

Florida Pediatric Medical Home DEMONSTRATION PROJECT EVALUATION 2014

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



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A DEEPER LOOK AT THE DATA

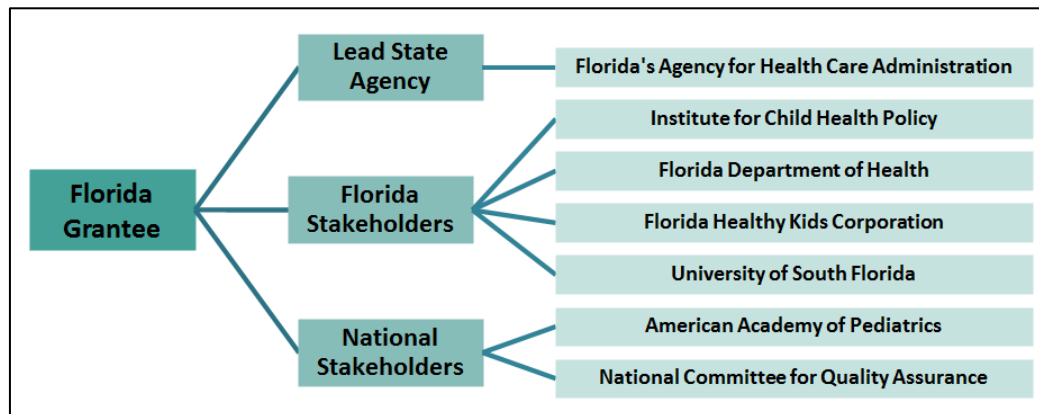
- Throughout this report there are several slides that take a closer look at findings from the Florida Pediatric Medical Home Demonstration Project
- These slides further explore the Patient Centered Medical Home (PCMH) model and its impact on patients and practice staff



CHIPRA QUALITY DEMONSTRATION GRANTS

- Feb 4, 2009—President Barack Obama signed Public Law 111-3, the Children's Health Insurance Program Reauthorization Act (CHIPRA)
 - Section 401(a)—Seven provisions created to improve child health quality activities for children enrolled in Medicaid and CHIP, including demonstration projects and standardized measures
- Sept 2009—CMS issued invitation for CHIPRA Quality Demonstration Grants
- Florida was awarded grants for categories A, B, C, and E

Structure of the Florida Quality Demonstration Grant



PCMH MODEL

- Category C: Evaluate provider-based models to improve health care delivery
 - Florida chose the Patient-Centered Medical Home (PCMH) Model as its provider-based model
- According to the American Academy of Pediatrics' (AAP) 1992 policy statement, a PCMH provides accessible, continuous, comprehensive, family-centered, coordinated, and compassionate medical care
- In 2002, the definition further expanded to include cultural effectiveness

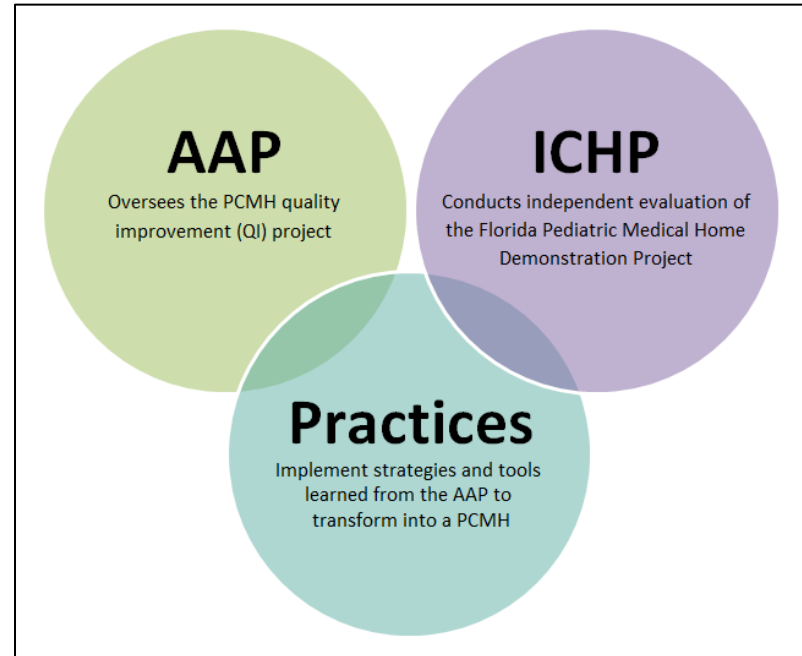
Joint Principles of the PCMH



QUALITY IMPROVEMENT (QI) PROJECT

- The Agency for Health Care Administration (AHCA) in 2011 designated the AAP and the Institute for Child Health Policy (ICHP) to implement and evaluate a PCMH QI project with select practices
- Two rounds of practices (Round 1 and Round 2) participated in the QI project

Project Roles



Project Evaluation Years				
Practice Round	Year 1	Year 2	Year 3	Year 4
Round 1	CY 2011	CY 2012	CY 2013	CY 2014
Round 2			CY 2013	CY 2014

Note: CY denotes calendar year.

AAP QUALITY IMPROVEMENT ACTIVITIES

- 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 provide high-quality, family-centered care for all children and youth, including those with special health care needs

AAP QI Activities



Note: Activities in green were added after the project had already commenced

PRACTICE DEMOGRAPHICS

ROUND 1

- To be eligible, practices had to accept Medicaid and CHIP and serve at least 100 children with special health care needs (CSHCN)
- Practice Attrition
 - Fifteen of the 20 practices made it to the final year of the project
 - One federally qualified health-center (FQHC) and three large-group, independent practices elected not to continue
 - One hospital-affiliated practice became a FQHC

Practice Demographics, Year 1

Practice Demographics, N=20

- **Practice Size:** Large Group (45%), Small Group (30%), Solo (25%)
- **Practice Type:** Independent (60%), Hospital-Affiliated Practice (30%), Affiliated with a University/Medical School (5%), FQHC (5%)
- **Practice Location:** Central (40%), South (35%), North (25%)
- **Practice Urbanity:** Urban/Suburban (100%), Rural (0%)

Multi-Stakeholder Evaluation Design

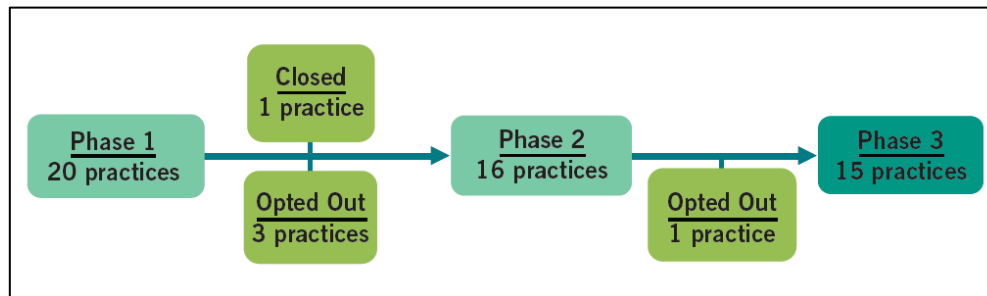


EVALUATION DESIGN

ROUND 1

- A four-year, longitudinal, multi-stakeholder evaluation was designed by the Institute to capture both short and long-term effects of PCMH implementation
- The core clinical team, practice staff, and parents were assessed at baseline and then annually thereafter with parent assessment ending in Year 3
- The community stakeholders were assessed at two time points (Years 2 and 4)

Practice Attrition Across All Phases



EVALUATION DESIGN & DEMOGRAPHICS, ROUND 2

- The second round of the demonstration project was launched in 2013; thirteen practices started this round
- The core clinical team for this round participated in the practice survey and performance measures in Years 3 and 4
- A cost study component was added to this round of practice evaluation to determine the cost of medical home transformation

Practice Demographics, Year 3

Practice Demographics, N=13

- **Practice Size:** Large Group (38%), Small Group (38%), Solo (23%)
- **Practice Type:** Independent (38%), Hospital-Affiliated Practice (38%), Affiliated with a University/Medical School (8%), FQHC (8%)

ROUND 1, CORE CLINICAL TEAM SURVEY

OVERVIEW

- A three-person core clinical team from each practice completed a year four survey in August 2014, using the same survey tools administered in prior years
- Teams included:
 - At least one lead physician
 - Other members in clinical/non-clinical positions
- Fifteen of the 16 (94%) demonstration practices returned surveys
- The Year 4 survey measured the following:
 - Medical Home Index (MHI)
 - Adaptive Reserve
 - Practice Environment
 - Staff Engagement
 - Communication with Community Stakeholders

MEDICAL HOME INDEX (MHI)

- Twenty-five themes across 6 domains were measured:

1. Organizational Capacity (7 themes) <i>Ex. Access to Medical Records</i>	4. Community Outreach (2 themes) <i>Ex. Community Assessment of Needs for CSHCN</i>
2. Chronic Condition Management (6 themes) <i>Ex. Care Coordination</i>	5. Data Management (2 themes) <i>Ex. Data Retrieval Capacity</i>
3. Care Coordination (6 themes) <i>Ex. Family Involvement</i>	6. Quality Improvement (2 themes) <i>Ex. Structures of Quality Standards</i>

- Practices chose a level (1-4) for each theme to indicate whether criteria was partially or fully met:
 - Level 1:** Basic Pediatric Care
 - Level 2:** Responsive Care
 - Level 3:** Proactive Care
 - Level 4:** Comprehensive Care
- Raw mean scores were calculated from the 25 themes and then transformed to a 100-point scale
 - A score of 100 = highest level of “medical home-ness”

KEY FINDING

Overall MHI Score for the Round 1 Demonstration Group		
MHI SCORE	YEAR 4 (N=15)	BENCHMARK ¹
MHI Mean [\pm Standard Deviation (SD)]	69.2 (\pm 17.7) (+3.7 ▲)	43.9 (\pm 15.8)
Median	67.0 (+2.7 ▲)	41.7

Note: Arrows denote the movement in mean and median scores from year three to year four.

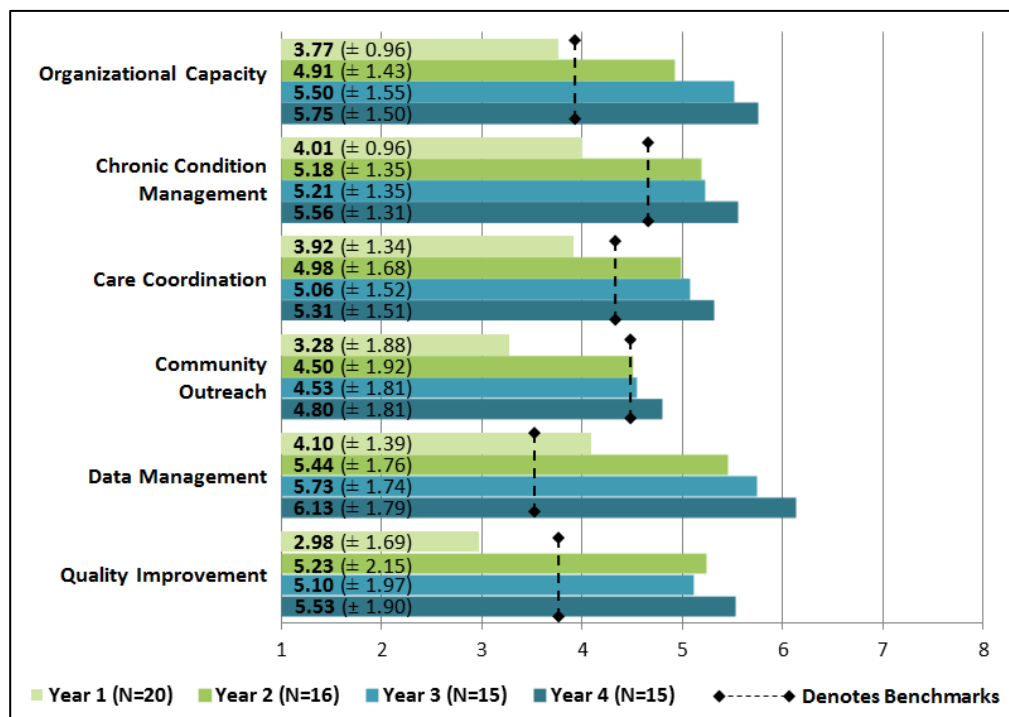
- Across all practices, the MHI mean score significantly increased from Year 3 to Year 4, exceeding the benchmark ($P < 0.05$) derived from Cooley et al. in 2003¹

¹ Cooley WC, McAllister JW, Sherrieb K, Clark RE. The Medical Home Index: development and validation of a new practice-level measure of implementation of the Medical Home model. *Ambul Pediatr.* Jul-Aug 2003; 3(4): 173-180.

KEY FINDINGS

- Three domains significantly improved from Year 3 to Year 4 ($P < 0.05$)
 - Organizational Capacity
 - Chronic Condition Management
 - Care Coordination
- Data Management
 - Year 4 had the highest MHI score across all years
- Quality Improvement
 - Most improved domain since baseline
 - Only domain to slightly decrease in Year 3, but again improved in Year 4

MHI Mean Scores for Florida Demonstration Practices (\pm SD)



Note: SD denotes Standard Deviation.

ADAPTIVE RESERVE

- A practice's **adaptive reserve** is a measure of a practice's ability to adapt and make changes in becoming a PCMH²
- Core clinical teams responded to 23 items about their practice's adaptive reserve
 - Five-point Likert scale used (1=strongly disagree to 5=strongly agree)
 - Raw mean score calculated and transformed to a scale of 0-1 (0=lowest)

² Nutting PA, Crabtree BF, Stewart EE, et al. Effect of facilitation on practice outcomes in the National Demonstration Project model of the patient-centered medical home. Ann Fam Med. 2010;8 Suppl 1:S33-44; S92.

