP		CONTROL GROUP	
<b>After Hours Care</b>				
Always	53.0%	-4.0 ↓	44.5%	+2.0 ↑
Usually	11.1%	-0.1 ↓	15.5%	+1.7 ↑
Sometimes/Never	35.9%	+4.0 ↑	40.0%	-3.7 ↓
<b>Appointment Wait Time</b>				
Same Day	67.6%	-3.9 ↓	66.0%	+0.3 ↑
1 Day	18.4%	+1.1 ↑	20.6%	+0.1 ↑
2 to 3 Days	9.8%	+2.2 ↑	10.4%	+1.4 ↑
4 to 7 Days	2.7%	+1.5 ↑	1.8%	-0.3 ↓
More Than 7 Days	1.53%	-0.8 ↓	1.2%	-1.4 ↓

\*Arrows denote the percentage-point movement in scores from year one to year two

### Key Findings

- Over eighty-six percent of parents in both the demonstration and control groups report that they are given information about after-hours care (**Figure 31**).
- Over sixty-five percent of parents in the demonstration and control groups report that they receive reminders between visits.
- The demonstration group rates both information about after-hours care and patient reminders more favorably than does the control group.
- Improvement was made in all areas other than the control group's ranking of information about after-hours care compared to year one.

### Single-Item Measures: Access to Care

#### Overview

- Two questions are asked that relate to access to care.
- In the last 12 months, how often were you able to get the care your child needed from this provider's office during evenings, weekends or holidays? (*Always, Usually, Sometimes, Never*)
- In the last 12 months, how many days did you usually have to wait for an appointment when your child needed care right away? (*Same Day, 1 Day, 2 to 3 Days, 4 to 7 Days, More than 7 Days*)

### Key Findings

- At least sixty percent of parents in both the demonstration and control groups report that they usually or always get needed care for their children on evenings, weekends, or holidays (**Table 13**).
- At least sixty-six percent of parents in both the demonstration and control groups indicate that they are able to get same-day appointments and at least eighty-six percent in both groups were able to get appointments the same day or next day when their children need care right away ( $P=0.02$ ).
- Access to after-hours care, compared to year one, has declined among

**Table 14. Overall Provider Rating**

ACCESS TO CARE	DEMONSTRATION GROUP		CONTROL GROUP		BENCHMARK
6 or under	4.2%	-1.6 ↓	7.3%	+0.4 ↑	3.2%
7 or 8	20.2%	-1.2 ↓	21.5%	-1.7 ↓	19.0%
9 or 10	75.4%	+2.5 ↑	71.2%	+1.3 ↑	77.9%

\*Arrows denote the percentage-point movement in scores from year one to year two

the demonstration group and risen among the control group.

- Compared to year one, fewer parents in both groups report having to wait more than 7 days for an appointment, though fewer parents in the demonstration group indicate that they are able to make same day appointments.

## Provider Ratings

### Overview

- Parents are asked to provide an overall rating of their child’s provider on a scale of zero to 10.
- Using any number from 0 to 10, where 0 is the worst provider possible and 10 is the best provider possible, what number would you use to rate this provider? (0-10)

### Key Findings

- Over three-quarters of parent in the demonstration group rate their children’s providers a “9” or “10”, while only seven in ten parents in the control group rate providers similarly (**Table 14**).

- Compared to year one, the demonstration group consistently rates their children’s providers more positively, while the control group’s provider ratings are more divergent (as both higher and lower categories grow).

- In spite of increases in the top category among both the demonstration and control groups, both groups continue to fall short of the 77.9% benchmark in the “9+” category.

### NS-CSHCN

The NS-CSHCN provides national and state level data on the prevalence of special health care needs and their impact on children and families<sup>29</sup>. This nationally representative survey of CSHCN ages 0 to 17 years has been conducted every four years since 2001. The medical home module from the 2005/2006 NS-CSHCN was used in the parent telephone survey for the Florida Pediatric Medical Home Demonstration Project. This module addresses whether or not practices

offer comprehensive care, coordinated care, family-centered care, and whether or not there is an established relationship with a specific provider.