KEY FINDINGS

Core Clinical Teams' Adaptive Reserve Score versus Benchmark

	DEMONSTRATION GROUP				BENCHMARK MEAN (\pm SD)
	MEAN (\pm SD)	MEDIAN	MINIMUM	MAXIMUM	
Adaptive Reserve	0.76 (\pm 0.11)	0.67	0.46	0.87	0.69 (\pm 0.35)

- The mean practice adaptive reserve score (0.76) is higher than the national benchmark of 0.69
- Slight, but insignificant, improvement (0.76 vs. 0.74) since Year 3 ($P > 0.05$)
- Variability exists among Florida demonstration practices in their self-reported abilities to adapt and make changes
- Practices' ability to transform to a PCMH has steadily increased since Year 1 of the project (0.70 to 0.76)

PRACTICE ENVIRONMENT

- The Practice Environment
Checklist measures the following four aspects of a practice's environment:³

1. **Community Knowledge** (4 items)
Ex. This practice works effectively together as a team with community organizations.
2. **Health Information Technology (HIT) Integration** (4 items)
Ex. The use of electronic medical records during patient visits interferes with the doctor-patient relationship.
3. **Cultural Sensitivity** (3 items)
Ex. Cultural issues are important in our interactions with patients.
4. **Patient Safety Culture** (3 items)
Ex. Staff feel like their mistakes are held against them.

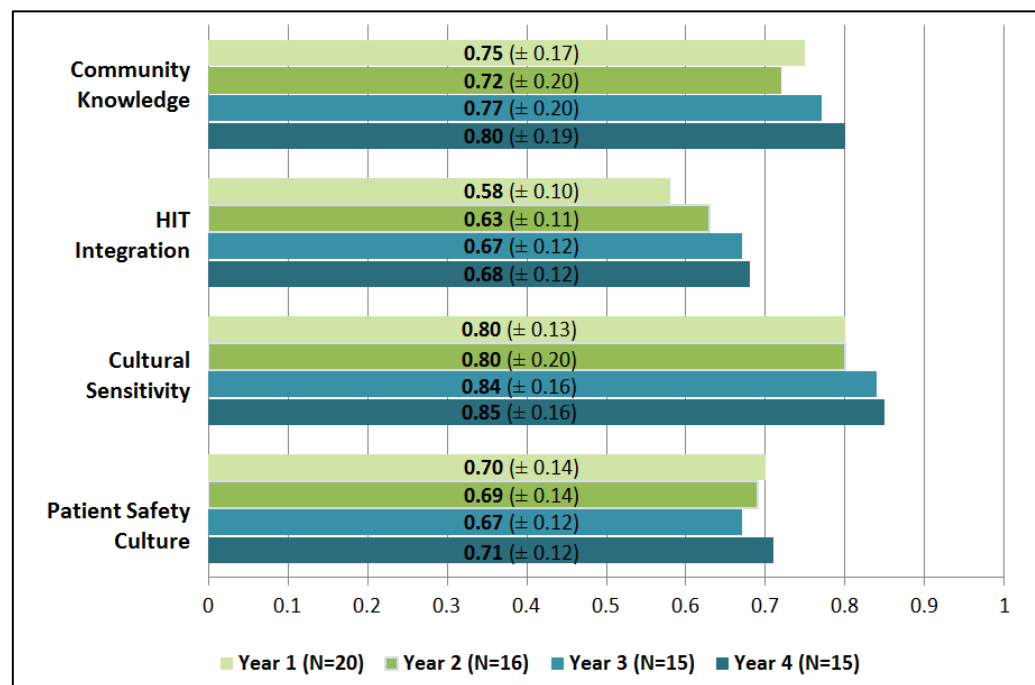
- Core clinical teams were asked to respond to 14 items about their practice's environment
- For each environmental factor, raw mean scores were calculated and then transformed to a scale from 0 to 1
 - Five-point Likert scale used (1=strongly disagree to 5=strongly agree)
 - Raw mean score calculated and transformed to a scale from 0-1 (0=lowest)
 - No benchmark data available

³ Jaen CR, Crabtree BF, Palmer RF, et al. Methods for evaluating practice change toward a patient-centered medical home. Ann Fam Med. 2010;8 Suppl 1:S9-20; S92.

KEY FINDINGS

- Mean domain scores are roughly unchanged from last year; Patient Safety Culture is the only domain with statistically significant improvement from Year 3 ($P < 0.5$)
- Demonstration practices continually score highest on the Cultural Sensitivity domain
- Across all years, Year 4 has the highest overall domain scores

Core Clinical Teams' Practice Environment Mean Scores (\pm SD)

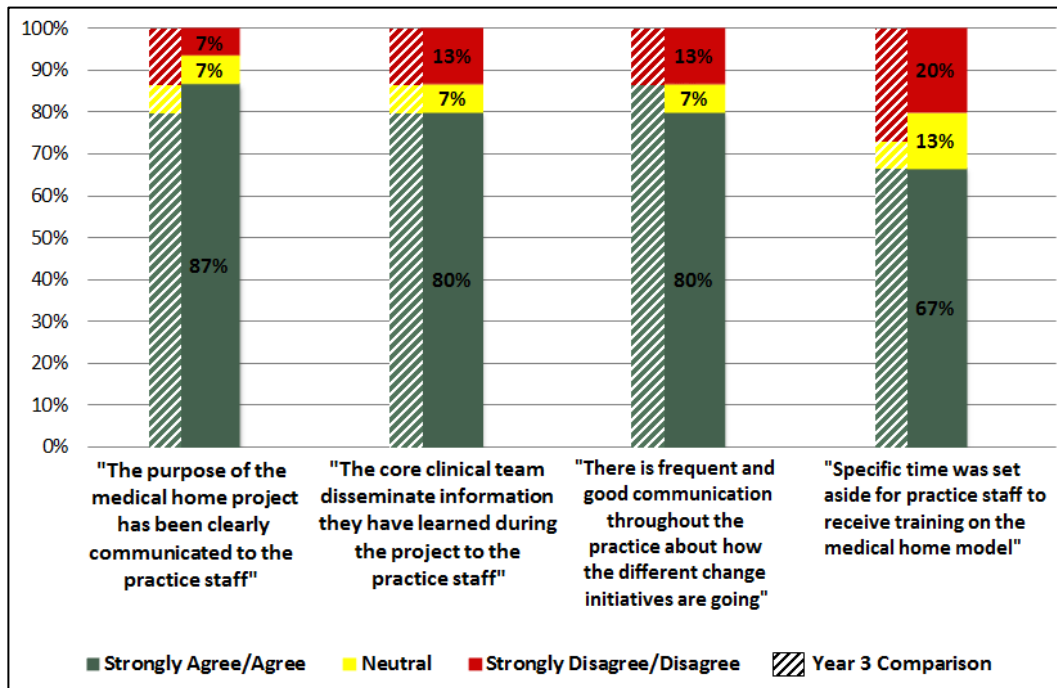


PRACTICE STAFF ENGAGEMENT

- Survey included questions intended to measure the success of the medical home initiative by gauging practices' internal communication and understanding of and engagement with the medical home project
- One member of the core clinical team was asked to respond to items regarding staff engagement and whether or not the medical home project has improved staff's jobs
 - Five-point Likert scale used (1=strongly disagree to 5=strongly agree)

KEY FINDINGS

Year 4 Core Clinical Teams' Perceptions of Practice Staff Communication



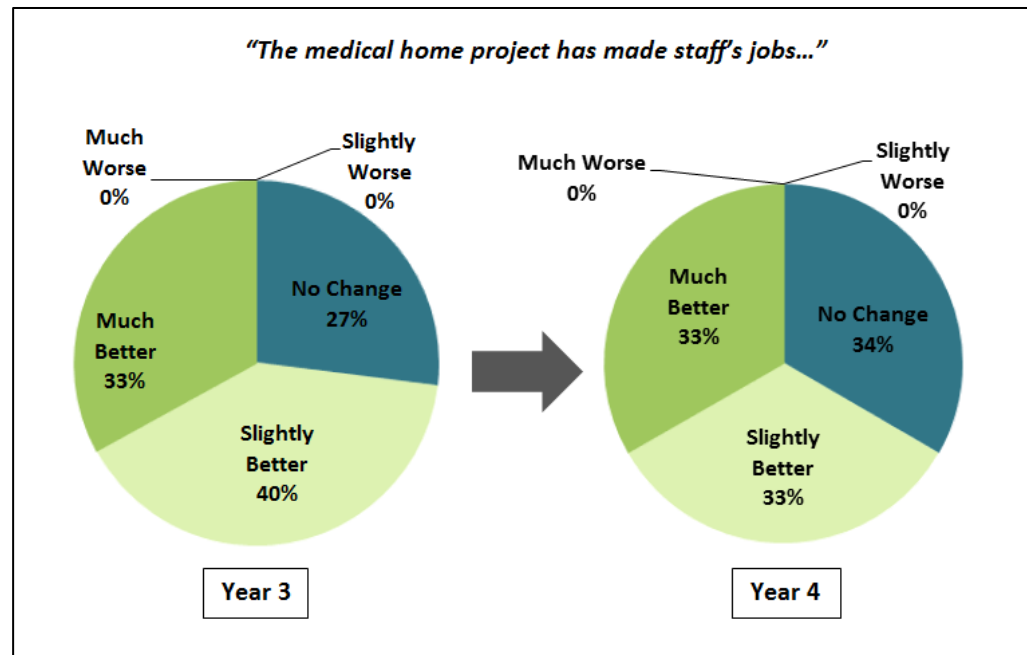
Note: Totals may not equal 100% because of rounding.

- Eighty-seven percent of the core clinical teams agree they communicate the purpose of and disseminate information about the medical home project to staff
- Twelve practices (80%) in Year 4 report "frequent and good communication" about the different medical home initiatives, a decrease from Year 3 (87%)
- Two-thirds of practices allot time for training staff about the medical home, suggesting room for improvement

KEY FINDINGS

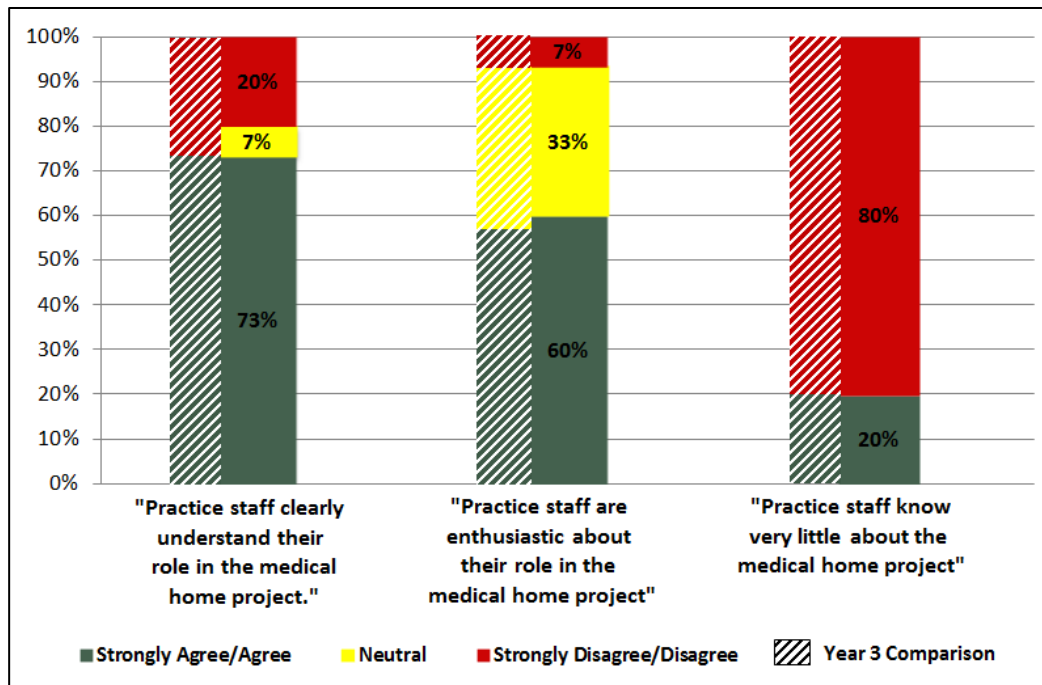
- In Year 4, no difference is observed between the percentage of core clinical teams who think that staff's jobs are "much better" (33%) and those who think staff's jobs are only "slightly better" (33%)
- Thirty-four percent report no change in staff's perception of job satisfaction in Year 4, an observed increase from Year 3

Year 4 Core Clinical Teams' Perceptions of Staff Job Satisfaction



KEY FINDINGS

Year 4 Core Clinical Teams' Perceptions of Practice Staff Engagement



- As seen in Year 3, nearly three-fourths of the core clinical teams in Year 4 perceive that practice staff understand their role in the project
- Over half report that staff are enthusiastic about their role in the project
- In Year 4, 20% report that staff lack knowledge about the project, indicating room for improvement

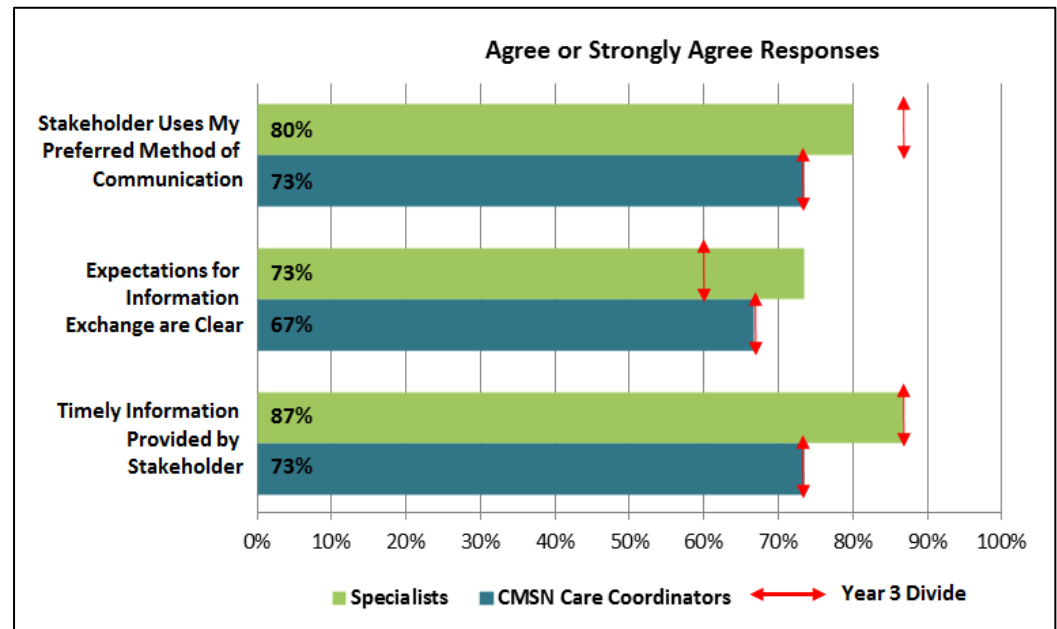
COMMUNICATION WITH COMMUNITY STAKEHOLDERS

- The core clinical team survey included questions to measure practices' interactions with community stakeholders, specifically specialists and Children's Medical Services Nurse (CMSN) Care Coordinators
- One member from each core clinical team was asked to respond to three items regarding information exchange with community stakeholders
 - Five-point Likert scale used (1=strongly disagree to 5=strongly agree)
- In addition, the core clinical team member was asked how often stakeholders provide all requested information to the practice and vice versa

KEY FINDINGS

- Practices report that specialists “use their preferred method of communication” more often than CMSN Care Coordinators
- Practices also report that specialists used their preferred method of communication more often in Year 3 than in Year 4

Year 4 Ease of Communication with Community



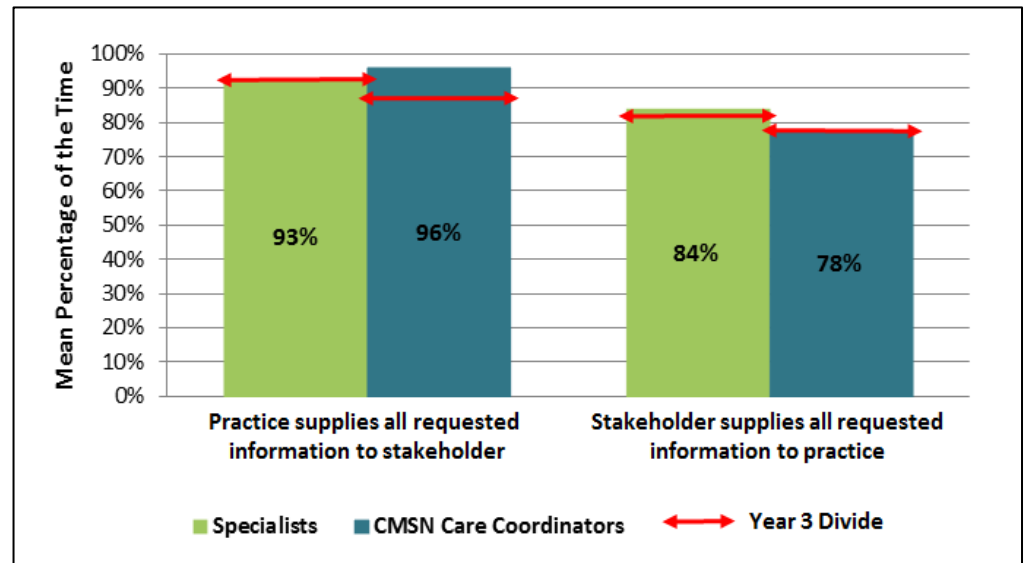
Note: The Year 3 divide denotes the Year 3 percentage.

- Over two-thirds of practices agree that “clear expectations for information exchange” exist for both specialists (73%) and CMSN Care Coordinators (67%)

KEY FINDINGS

- Practices report supplying “all requested information to stakeholders” over 90% of the time, with improved communication reported for CMSN Care Coordinators in Year 4
- Practice scores for “stakeholder supplies all requested information” remain roughly unchanged from last year

Year 4 Information Exchange between Practices and Stakeholders



Note: The Year 3 divide denotes the Year 3 percentage.

ROUND 2, CORE CLINICAL TEAM SURVEY

OVERVIEW

- Round 2 practices participated in a shortened version of the core clinical team survey, which only included the MHI survey⁴
- The three-person core clinical team from each practice completed the survey in September 2014
- One hundred percent of the demonstration practices returned surveys
- The Year 4 survey included the following:
 - Medical Home Index (MHI)
 - Practice profile

⁴ Round 2 core clinical teams were asked the same MHI survey items as Round 1. Analyses and reporting methods for the 25 themes across the 6 MHI domains have been described previously in this report.

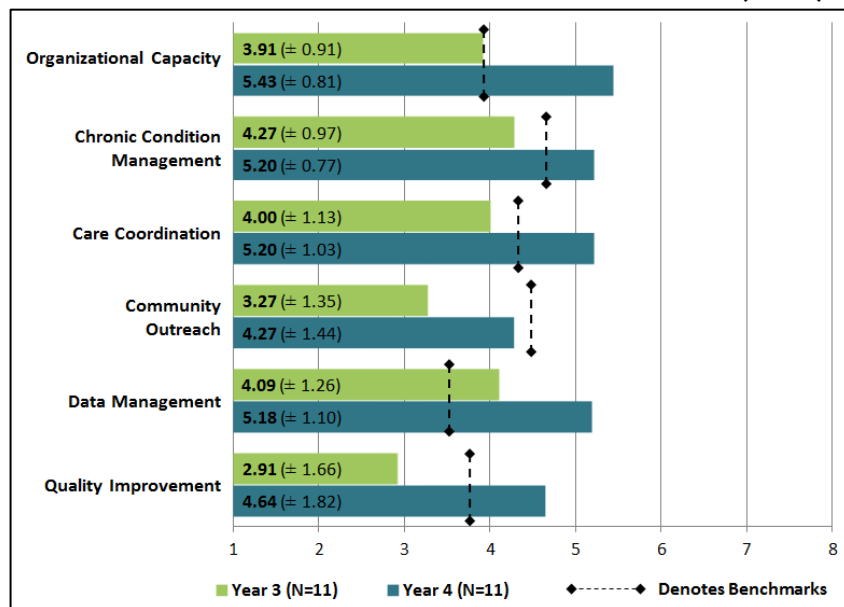
KEY FINDINGS

- The overall MHI mean score (across all domains) significantly increased from Year 3 to Year 4 ($P < 0.05$)

Overall MHI Score for the Round 2 Demonstration Group			
MHI SCORE	YEAR 3 (N=11)	YEAR 4 (N=11)	SIGNIFICANCE
MHI Mean [\pm Standard Deviation (SD)]	48.8 (\pm 11.1)	64.3 (\pm 8.62)	$P < 0.05$

- All of the MHI domains significantly increased with improved scores from Year 3 to Year 4 ($P < 0.05$)

MHI Mean Scores for Round 2 Demonstration Practices (\pm SD)



ROUND 1, CORE CLINICAL TEAM INTERVIEW



OVERVIEW

- A telephone interview was conducted during July and August 2014 with the 15 core clinical teams participating in Year 4 of the project
- Interviews averaged 36 minutes
- The following domains were included:
 - Ability to Make Changes
 - Successful and Challenging Changes
 - Impact of Changes on Stakeholders
 - Innovations and Resourcefulness
 - Translation of PCMH concepts
 - Measuring Transformation Success
 - Measures of Success
 - Final Goals
 - Room for Improvement
 - Future Plans
 - Medical Home Community and Neighborhoods
 - Parent Partner Experience
 - Teamwork and Practice Efficiency

ABILITY TO MAKE CHANGES

Successful Changes

- All practices report examples of implemented changes, but the degree of change varied from practice to practice
- Successful changes include ensuring the continuity of care for patients, maintaining meetings as a PCMH team, continuing patient surveys, creating policies to improve workflow, and using registries to better track immunizations and children with chronic conditions

“One thing that’s helped with that is we actually implemented a new office management system and an electronic medical record along with that...Which helps us track those patients even better than we were doing before, and now each provider has their own schedule. So those most complicated patients will get on someone’s schedule and they’ll maintain on that schedule with double-slotted appointments so they have extra time with the provider... we’re seeing some improvements in the patient care that we deliver just because we have more information at our fingertips more easily.”

Characteristics for Maintaining Changes

- EHR implementation
- Staff buy-in
- Improved teamwork and communication

“The EHR system, it was a transition for everyone but...I think they...all embraced it...I know for myself, certain components of it are actually more efficient [...] And then...we would try to implement staff meetings and try to make sure everyone’s on the same page as far as...different issues that we want to try to resolve or make sure that our patients are getting their vaccinations or make sure our patients are coming in for their well-child visits...”

“The staff, everyone, they are physically on the same page[...] And now it’s – I guess everyone can mention but we talk about there’s no suggestions that are you know, wrong – or everybody has um – wants to have a positive input or discuss things that are not working much more easily than before.”

ABILITY TO MAKE CHANGES

Obstacles to Maintaining Changes

- Different challenges were observed depending on practice size
- Larger practices report organizational challenges
- Smaller practices indicate not having enough resources or staff to maintain changes
- High staff turnover rate also reported as a barrier to maintaining changes

"It's not like a small practice where you can make a change and kind of everybody's in the same room and they know about it. If you don't actively stay on top of it, it starts to dwindle and you have to keep sort of stoking the fires of these things to keep them going."

"We're a really small practice, we don't have the payroll or the time... Everyone has to do a little bit of everything and because of that it's hard to keep up with some stuff."

"[...] I started in late September last year as the practice administrator. We have all new staff...when I got here in late September the longest anyone had been here was about six months, with the exception of...one of our RN coordinators who had been here about a year..."

Challenging Changes

- Changes that were too difficult or not feasible to maintain included the following:
 - Closing the referral loop
 - Maintaining parent involvement
 - Improving communication with specialists
 - Care coordination
 - Huddles

"I would say probably that's one of the more discouraging things is...having the initiative to do referral wraparound and finding that the most difficult thing is to get feedback from the specialists...we still struggle with that a lot. There's quite a bit of processing that has to go on our side in order to...document the referral, to identify referrals that are past due, to do the outreach, to get outreach to the parent. It's probably the one piece of this that at this point, feels like a lot of work for almost no result [...]"

"The hardest part was the clinical summaries after their visit [...] We found it a little bit challenging because our providers sometimes were not able to finish the notes...right after they leave. That's one of our biggest challenges."

ABILITY TO MAKE CHANGES

Impact of Changes on Stakeholders

- Clinic changes have resulted in positive impacts seen by both families and staff
- Despite practices' challenges, core clinical teams report increased staff communication and involvement, improvements in patient satisfaction, higher quality of care, and improved health outcomes
- Some practices indicate an improvement in communication with specialists; however, the majority report no change in how their practices interact with specialists

"Specialists are really a problem and I always go back to those tools that they gave us at the learning session about the letters to specialists and what you're responsible for and what we're responsible for. Man, they sounded great when you're looking at them, but to try to draft a letter like that and meet with a specialist and explain that to them is really hard."

"I think we...have a different expectation on our side around communication...the medical home empowers you as a primary care provider to expect more there [...] I wouldn't necessarily say that we've seen great strides in specialists meeting that expectation [...] Which is discouraging..."

"Now [staff] have seen some of the benefits of becoming a medical home. When we first started, there was a lot of pushback and complaints. Now everybody seems to see that there's a lot of benefit. It's made the office more efficient."

"I think it's good for the staff, too, when they hear parents saying how easy we make things for them. Sometimes they forget that they have to come back for a follow-up, but we're calling them ahead of time. We're getting them before they're out the door. We've made their life a little easier so I think that there's something to be said for getting that kind of a positive feedback back."

"I think [parents] responded well. Most of them have noticed, and commented, on [the] ease of getting appointments...and then the use of waiting lists...we're getting less calls now, as far as afterhours [and] less ER visits."

"We've noticed [our] asthmatics are doing better. They are more empowered. They know when to give their steroid [and] when to call...As far as our disease acute and chronic care, I think, especially our chronic care patients, have noticed a lot of improvement in what we're doing."

INNOVATION AND RESOURCEFULNESS

- Several practices report translating medical home strategies to other areas in their practice; however, larger practices report more innovation than smaller practices
- Examples of innovation include:
 - Using action plans to focus on oral health, obesity, autism, diabetes, breastfeeding, nutrition, etc.
 - Enlisting a campaign to increase specific immunizations
 - Administering short versions of the CAHPS survey on an iPad, in multiple languages, to collect patient satisfaction data

"A couple of years ago we created an action plan. We spread [what we learned] a little bit to when we did our fluoride program and started doing fluoride varnish. To prevent dental caries we do the fluoride varnish [and] we do a lot of prevention discussion when we talk to [parents]."

"Right now we're working with pharmacy and we're going to do a project just working with our patients. A lot of our patients are on ten, fifteen, twenty medications, and they are going to review charts, look at dosages, look at interactions, [and] teach parents."

"I think some of the stuff gets kind of contagious when you start working on stuff – but [Core Team Member] on the adult side, just applied for a grant to increase adult immunization and pneumococcal vaccinations."

PARENT PARTNER EXPERIENCE

- About half of the practices report having a parent partner
- Practices without a parent partner indicate internal and external challenges to finding/keeping a partner

"We include [our parent partner] in our meetings, ask for any ideas or input which she's a big help with [...] I chose her because...I found her very easy to work with. She's very intelligent. She's going to school now for social work [...] And she's a very outgoing person."

"She's so enthusiastic about putting the list of our community resources together and sends us emails, but then there are times too where she's unable to participate because of some health issues."

"The first one, she came to the meetings, and at that time we were new to it and she was new to it. With this parent partner, she knows what our goals are. We're able to explain [goals] better. We were able to define a role and we were ready for, as far as the changes, getting real feedback on how [parents] feel honestly."