### Analyses and Reporting

A standard NS-CSHCN SAS<sup>®</sup> scoring program was used to calculate the five medical home sub-component measures and the overall medical home composite score<sup>29</sup>. Children must meet the threshold criteria on all five sub-components, or legitimately have skipped one or more sub-components, to qualify as having a medical home. In other words, the overall medical home composite is the “percent of children who have a primary care provider AND usual sources for both sick and preventive care AND consistently get family-centered care from their doctors and other health care providers AND, if needed, receive effective care coordination AND, if needed, have no problems getting referrals”<sup>29</sup>. The “if needed” statements denote where some children may legitimately have

skipped a sub-component because the question did not pertain to them.

Florida data from the 2005/2006 NS-CSHCN is provided as a benchmark, where available<sup>30</sup>.

## NS-CSHCN Medical Home Sub-Components

### Overview

The NS-CSHCN includes five medical home sub-component measures as follows.

- Child has at least one personal doctor or nurse (*1 item*)
- Family centered care (*7 items*)
- No problems getting needed referrals (*2 items*)
- Usual sources for both sick and well care (*5 items*)
- Care coordination when needed (*6 items*)

### Key Findings

- Although over 90% of parents in both the demonstration and control group report having a personal doctor or nurse, both groups continue to fall short of the 91.6% Florida benchmark (**Figure 32**).

- Both the demonstration and control groups exceed the Florida benchmarks of 61.7% for the sub-component “Family Centered Care”.

- Although both the demonstration and control groups meet the Florida benchmark of 73.1% for the sub-component “No Problems Getting Needed Referrals”, both groups indicate a more difficult time getting referrals compared to year one.

- Over 80% of parents in the demonstration and control groups report a usual source of care for both sick care and well care.

- Similar to year one, parents in both the demonstration and control groups rate the sub-component “Getting Care Coordination When Needed” as their lowest aspect of care.

## NS-CSHCN Medical Home Composite

### Overview

Children qualify as having a medical home if they receive ongoing, coordinated, and comprehensive care, as determined by the five sub-component measures above. Compared with the other states,

Florida ranks 45<sup>th</sup> out of 51 states for the medical home composite measure (**Figure 33**)<sup>31</sup>.

### Key Findings

- At baseline, parents whose children are treated in Florida’s demonstration practices report that 47.9% of children meet the overall criteria for receiving ongoing, coordinated, and comprehensive care within a medical home (**Figure 33**). Both the demonstration and control practices surpassed for the national and Florida benchmarks by at least six percentage points.
- In year 2 both the demonstration and control practices again performed better than the national and Florida benchmarks. However, demonstration practices reported improvement in regards to the medical home composite (47.9% to 51.6%) while the composite score of the control practices decreased (52.5% to 49.1%).