"Well, I don't think that we clearly understood the purpose of it. It was very difficult to make something happen. It was really hard to understand the concept of a parent partner. I think that took us a while to wrap our brains around."

"We don't have as much parent involvement probably as I'd like to have. It's just hard to kind of make that work in a big practice."

"No, [...] we had such a bad experience the first go round that – just us trying to pick the right person who is insightful enough to be helpful [...] Some of our adult patients might be more insightful into clinic operations and stuff like that than some of our poor Medicaid patients that are operating at a level of trying to figure out how to take the bus to get here, and what are they going to feed their kid tomorrow...to have them come and show up and give insight into our clinic operation, they're – again, a lot of them are kind of in survival mode in their lives."

MEDICAL HOME NEIGHBORHOOD AND COMMUNITY

- All of the practices gave examples of who they considered to be a part of their medical home community
- The most frequently mentioned entities were specialists, schools, and hospitals
- Other entities include CMSN, daycares, foster care organizations, mental health organizations, and the YMCA
- Ease of interaction with these entities varied by practice

"Our patients, our providers, the resources that we have in the community...how to access them and the specialists...that would be our medical home community."

"The relationship with schools is pretty easy...we have a very high volume of complex children. So that's something that happens almost on a daily basis. We get something from a school...whether it's the transportation need or...some requirement for additional medication or treatment or something needed from the school, whether it be a you know, a special needs school or a regular public school, but our – one of our doctors actually is the medical director that gets all the [County] transportation requests here. So he has a really good relationship with the school system."

"[...] driven by the improvement in care...that we're trying to effect through healthcare providers...mental health has taken a much larger role in our medical home than it did prior to the medical home, but I think just the whole community resourcing process has really caused us to be more aware of the resources that are out there. We absolutely, as part of our medical home process, are...asking parents about any additional needs they have that's outside kind of the traditional medical realm, and then our case managers are really charged with...having community resource lists that are up to date and available for these folks. So it definitely...makes us more aware of outside resources, not traditionally medical, that we can refer folks to."

EFFECTIVE TEAMWORK

- Practices report either having experienced great teamwork from the start or transitioning to becoming a more effective team
- The majority of practices report a significant improvement in staff communication as a result of the project

"I think that the staff [has] changed...Now they work more as a team, now they communicate a little bit better between them, [and] now they're prepping for the patients. They have to prep in anticipation so they need to know what the patient needs."

"[...] I think we've recognized that there are many different avenues in which to communicate with one another [...] I think that...our communications have improved. We're having more team meetings [...] We have...a nurse manager who recognizes that...to work effectively we have to work as a team, and...then we have staff that are really willing to kind of be part of that team so yeah, I think we're working better as teams you know..."

- Nine out of 15 practices indicate having clinical staff who work at the "top of their license"; the remaining practices hope to add more licensed staff to become more efficient

"[...] I would say that the medical staff are working near the top of their license. Our case managers absolutely, they are [...] I think that we are about to...embark on...what will hopefully be...a process of engaging our staff at even a higher level."

"No, I don't think so. I would have liked to have seen the nursing staff step up a little bit more and try to make sure that patient flow was going well, trying to find out when patients who were medically complex all the time...but just comparing them with nursing staff that we previously had...there are certain nurses that will come to me saying, 'you need ... this ... that.' So I think for the most part...it could be better."

PRACTICE EFFICIENCY

- Many of the practices report being more efficient since implementing the PCMH model
- The majority of practices, however, report inefficiency in managing time, since providing a higher quality of care requires more time

"I think we've become more efficient. We're not seeing more patients. That's for sure, but I think the quality of care it's – it's where our efficiencies are reflected the most."

"Do I think we've been more efficient in that sense? [...] I think it's been more comprehensive. With the changes with the EMR [...] I think we've increased our vaccination rates because we're able to see vaccinations on any child that comes in. It's very easy to do. I think we are able to provide care in that sense better. I think efficiently our time in the room or with the patient has not changed at all. It has increased your work time outside of the room or outside of patients because there is a lot more documentation..."

"You end up spending a lot more time. But if you hadn't asked the questions, you probably wouldn't know that that was going on."

"I think we're more efficient at adapting the change and doing quality improvement cycles on kind of the concept of looking at our performance more efficiently. So I would say that is probably the efficiency metric that I can point to. I think doing more for the patient and providing better quality isn't usually something that takes less time. It takes more time..."

PATIENTS IN THE PATIENT-CENTERED MEDICAL HOME



Background

- Confusion exists on how patient-centered care should be implemented during a PCMH transformation
- Attention is often focused on practice infrastructure and non-patient-centered outcomes
- This analysis seeks to understand how practices modify their care to be “patient-centered”

Method

- Use of qualitative interviews with clinical teams from the demonstration practices over 3 years
- This analysis looked at several aspects of patient-centered care:
 - The presence of parent representatives
 - Systems in place for patient feedback
 - Understanding the role of patients in practice changes
 - Perceptions of patient experiences

Results

- While initially optimistic, few practices managed to implement and consistently maintain a parent representative or patient feedback system by year 3 of the transformation
- Practice change was more likely to be informed by characteristics of the patient population as a whole
- Clinicians felt their patients’ experiences had overall improved

Conclusion

- The paths to patient engagement are not clear, and providers often face barriers to implementation
- There is a need for a model of patient participation; however, templates cannot be “one-size-fits-all” solutions
- Patient-centered outcome tools that can be effectively implemented in practices need to be developed, while payors and medical home certifying organizations need to recognize their importance and provide incentives for this data collection

WHAT IS SUCCESS IN THE PCMH?



Background

- The PCMH is a model being touted as a possible way to contain costs, increase access, and improve health for children
- The PCMH can be defined in a number of ways
- The PCMH can be measured in a number of ways
- Due to these variations, the study sought to understand what practices considered success and how they knew they achieved that success

Method

- Use of qualitative interviews with clinical teams from the demonstration practices in Years 3 and 4
- This analysis used questions that asked what the practices considered success in the project
- Answers were analyzed using the constant comparison method
- Answers were compared based on practice type

Results

- Practices report increased patient satisfaction, better communication and patient understanding, and improved patient care/disease management as measures of success
- Few practices said that NCQA recognition meant success
- Practices noted that instead of viewing the PCMH as an objective they met, they viewed PCMH as an ongoing process
- Insurance recognition and buy-in were also viewed as markers of success

Conclusion

- This study highlights the fact that much about the PCMH is not standardized including the definition, the measures, and the benchmark a practice reaches that signal success in the transformation
- The results also suggest that states should be cautioned against using only one marker of success, such as the NCQA recognition, as most practices did not use that as their measure of success due to costs of applying for recognition

ROUND 1, PRACTICE STAFF SURVEY



OVERVIEW

- Staff surveys were administered between June and August 2014
- All staff members, including physicians, were invited to participate in the staff survey
- Four hundred and fifty-seven surveys were distributed and 173 were returned
- Across practices, the average response rate was 51%, with a minimum response rate of 0% and a maximum response rate of 100%
- The Year 4 staff survey measured the following:
 - Adaptive Reserve
 - Practice Environment
 - Job Satisfaction
 - Job Burnout

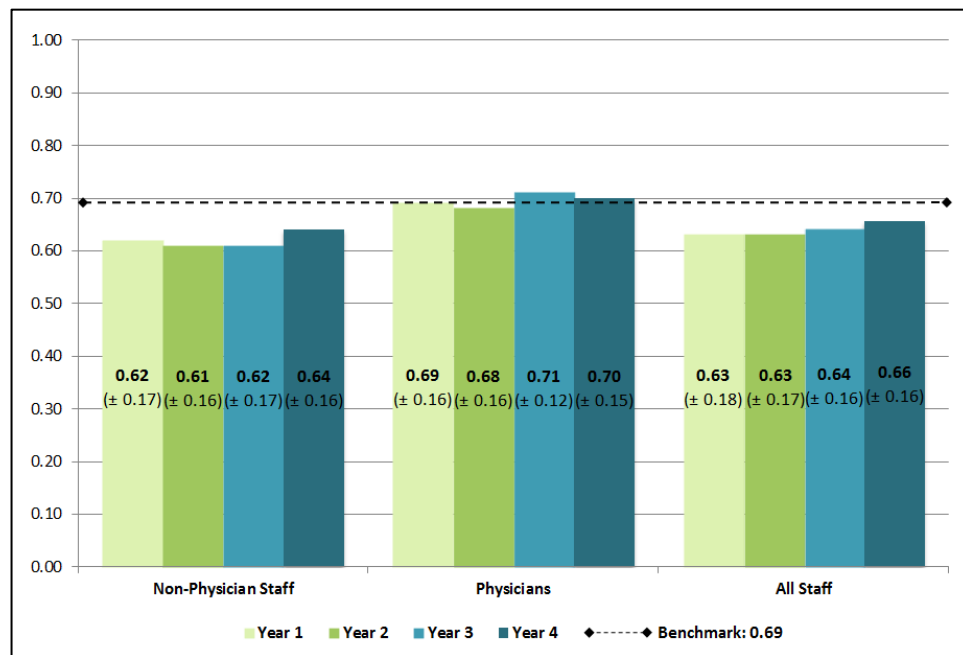
ADAPTIVE RESERVE

- All staff members were 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 p. 16)

KEY FINDINGS

- The mean adaptive reserve score reported by all staff members in Year 4 (0.66) is slightly higher than Year 3 levels, and remains below the national benchmark (0.69)
- Over all four years, non-physician staff report a lower adaptive reserve score than physicians
- Physicians' scores (0.70) slightly exceeded the benchmark in Year 4

Staff Adaptive Reserve Score (\pm SD), by Year and Staff Type

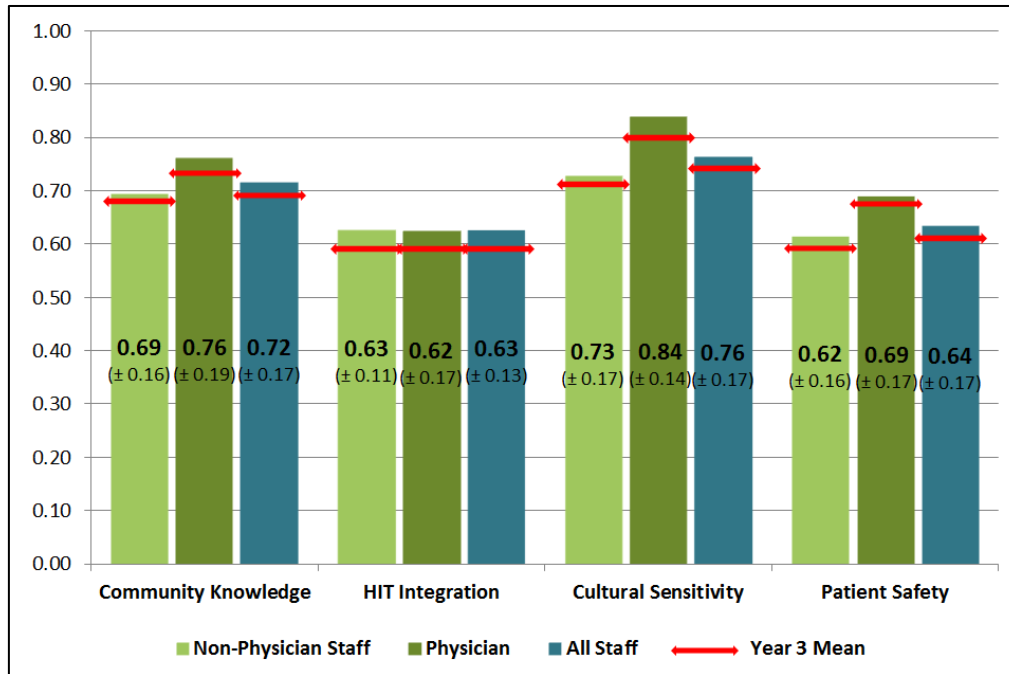


PRACTICE ENVIRONMENT

- All staff members were 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 p. 12)

KEY FINDINGS

Staff Practice Environment Mean Scores (\pm SD)



- As seen in Year 3, all staff rate their practice highest for cultural sensitivity, followed by community knowledge, patient safety culture, and HIT integration in Year 4
- In all four years, physicians rate their practice's cultural sensitivity significantly higher than non-physician staff, but do not significantly differ with respect to HIT integration

JOB SATISFACTION

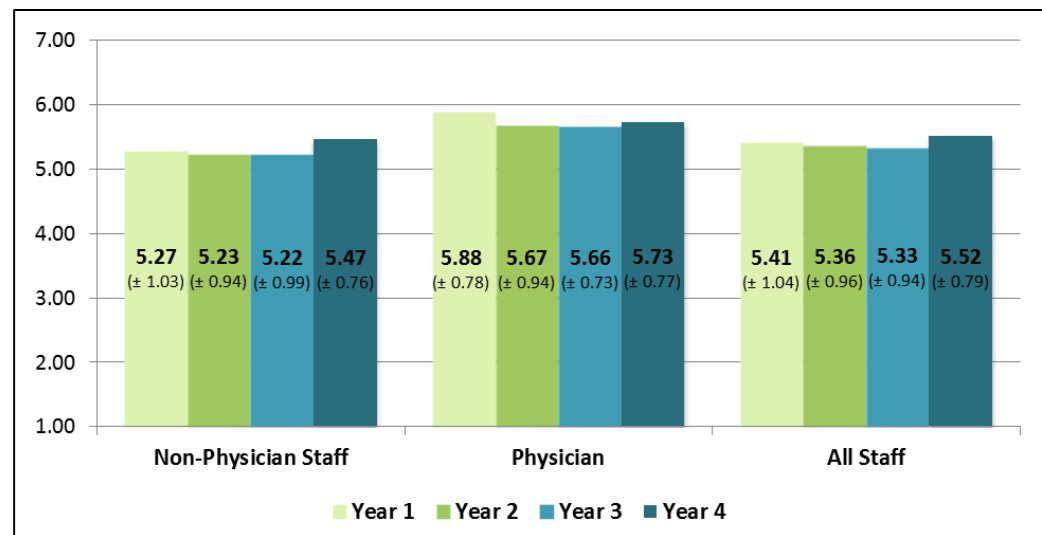
- Warr's 10-item job satisfaction scale was included on the staff surveys⁵
- Survey items cover factors ranging from work hours to peers
- All items rated on seven-point Likert scale (1=extreme dissatisfaction to 7=extreme satisfaction)

⁵ Warr P, Cook J, Wall T. Scales for the Measurement of Some Work Attitudes and Aspects of Psychological Well-Being. J Occup Psychol. 1979;52(2):129-148.

KEY FINDINGS

- In Year 4, both physician and non-physician staff have a combined 10-item mean score of 5.52, indicating continued satisfaction with their working conditions
- The job satisfaction score has increased overall from Year 3 to Year 4

10-Item Mean Job Satisfaction Scores (\pm SD), by Year and Staff Type



JOB BURNOUT

- Job burnout was assessed on the staff survey by the Maslach Burnout Inventory – General Scale (MBI-GS)⁶
- Staff were 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 burnout is reflected in high scores on the exhaustion and cynicism subscales and low scores on the professional efficacy subscale

⁶ Maslach C, Jackson S, Leiter MP. Maslach Burnout Inventory Manual, Third Edition: Consulting Psychologists Press; 1996: www.mindgarden.com.

KEY FINDINGS

- As seen in Year 3, physician and non-physician staff report average burnout levels of exhaustion, cynicism, and professional efficacy in Year 4
- Although not shown here, physicians report statistically significant higher rates of exhaustion than non-physician staff

Cut-off Thresholds for the MBI-GS Subscales

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

Staff Job Burnout

BURNOUT DOMAIN	STAFF MEAN (\pm SD)		BURNOUT RATING
Exhaustion**	2.07 (\pm 1.45)	(-0.22 ▼)	Average Burnout
Cynicism	1.10 (\pm 1.13)	(-0.15 ▼)	Average Burnout
Professional Efficacy	4.90 (\pm 0.88)	(+0.11 ▲)	Average Burnout

Note: Arrows denote the movement in mean scores from Year 3 to Year 4.

** Exhaustion significantly decreased from Year 3 to Year 4 in a paired, one-tailed test at the 5% level.

THE IMPACT OF STAFF JOB SATISFACTION ON MHI



Background

- Health care management can benefit from understanding the impact of staff job satisfaction and burnout on health outcomes
- The well-being, efforts, and engagement of the staff can help improve the quality of care provided at a clinic or practice
- This study assesses the causal impact of staff job satisfaction and job burnout at pediatric practices on the Medical Home Index (MHI)

Method

- 3 years of longitudinal survey data.
- Respondents were staff and physicians working in 15-20 Florida pediatric practices
- 170 staff members completed the staff survey in year 1; 208 in year 2; 189 in year 3
- The study uses “adaptive reserve” as an instrumental variable for the two-stage least squares regression.

Results

- Staff job satisfaction impacts 2 domains of MHI: Quality Improvement and Chronic Care Management
- An increase in Overall Job satisfaction causes Quality Improvement to increase by 81.78 points (on a 100-point scale, $P = 0.05$)
- Older age of the staff was associated with decreases in the two MHI domains
- Each year of the project brought about increases in these two (and all other) MHI domains

Conclusion

- Staff burnout and job dissatisfaction have a causal impact on the MHI score through impacting Quality Improvement and Chronic Care domains
- Practices can use the awareness of these causal and longitudinal relationships to target improvement interventions

ROUND 1, COMMUNITY STAKEHOLDER SURVEY



OVERVIEW

- A survey was administered to stakeholders within each practice's community, specifically specialists and CMSN Care Coordinators
- Specialists
 - Administrative claims and encounter data were used to identify specialists who had contact in the last year with Medicaid or CHIP children attending the 16 demonstration practices
 - 1,440 surveys were distributed in August 2014
- CMSN Care Coordinators
 - Supervisors at six CMSN area offices were contacted in June 2014 for the number of employed CMSN Care Coordinators
 - 1,071 surveys were distributed to 383 care coordinators in August 2014

RESPONSE RATE

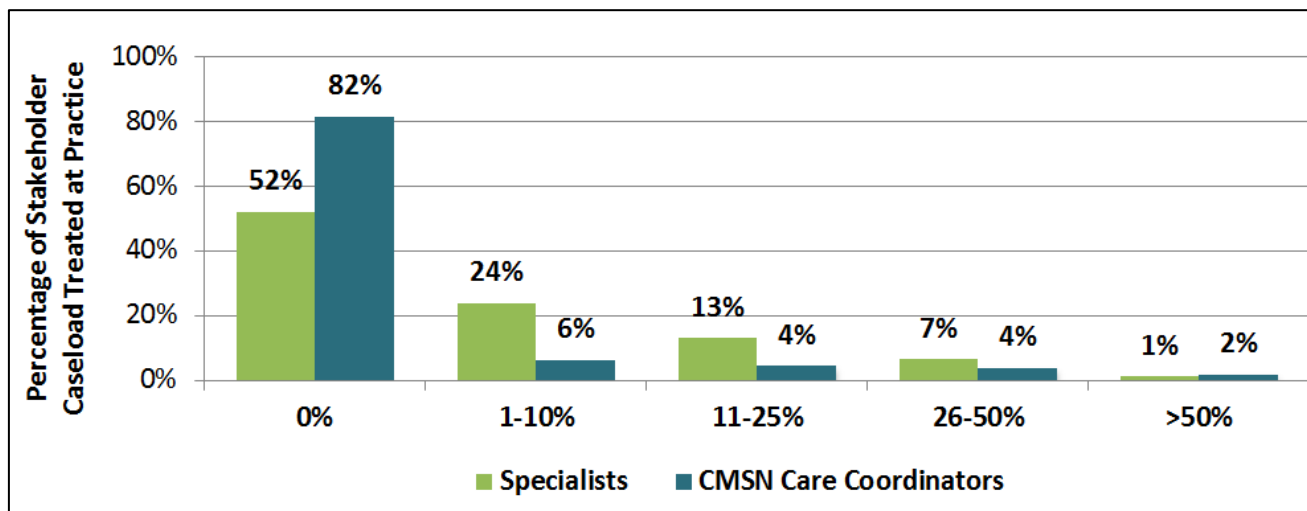
■ Specialists

- Of the 1,156 surveys that reached specialists, 97 surveys were returned (8%)
- Only those specialists who indicate having a caseload of patients at a demonstration practice were included in the analysis (n=42)

■ CMSN Care Coordinators

- Out of 1,071 surveys distributed to CMSN Care Coordinators, 543 responses were received (51%)
- Only those CMSN Care Coordinators who indicate having a caseload of patients at a demonstration practice were included in the final analysis (n=88)

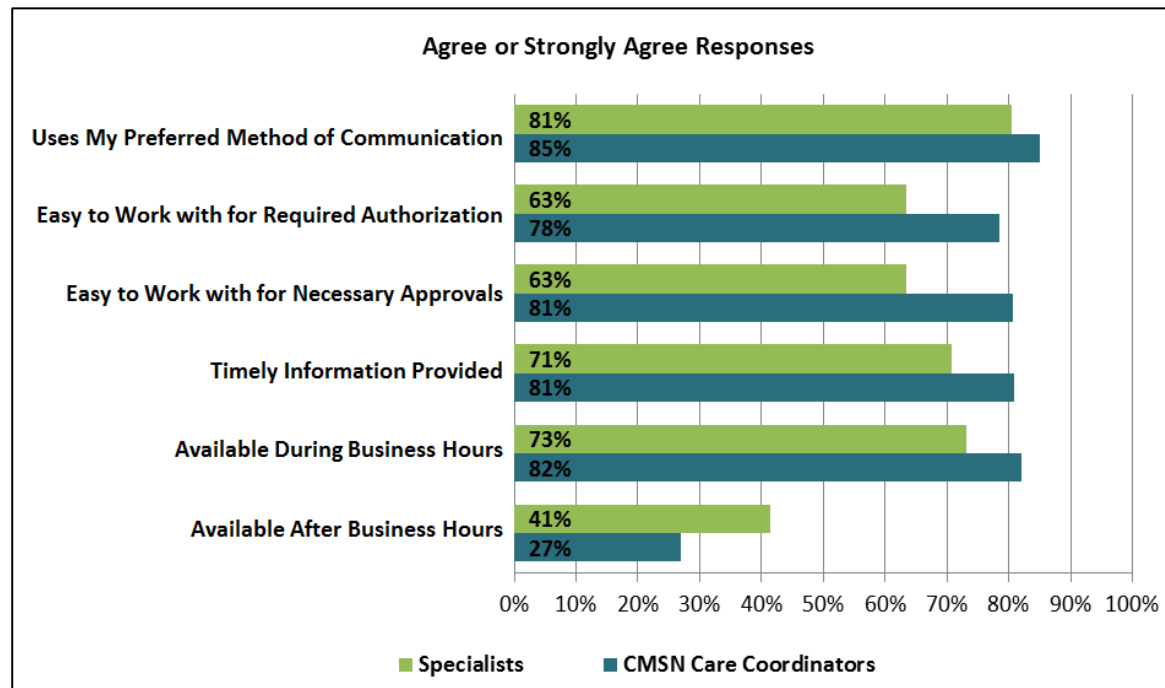
Percentage of Caseload Treated at Demonstration Practices



KEY FINDINGS

- Less than half of CMSN Care Coordinators and specialists report being able to communicate with practices after business hours, suggesting room for improvement

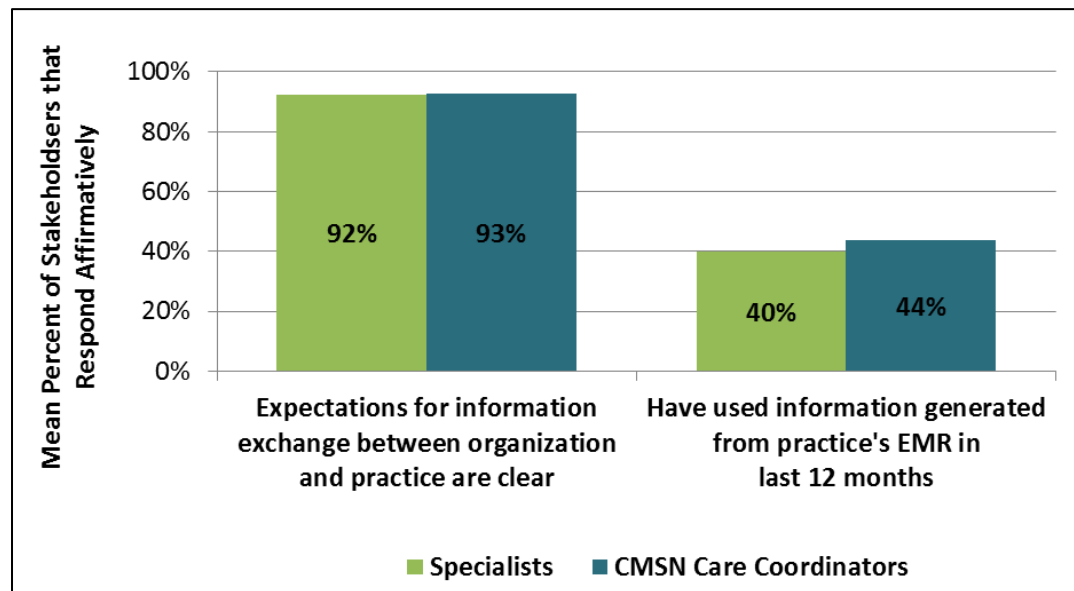
Ease of Communication with Demonstration Practices



INFORMATION EXCHANGE

- Over 90% of specialists and CMSN Care Coordinators report clear expectations for information exchanges
- Less than half of stakeholders use information supplied from a practice's EMR

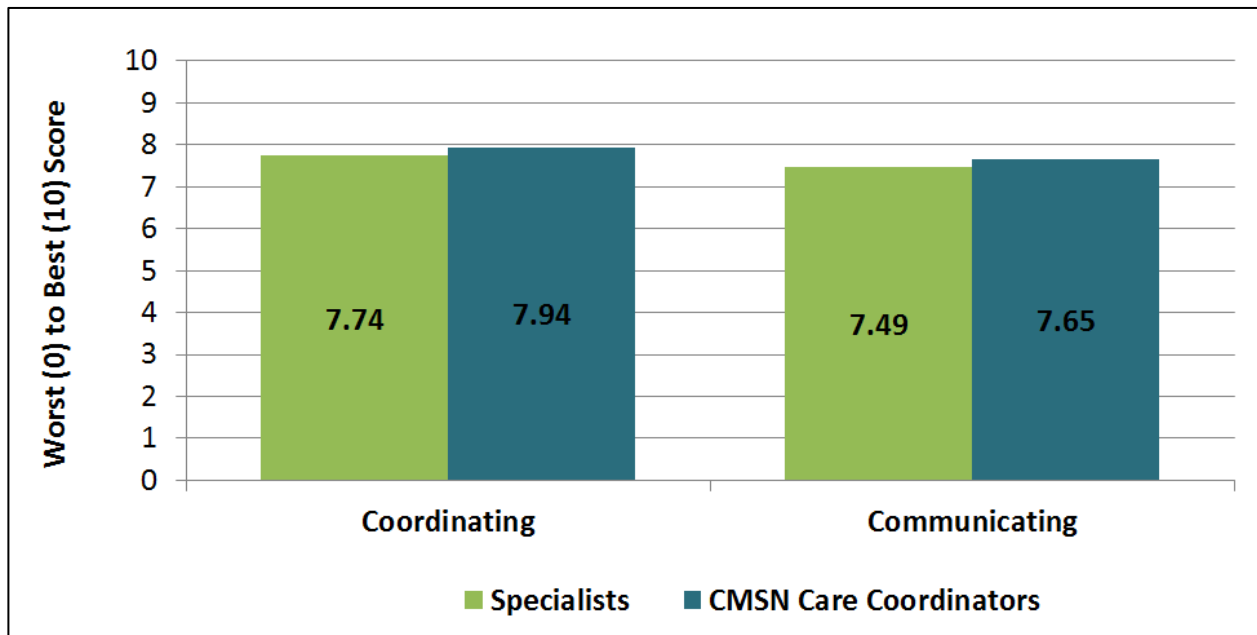
Clarity and Use of Exchanged Information



INFORMATION EXCHANGE

- CMSN Care Coordinators and specialists provided similar ratings on their experience with coordinating services for children at demonstration practices and in communicating with the practices

Stakeholder Ratings of Demonstration Practices



PERFORMANCE MEASURES (ROUNDS 1 & 2)

OVERVIEW

- Fifteen CHIPRA quality of care measures—both HEDIS® and non-HEDIS measures—were calculated for Round 1 and Round 2 practices
- Round 2 data collection began in Year 3, resulting in only two years of data collected
- For ease of interpretation, Round 1 and Round 2 results are presented on the same graph
- Data were collected using administrative data, registry data, and medical records⁷

⁷ Administrative measures were produced using the Quality Spectrum Insight (QSI) software, a NCQA-certified HEDIS® reporting software; the CHIPRA Core Set Technical Specifications were used to generate the non-HEDIS measures.