Figure 32. NS-CSHCN Sub-Components

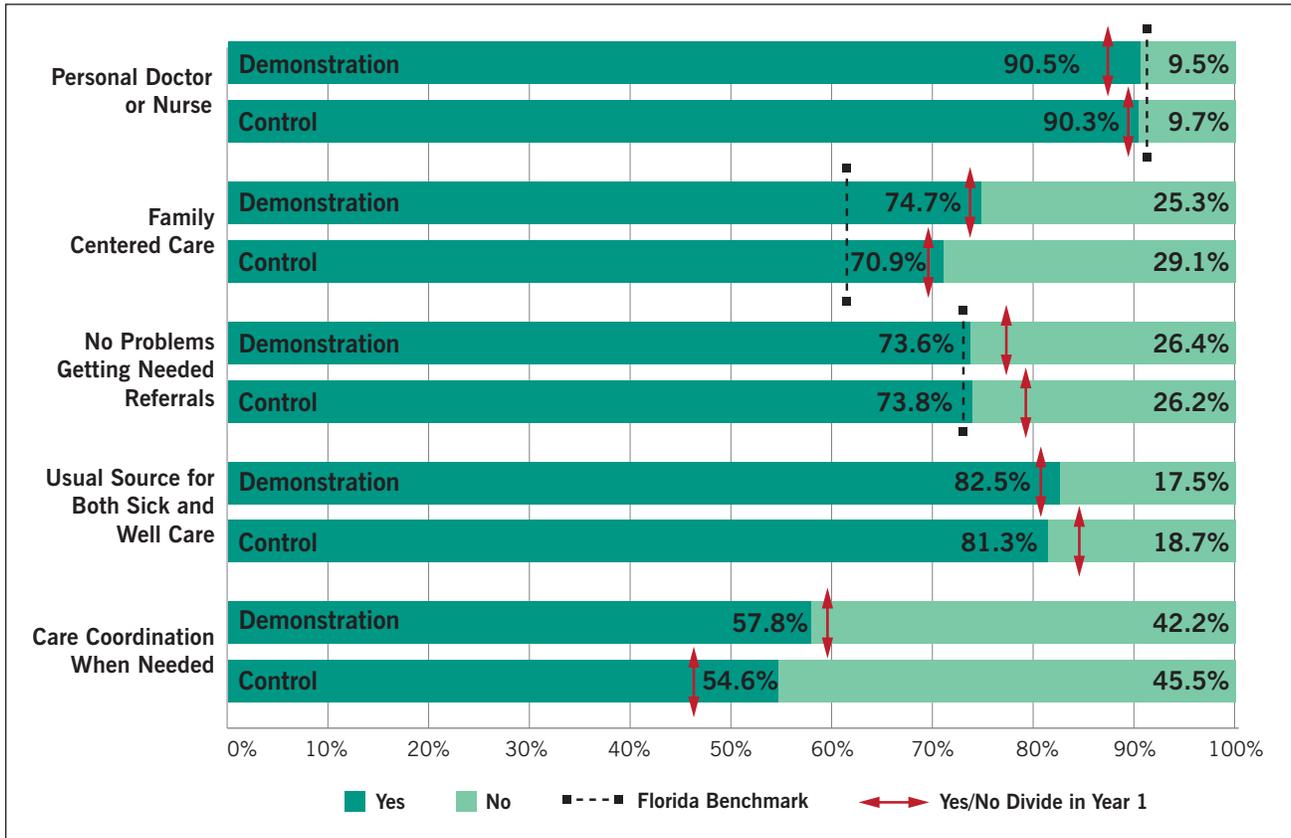
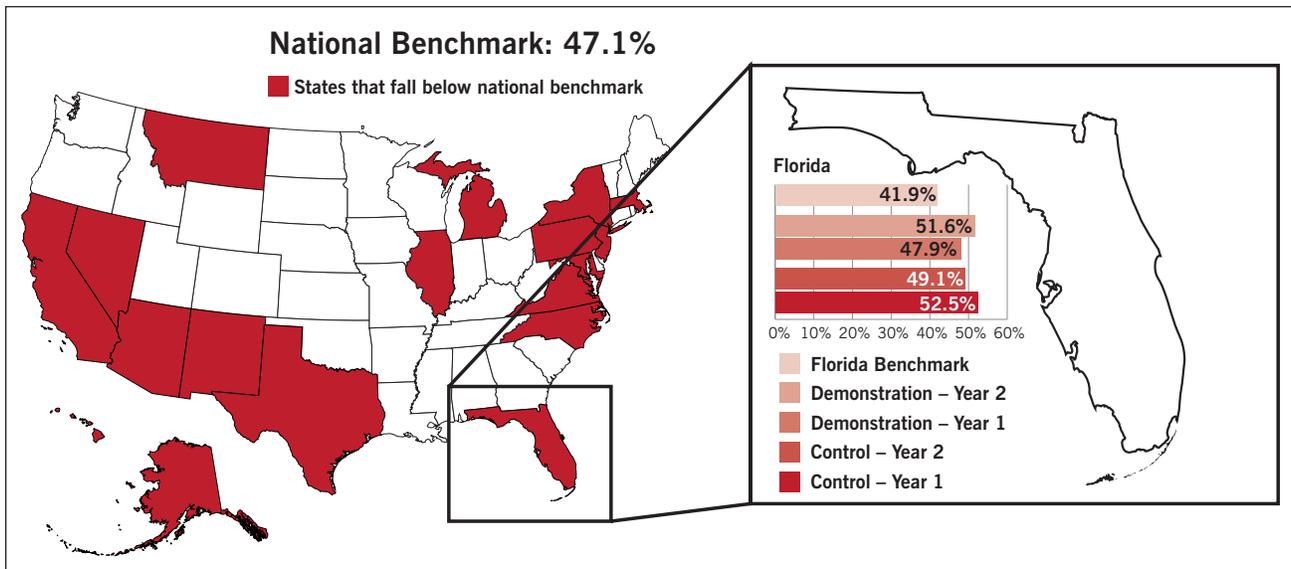