ADOLESCENT WELL-CARE VISIT (AWC)

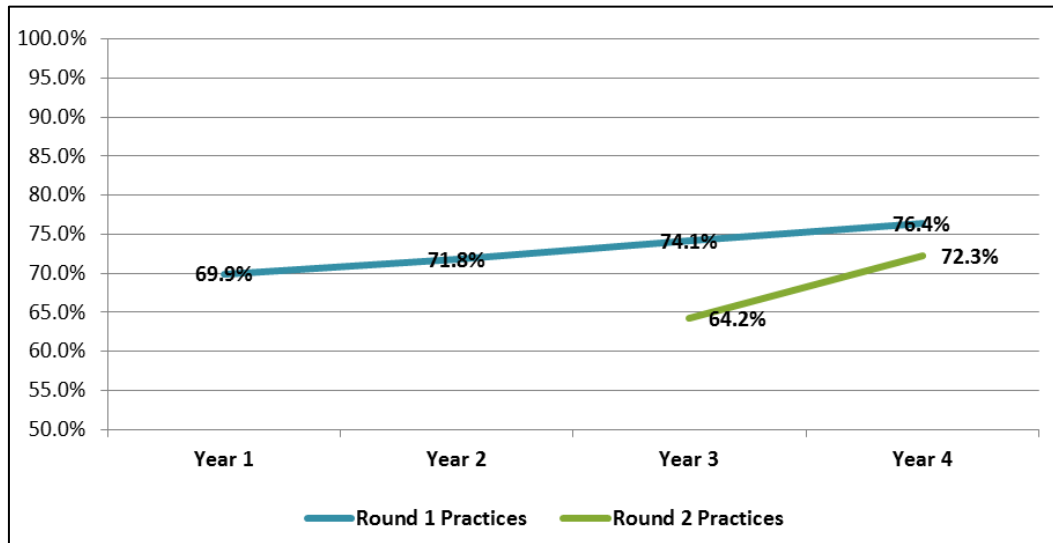
Core Set Technical Specifications

Florida Baseline 2011

Percentage of adolescents ages 12 to 21 that had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year

46.7%

HEDIS® Adolescent Well-Care Visit (AWC) Rates by Year



- The HEDIS® AWC rates for Round 1 practices have steadily increased since Year 1
- The rate for Round 2 practices improved by 8.1% in Year 4

CHILDREN WITH PHARYNGITIS (CWP)

Core Set Technical Specifications

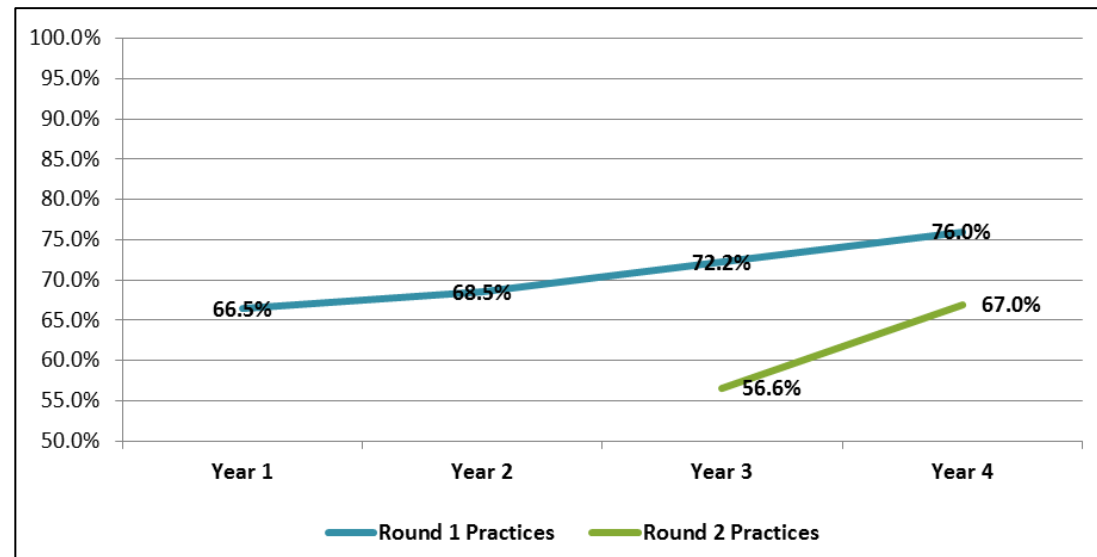
Florida Baseline 2011

Percentage of children ages 2 to 18 that were diagnosed with pharyngitis, dispensed an antibiotic, and received a group A streptococcus test for the episode

58.9%

- For both Round 1 and Round 2 practices, the HEDIS® CWP rates have increased substantially since baseline
- Round 2 increased their rate by 10.4% and exceeded the benchmark in Year 4

HEDIS® Children with Pharyngitis (CWP) Rates by Year



CHILDHOOD IMMUNIZATION STATUS (CIS)

- The majority of HEDIS[®] CIS rates in Round 1 increased from Year 3 to Year 4
- VZV (chickenpox) immunizations had the highest rate (93.3%) of all CIS immunizations in Year 4 for Round 1 practices; MMR immunizations had the highest rate in Year 4 for Round 2
- Combo9 and Combo10 for both Rounds 1 and 2 had the lowest rates in Year 4, yet have improved significantly

HEDIS[®] Childhood Immunization Status (CIS) Rates, Year 4

Core Set Technical Specifications	Round 1 Practices	Round 2 Practices	Florida Baseline 2011
<i>The percentage of children 2 years of age who had four DTaP, three IPV, one MMR, three Hib, three HepB, one VZV, four PCV, two HepA, two or three RV, and two flu vaccines by their second birthday</i>			
DTaP	78.7% (432) ▼	90.2% (143) ▲	79.9%
Hep A	86.1% (432) ▲	90.2% (143) ▲	88.4%
Hep B	83.8% (432) ▲	81.8% (143) ▲	90.5%
Hib	91.7% (432) ▲	95.1% (143) ▲	90.2%
Influenza	47.7% (432) ▼	56.6% (143) ▲	80.0%
MMR	91.9% (432) ▲	95.8% (143) ▲	91.3%
PCV	82.2% (432) ▲	86.0% (143) ▲	77.5%
Polio	88.0% (432) ▲	95.1% (143) ▲	37.1%
Rotavirus	70.4% (432) ▲	74.1% (143) ▲	60.4%
VZV	93.3% (432) ▲	94.4% (143) ▼	30.3%
Combo2	72.7% (432) ▲	75.5% (143) ▲	69.5%
Combo3	70.1% (432) ▲	71.3% (143) ▲	65.2%
Combo4	66.2% (432) ▲	67.1% (143) ▲	30.0%
Combo5	58.8% (432) ▲	55.2% (143) ▲	47.8%
Combo6	37.5% (432) --	44.1% (143) ▲	23.8%
Combo7	56.5% (432) ▲	53.1% (143) ▲	23.6%
Combo8	35.9% (432) ▼	44.1% (143) ▲	13.2%
Combo9	33.3% (432) ▲	38.5% (143) ▲	18.8%
Combo10	32.4% (432) ▲	38.5% (143) ▲	10.8%

Note: Numbers in parentheses indicate the number of observations.

▲ ▼ Indicates the direction of change from Year 3 to Year 4.

-- Indicates no change from Year 3 to Year 4.

CHILD AND ADOLESCENT ACCESS TO PRIMARY CARE PRACTITIONERS (CAP)

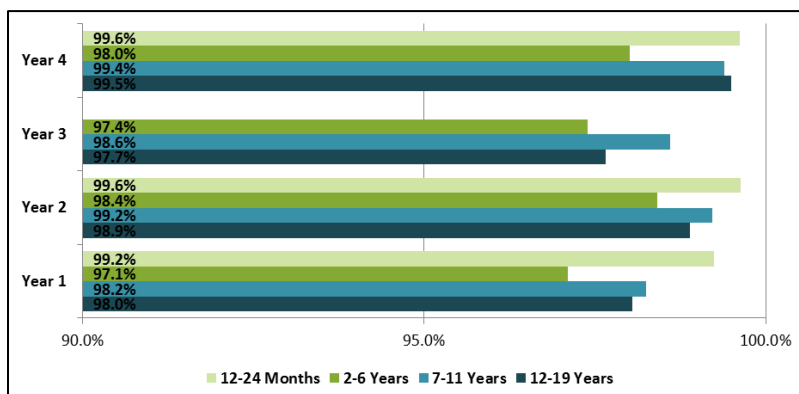
Core Set Technical Specifications

Florida Baseline 2011

Percentage of children and adolescents that had a visit with a PCP in the measurement year (12 months to 6 years) or with a PCP during the measurement year or the year prior to the measurement year (7 years to 19 years)

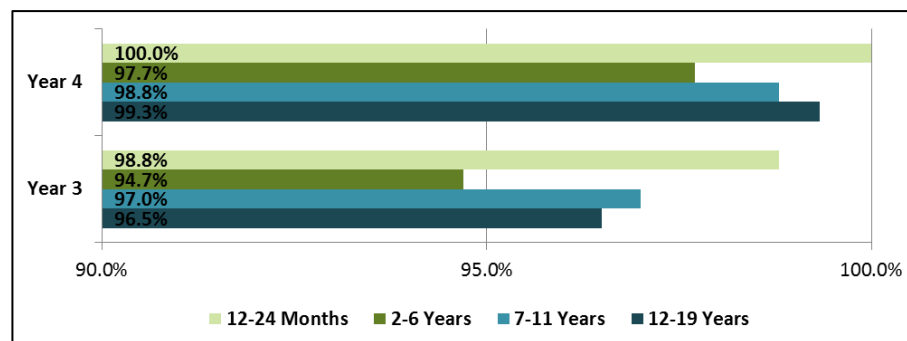
12 to 24 months	94.8%
25 months to 6 years	81.7%
7 to 11 years	85.4%
12 to 19 years	84.1%

Round 1, HEDIS® Child and Adolescent Access to Primary Care Practitioners (CAP) Rates by Year



Note: 12-24 Months data not available for Year 3.

Round 2, HEDIS® Child and Adolescent Access to Primary Care Practitioners (CAP) Rates by Year



- The HEDIS® CAP rates for both Rounds 1 and 2 have remained relatively consistent since baseline and have exceeded the benchmark every year

CHLAMYDIA SCREENING (CHL)

Core Set Technical Specifications

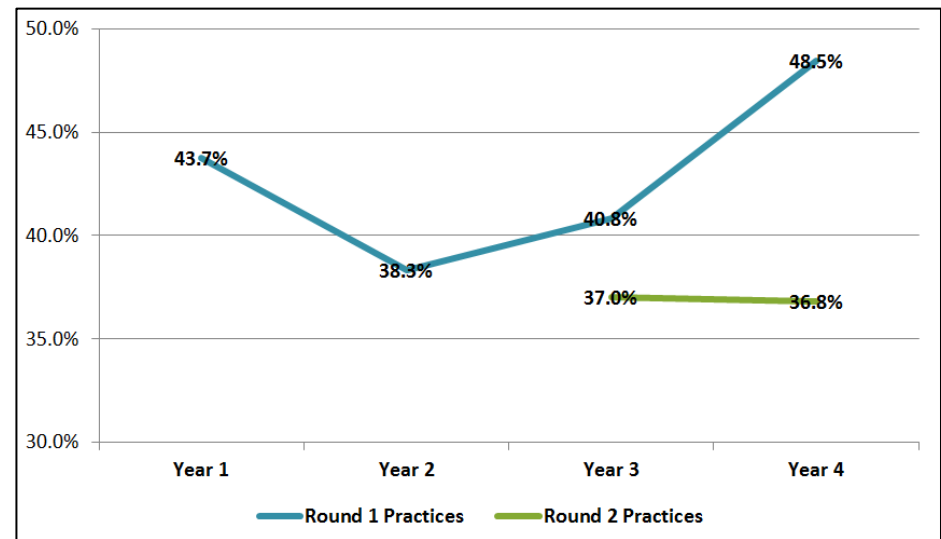
Florida Baseline 2011

Percentage of women ages 16 to 20 that were identified as sexually active and had at least one test for Chlamydia during the measurement year

52.6%

- For Round 1 practices, the HEDIS® CHL (16-20) has steadily increased since Year 2; however, the Round 2 rate slightly decreased in Year 4
- Rates for both Rounds 1 and 2 remain below the NCQA benchmark

HEDIS® Chlamydia Screening (CHL) 16-20 Rates by Year



FOLLOW-UP AFTER HOSPITALIZATION FOR MENTAL ILLNESS (FUH)

Core Set Technical Specifications

Florida Baseline 2011

Percentage of discharges for children ages 6 to 20 that were hospitalized for treatment of selected mental health disorders and who had an outpatient visit, an intensive outpatient encounter, or partial hospitalization with a mental health practitioner within 7 days of discharge and within 30 days of discharge

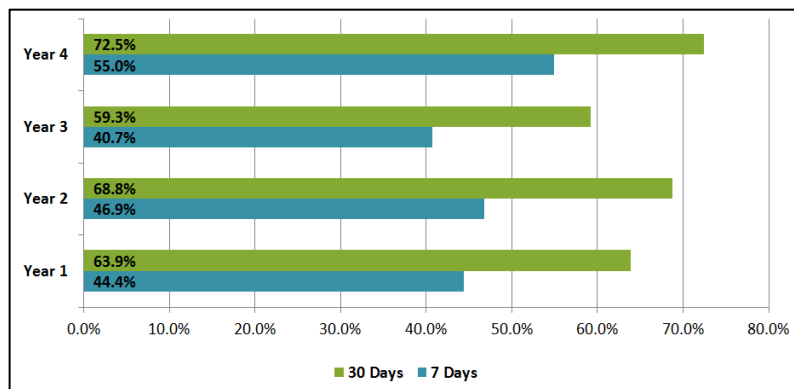
30 days follow-up

53.8%

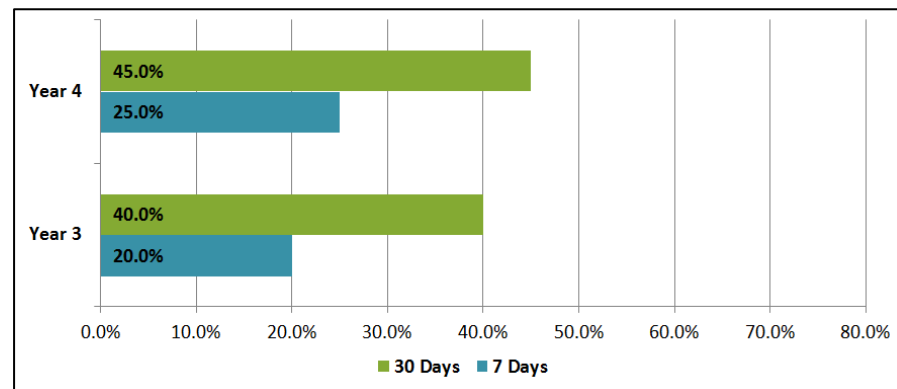
7 days follow-up

34.9%

Round 1, HEDIS® Follow-Up After Hospitalization for Mental Illness (FUH) Rates by Year



Round 2, HEDIS® Follow-Up After Hospitalization for Mental Illness (FUH) Rates by Year



- The HEDIS® FUH rates for Round 1 practices improved from Year 3 to Year 4; rates for both 30 and 7 Days exceed the NCQA benchmark in Year 4
- The FUH rates for Round 2 practices have improved from Year 3 to Year 4, but still fall below the NCQA benchmark

FOLLOW-UP CARE FOR CHILDREN PRESCRIBED ADHD MEDICATION (ADD)

Core Set Technical Specifications

Florida Baseline 2011

Percentage of children newly prescribed ADHD medication that had at least three follow-up care visits within a 10-month period, one of which was within 30 days from the time the first ADHD medication was dispensed

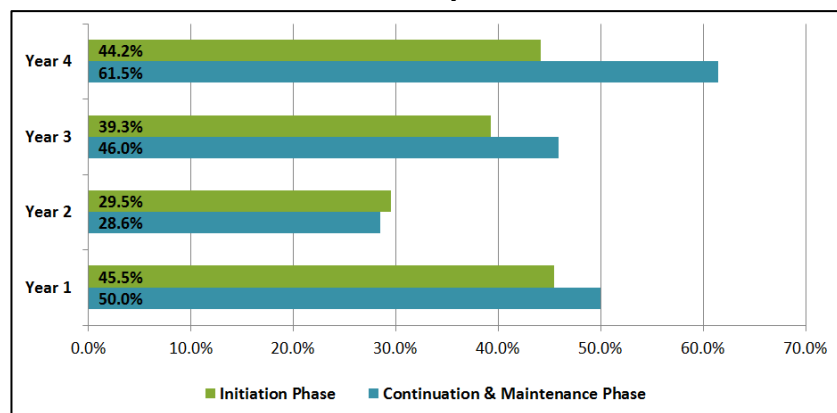
Initiation phase

41.9%

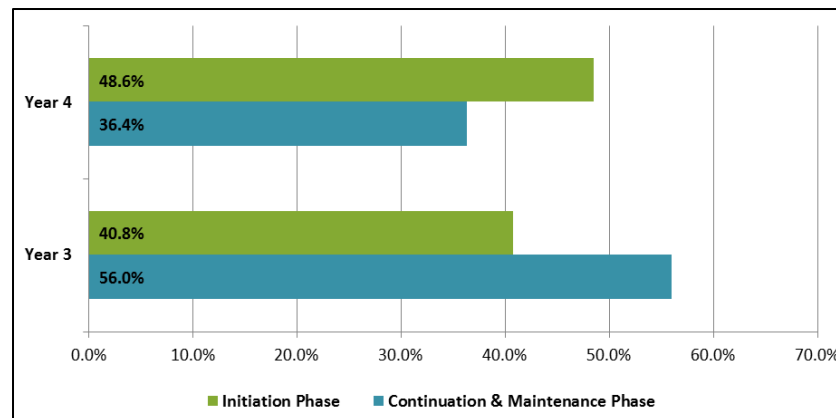
Continuation and maintenance phase

n/a

Round 1, HEDIS® Follow-Up Care for Children Prescribed ADHD Medication (ADD) Rates by Year



Round 2, HEDIS® Follow-Up Care for Children Prescribed ADHD Medication (ADD) Rates by Year



- The HEDIS® ADD rates for Round 1 practices improved from Year 3 to Year 4; rates for both phases exceed the NCQA benchmark in Year 4
- The Continuation and Maintenance Phase rate for Round 2 practices decreased from Year 3 to Year 4 (56% to 36.4%) and fell below the NCQA benchmark

FREQUENCY OF ONGOING PRENATAL CARE (FPC)

HEDIS® Frequency of Ongoing Prenatal Care (FPC) Rates, Year 4

Core Set Technical Specifications	Round 1 Practices	Round 2 Practices	Florida Baseline 2011
<i>Percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year that received the following number of expected prenatal visits:</i>			
<= 20% of expected visits	8.7% (23) ▼	N/A	6.7%
21% to 40% of expected visits	4.3% (23) ▲	N/A	5.0%
41% to 60% of expected visits	4.3% (23) ▼	N/A	10.9%
61% to 80% of expected visits	26.1% (23) ▼	25.0% (4) ▲	28.5%
>= 81% of expected visits	56.5% (23) ▲	75.0% (4) ▼	49.5%

Note: Numbers in parentheses indicate the number of observations.

▲ ▼ Indicates the direction of change from Year 3 to Year 4.

-- Indicates no change from Year 3 to Year 4.

- For Round 1 practices, only two HEDIS® FPC sub-measures exceeded the NCQA benchmark in Year 4 (the 0-20% and the 61-80% sub-measures)
- For Round 2 practices, no rates are available for the sub-measures 0-20%, 21-40%, and 41-60%

ADOLESCENT IMMUNIZATIONS STATUS (IMA)

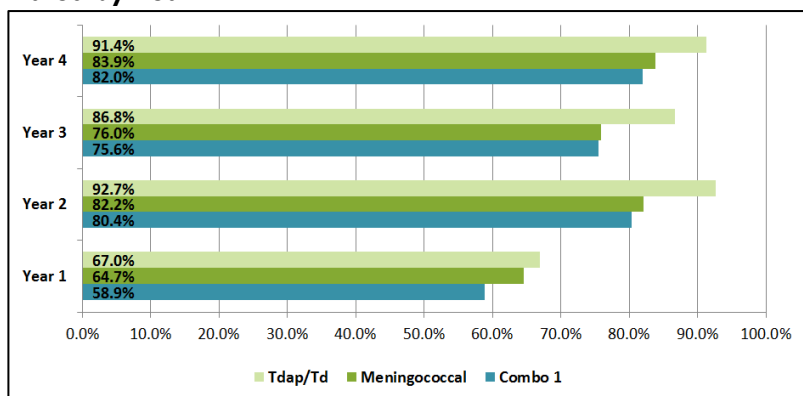
Core Set Technical Specifications

The percentage of adolescents 13 years of age who had one dose of meningococcal vaccine and one tetanus, diphtheria toxoids, & acellular pertussis vaccine (Tdap) by their 13th birthday

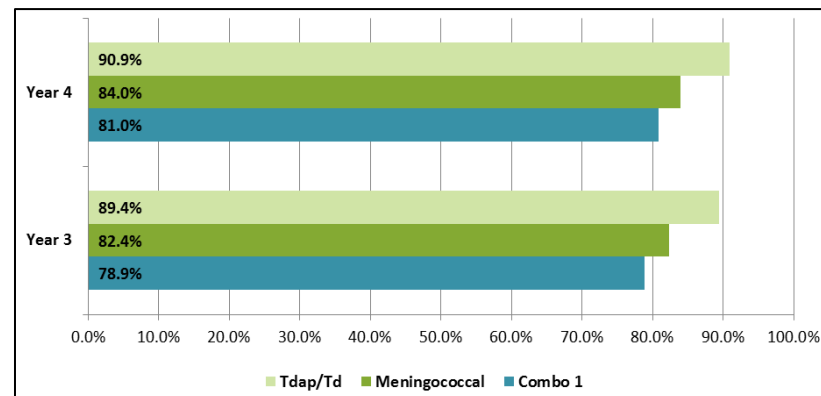
Florida Baseline 2011

Tdap/Td	54.3%
Meningococcal	73.2%
Combo 1	52.5%

Round 1, HEDIS® Adolescent Immunizations Status (IMA) Rates by Year



Round 2, HEDIS® Adolescent Immunizations Status (IMA) Rates by Year



- The HEDIS® IMA rates in Year 4 for Round 1 practices are the highest of all four years, with the exception of Tdap/Td (92.7% in Year 2)
- IMA rates for Round 2 practices slightly improved from Year 3 to Year 4

TIMELINESS OF PRENATAL CARE (PPC)

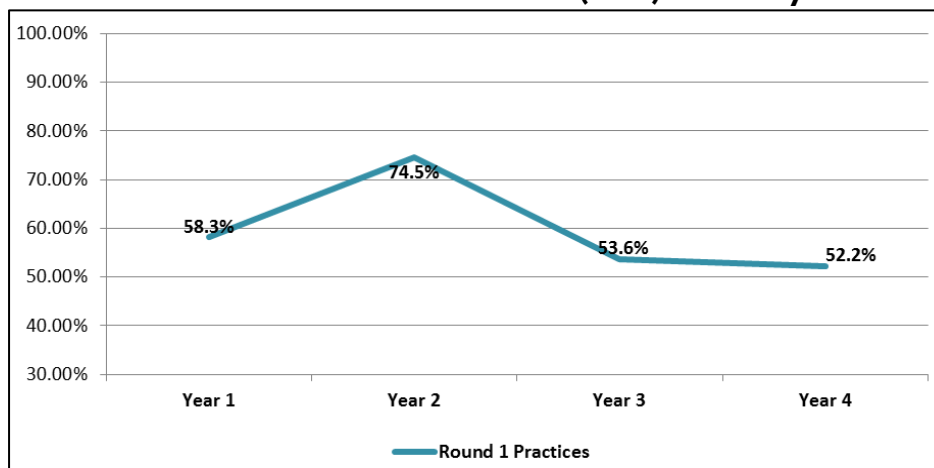
Core Set Technical Specifications

Florida Baseline 2011

Percentage of deliveries of live births between November 6 of the year prior to the measurement year and November 5 of the measurement year that received a prenatal care visit in the first trimester or within 42 days of enrollment

74.1%

HEDIS® Timeliness of Prenatal Care (PPC) Rates by Year



Note: Data not available for Round 2 practices as observations were less than 10.