Figure 33. NS-CSHCN: Child Receives Ongoing Comprehensive Care in a Medical Home



# 7 Conclusion

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CHIPRA Quality Demonstration Grants provide states with several opportunities to track and improve the quality of children's health care in the U.S. Florida, along with 17 other states, is participating in the grant. There are five categories of the grant, and Category C is focused on evaluating provider-based models to improve health care delivery. Florida chose to implement the PCMH model and successfully recruited 20 demonstration practices to join the Florida Pediatric Medical Home Demonstration Project in 2011.

In 2012 the practices continued to make improvements in processes and outcomes.

The next steps of the project are critical to spreading the PCMH model and to determine its effectiveness. Round 1 has ended and the demonstration practices have realized success in many areas. Those practices will need to focus on sustainability and continued improvement. Several of the lead-physicians from Round 1 will be chosen to become statewide facilitators. Facilitators will be trained and available to help other pediatric practices across the State become medical homes. Evaluation of the Round 1 practices will continue. This is important to identify changes in long term outcomes that may have not materialized yet and to

determine if practices are able to maintain their short-term improvements. It is expected that a new group of practices will be chosen to complete a similar pediatric medical home demonstration project in the fall of 2013.

Finally, the Expert Group has endorsed the creation of a Pediatric Medical Home and Quality Improvement Leadership group. The group will be organized by the Florida chapter of the AAP and include members from around the state that can help to build PCMH infrastructure and influence practices and providers to adapt the PCMH model.

# 8 Abbreviations

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AAFP – American Academy of Family Physicians

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AAP – American Academy of Pediatrics

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AHCA – Agency for Health Care Administration

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CHIP – Children’s Health Insurance Program

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CHIPRA – Children’s Health Insurance Program Reauthorization Act

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CMS – Centers for Medicare and Medicaid Services

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CMSN – Children’s Medical Services Network

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CSHCN – Children with Special Health Care Needs

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DOH – Florida Department of Health

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EHR – Electronic Health Record

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EMR – Electronic Medical Record

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EQIPP – Education in Quality Improvement for Pediatric Practice

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FHKC – Florida Healthy Kids Corporation

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FQHC – Federally Qualified Health-Center

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HIT – Health Information Technology

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HMA – Health Management Associates

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Institute – Institute for Child Health Policy

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IRB – Institutional Review Board

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MBI-GS – Maslach Burnout Inventory - General Scale

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MHI – Medical Home Index

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NCQA – National Committee for Quality Assurance

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PCMH – Patient-Centered Medical Home

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QI – Quality Improvement

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QuIIN – Quality Improvement Innovation Network

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SD – Standard Deviation

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UF – University of Florida

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# Appendix 1. Quality

## 9 Demonstration Grantees

Twelve of the 18 CHIPRA Quality Demonstration Grantee states chose to implement the PCMH model as their provider-based model of care for Category C (**Table 15**). Across the 12 states, a mixture of instruments and methodologies was selected to measure medical home transformation at the practice level. Please refer to the 2011 evaluation report for further details<sup>7</sup>.