- The HEDIS® PPC rates for Round 1 practices have steadily decreased since Year 2
- Round 1, Year 2 PPC rate (74.5%) was the highest of all years, but still fell below the NCQA benchmark

WELL-CHILD VISITS IN THE 3RD, 4TH, 5TH, AND 6TH YEARS OF LIFE (W34)

Core Set Technical Specifications

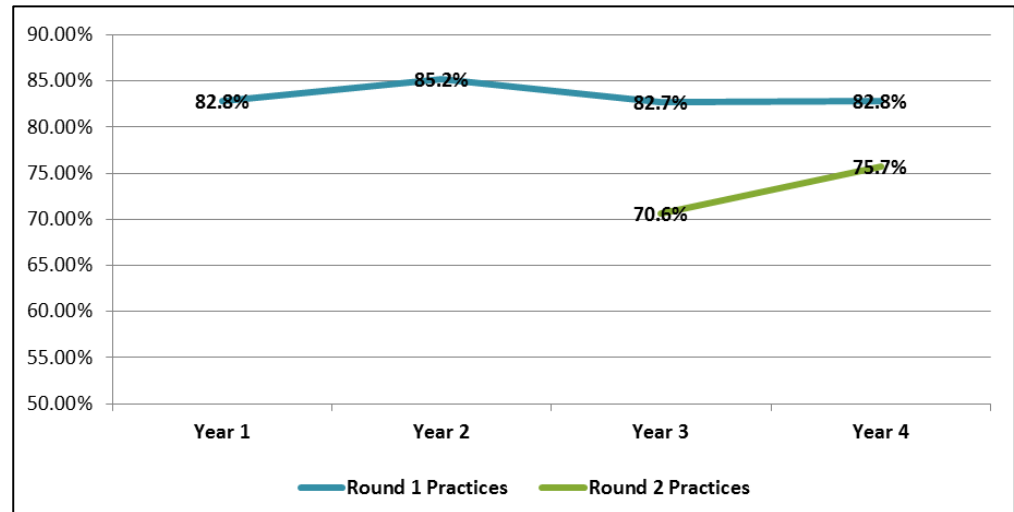
Florida Baseline 2011

Percentage of children ages 3 to 6 that had one or more well-child visits with a Primary Care Practitioner (PCP) during the measurement year

67.6%

- The HEDIS® W34 rate was the highest for Round 1 practices in Year 2
- The W34 rate for Round 2 practices improved by 5.1% in Year 4, and now exceeds the NCQA benchmark

HEDIS® Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life (W34) Rates by Year



WELL-CHILD VISITS IN THE FIRST 15 MONTHS OF LIFE (W15)

HEDIS® Well-Child Visits in the First 15 Months of Life (W15), Year 4

Core Set Technical Specifications	Round 1 Practices	Round 2 Practices	Florida Baseline 2011
<i>Percentage of children that turned 15 months old during the measurement year and had zero, one, two, three, four, five, or six or more well-child visits with a PCP during their first 15 months of life</i>			
0 visits	0.8% (228) ▼	2.7% (75) ▲	2.8%
1 visit	0.9% (228) ▼	4.0% (75) ▲	1.9%
2 visits	0.0% (228) ▼	2.7% (75) ▼	2.8%
3 visits	5.3% (228) ▲	4.0% (75) ▼	5.0%
4 visits	9.2% (228) ▲	8.0% (75) ▼	9.3%
5 visits	13.6% (228) ▲	17.3% (75) ▼	16.2%
6 or more visits	70.2% (228) ▼	61.3% (75) ▲	62.1%

Note: Numbers in parentheses indicate the number of observations.

▲ ▼ Indicates the direction of change from Year 3 to Year 4.

- In Year 4, Round 1, the HEDIS® W15 rates are highest for children who had 6 or more visits with their PCP during the first 15 months of life
- In Year 4, Round 2, the W15 rates are also highest for 6 or more visits (61.3%); this rate slightly exceeds the NCQA benchmark

PERCENTAGE OF ELIGIBLES THAT RECEIVED PREVENTIVE DENTAL TREATMENT SERVICES (PDENT)

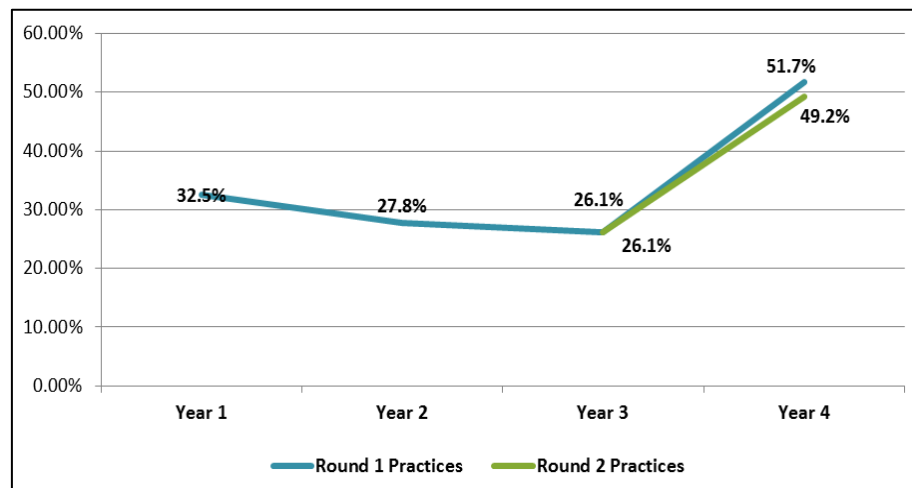
Core Set Technical Specifications

Florida Baseline 2011

Percentage of individuals ages 1 to 20 eligible for Medicaid or CHIP Medicaid Expansion programs (that is, individuals eligible for EPSDT services) that received preventive dental services

9.0%

Percentage of Eligibles That Received Preventive Dental Services (PDENT) Rates by Year



Note: This measure is a non-HEDIS measure

- For Round 1 and Round 2, the PDENT rate substantially improved since Year 3 (by 25.6% and 23.1%, respectively)

PERCENTAGE OF ELIGIBLES THAT RECEIVED DENTAL TREATMENT SERVICES (TDENT)

Core Set Technical Specifications

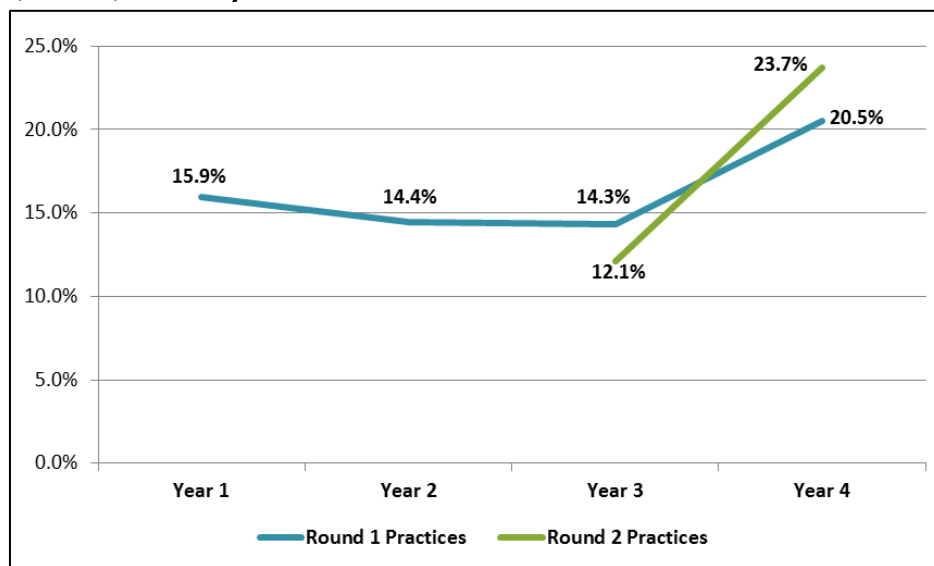
Florida Baseline 2011

Percentage of individuals ages 1 to 20 eligible for Medicaid or CHIP Medicaid Expansion programs (that is, individuals eligible for EPSDT services) that received dental treatment services

4.9%

- The TDENT rate for Round 1 practices improved by 6.2% in Year 4 and is the highest rate across all four years
- The Year 4 rate for Round 2 practices improved considerably from Year 3 (12.1% to 23.7%) and exceeds the Round 1, Year 4 rate (20.5%)

Percentage of Eligibles That Received Dental Treatment Services (TDENT) Rates by Year



Note: This measure is a non-HEDIS measure

PERCENTAGE OF ASTHMA PATIENTS 2 THROUGH 20 YEARS OLD WITH ONE OR MORE ASTHMA-RELATED EMERGENCY ROOM VISITS (ASMER)

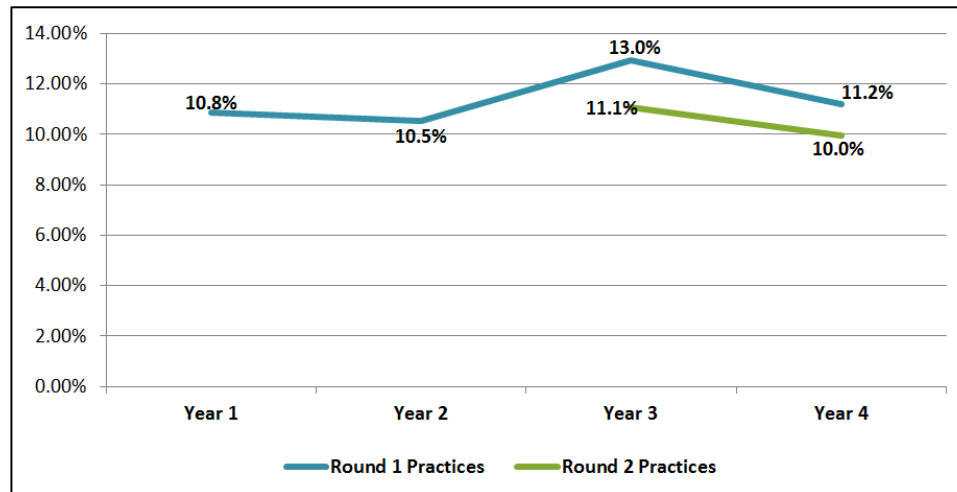
Core Set Technical Specifications

Florida Baseline 2011

Percentage of children ages 2 to 20 diagnosed with asthma during the measurement year with one or more asthma-related Emergency Room visits

10.8%

Percentage of Asthma Patients 2-20 Years Old with One or More Asthma-Related Emergency Room Visits (ASMER) Rates by Year



Note: This measure is a non-HEDIS measure

- The ASMER rate for Round 1 practices decreased by 1.8% from Year 3 to Year 4
- Round 2 practices also decreased their ASMER rate in Year 4

THE IMPACT OF THE PATIENT-CENTERED MEDICAL HOME ON ASTHMA-RELATED VISITS TO THE EMERGENCY DEPARTMENT: A FIXED EFFECTS REGRESSION APPROACH



Background

- One objective of the patient-centered medical home is to decrease the number of emergency room visits by providing higher-quality primary care
- This analysis focused on how the ER rate for children with asthma changed over three years

Results

- The estimation suggests that the PCMH intervention did have a statistically significant negative effect on asthma-related ER visits (OR 0.42) in the earlier part of the intervention
- This effect, however, was not detected in the later years

Method

- Identified a panel of pediatric patients attending one of the 16 demonstration practices (n=331), as well as pediatric patients treated at non-participating clinics (n=277)
- Administrative data between the years 2010 and 2013 were used to coincide with the project
- The dependent variable was a pediatric quality indicator that assessed whether a patient diagnosed with asthma had at least one asthma-related ER visit within the calendar year
- A fixed effects logistic regression model was used, which requires repeated observations on the same patient in the pre- and post-treatment years

Conclusion

- Practices in the project were given tools to help them reduce these ER visits
- Our findings suggest that the PCMH can affect the number of ER visits for children with asthma
- Given the improvements in the early part of the project, reducing asthma ER visits might be a task that is more immediately actionable for practices, meaning that the infrastructure to enact change for asthma patients might already exist

ROUND 2, COST STUDY

BACKGROUND

- Eight of the Round 2 practices were identified and offered participation in the cost effectiveness component of the evaluation;⁸ of the 8 selected, 6 volunteered to participate
- Cost information, directly related to medical home transformation, was gathered by monthly calls with practices over a 12 month period (October 2013 through November 2014)
- Practices were asked about their medical home implementation activities and associated costs during the same time period
- Each call was guided by practice summary documents of medical home activities
- A primary contact person was identified at each practice, who then identified personnel involved, including associated position titles and any supplies or contract costs
- Median hourly wages for the relevant position titles were obtained from the Bureau of Labor Statistics
- Additional data on practices' MHI score and practice population were gathered from the practice surveys

⁸ A full cost study report is available by request.

RESULTS: PRACTICE DEMOGRAPHICS

- The six participating practices have patient caseloads that ranged from 1,600 to 10,000 annually
- The mean MHI self-report score increased by 1.39 points, or 38.4%, across the 12 months
- Medical home activities included referral coordination, care plan implementation, creation of patient registries, family advisory group meetings, and NCQA preparations

Practice	Annual # Patients Served	Annual # Patient Visits	Average # Visits per Patient	MHI Pre- Intervention	MHI Post- Intervention	MHI Difference
A	6,000	17,160	2.9	2.88	6.08	3.20
B	4,968	18,468	3.7	2.52	4.08	1.56
C	6,550	8,880	1.4	5.52	5.56	0.04
D	2,000	6,180	3.1	4.40	5.00	0.60
E	10,000	34,008	3.4	3.12	4.16	1.04
F	1,600	5,880	3.7	3.28	5.16	1.88
Average	5,186	15,096	3.0	3.62	5.01	1.39

RESULTS: TRANSFORMATION COSTS

- The average annual cost per practice to transform to a pediatric medical home was \$131,943
- This represents an average cost per visit of \$14, an average cost per patient of \$39, and an average cost per percent change in “medical home-ness” of \$24,905

Practice	Cost for Medical Home Transformation	Cost per MHI Unit Difference	Cost per MHI % Change	Cost per Visit	Cost per Patient
A	\$82,100	\$25,656	\$739	\$5	\$14
B	\$232,743	\$149,194	\$3,760	\$13	\$47
C	\$97,186	\$2,429,650	\$134,117	\$22	\$15
D	\$44,445	\$74,075	\$3,259	\$7	\$22
E	\$135,971	\$130,742	\$4,079	\$4	\$14
F	\$199,212	\$105,964	\$3,476	\$34	\$125
Average	\$131,943	\$485,880	\$24,905	\$14	\$39

Note: No direct patient care costs were included.

DISCUSSION

- The practices perceive that medical home transformation can be costly
- Practice perceptions vary regarding the identification of medical home transformation activities, which in turn creates variation in the practice costs related to the transformation
- Activities which constitute medical home transformation vary greatly across practices
- Self-report of the MHI pre- and post-transformation, without objective criteria, can be a challenge to interpret

CONCLUSIONS

CONCLUSIONS

- Over the duration of the project, the MHI increased for Round 1 and Round 2 practices indicating they made great strides towards becoming PCMHs
- Practices were able to make changes, improve teamwork, and enhance practice efficiency
- Areas that are still challenging for practices are staff turnover, communication with specialists, and maintaining the parent partner relationship
- Physician outcomes such as job satisfaction were better than non-physician outcomes over the entire course of the project
- Community stakeholders indicate that communication with the practices can still be improved
- The practices perceive that medical home transformation can be costly
- Activities the practices engaged in to become a medical home varied, resulting in a range of incurred costs

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