**Table 15. CHIPRA Quality Demonstration Grantee States**

STATE	CATEGORY	PROVIDER BASED MODEL FOR CATEGORY C
Colorado, New Mexico	C, E	School Based Health Centers
Florida, Illinois	A, B, C, E	PCMH
Maine, Vermont	A, B, C, E	PCMH
Maryland, Georgia, Wyoming	B, C, D	Care Management Entities
Massachusetts	A, C, E	PCMH
North Carolina	A, B, C, D	PCMH
Oregon, Alaska, West Virginia	A, B, C	PCMH
Pennsylvania	A, B, D	N/A
South Carolina	A, B, C	PCMH
Utah, Idaho	B, C, D	PCMH

*Note: Lead state listed first*

# 10 Appendix 2. 2012 Survey Tools

Table 16. Year Two Survey Tools		
STAKEHOLDER	SURVEY TOOL	CONCEPTS MEASURED
Core Clinical Team	Medical Home Index (MHI) <sup>12</sup>  TransforMED Practice Environment Checklist <sup>13</sup>  Practice Communication – Internal and External	<ul style="list-style-type: none"> <li>• Chronic condition management</li> <li>• Care coordination</li> <li>• Community outreach</li> <li>• Data management</li> <li>• Organizational capacity</li> <li>• Quality improvement</li> <li>• Adaptive reserve</li> <li>• Community knowledge</li> <li>• Cultural sensitivity</li> <li>• Health Information Technology integration</li> <li>• Patient safety culture</li> <li>• Practice staff engagement</li> <li>• Communication with community stakeholders</li> </ul>
	Qualitative Interview Guide	<ul style="list-style-type: none"> <li>• Internal processes</li> <li>• Patient interactions</li> <li>• Learning collaborative model</li> <li>• Lessons learned</li> </ul>
Practice Staff	TransforMED Practice Environment Checklist  Maslach Burnout Inventory – General Scale (MBI-GS) <sup>22</sup>  Job Satisfaction <sup>19</sup>	<ul style="list-style-type: none"> <li>• Adaptive reserve</li> <li>• Community knowledge</li> <li>• Cultural sensitivity</li> <li>• Health Information Technology integration</li> <li>• Patient safety culture</li> <li>• Exhaustion</li> <li>• Cynicism</li> <li>• Professional efficacy</li> <li>• Satisfaction with work environment</li> </ul>
Parents	Consumer Assessment of Healthcare Providers and Systems — PCMH (CAHPS-PCMH) <sup>26</sup>  National Survey of Children with Special Health Care Needs (NS-CSHCN) <sup>30</sup>	<ul style="list-style-type: none"> <li>• Getting timely appointments, care, and information</li> <li>• Provider-patient communication</li> <li>• Courteous and helpful office staff</li> <li>• Provider’s attention to child’s growth and development</li> <li>• Provider’s advice on child’s health and safety</li> <li>• Provider’s support of patient self-management</li> <li>• Family-centered care</li> <li>• Getting needed referrals</li> <li>• Usual sources for sick and well care</li> <li>• Care coordination when needed</li> <li>• Personal doctor or nurse</li> </ul>
Community Stakeholders	CMSN Care Coordinators  Specialists	<ul style="list-style-type: none"> <li>• Ease of communication</li> <li>• Information exchange</li> </ul>

# Appendix 3. Practice

## 11 Survey Panel Data

The Institute undertook a sensitivity analysis to show whether or not practice attrition affected survey results between years one and two.

Separate analyses were undertaken for the following two models:

Model 1: Year two data from 16 practices compared with year one data from 20 practices

Model 2: Year two data from 16 practices compared with year one data from the same 16 practices.

The sensitivity analysis for the MHI showed the following:

- **Under both models, all six MHI domain scores significantly improved in year two**<sup>x</sup>
- Data Management scores significantly improved between years under either model, but the magnitude of significance varied depending on model type (model 1,  $P < 0.05$ ; model 2,  $P < 0.01$ ).

Table 17. MHI Sub-analyses, by Year			
MHI	YEAR 1 (N=20)	YEAR 1 (N=16)	YEAR 2 (N=16)
MHI Domains (1-8)			
Data Management	4.10	3.97	5.44
Chronic Condition Management	4.01	3.99	5.18
Care Coordination	3.92	4.01	4.98
Organizational Capacity	3.77	3.85	4.91
Community Outreach	3.28	3.56	4.50
Quality Improvement	2.98	2.94	5.23
<b>TOTAL SCORE (0-100)</b>	<b>39.83</b>	<b>40.50</b>	<b>57.50</b>

<sup>x</sup> Note: The Community Outreach domain did not significantly differ between years when a two-tailed t-test was employed instead of a one-tailed t-test

# 12 Endnotes

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