MedPeds HIMSS Application: Core Clinical Value

Date:	07/30/2013
Name of Application Organization:	MedPeds, LLC
Address:	7350 Van Dusen Rd, #110, Laurel Md. 20707
Submitter's Name:	Seth Eaton, M.D.
Submitter Title:	Medical Director
Submitter's email address:	setheaton@gmail.com
Additional Contact's Name:	Janet Gerber-Salins
Additional Contact's Title:	Practice Administrator
Additional contact email address:	jgerbsal@MedPeds.net

Core or Menu Item: **Clinical Value**

Executive Summary

MedPeds became a paperless health center in 2004 after implementing eClinicalWorks comprehensive electronic health record (EHR). From that time, legible and accessible charts allowed providers to view patient data outside of the practice securely over the internet, without worry of losing the data. Electronic charts included patient history, medication lists, medical summaries, and allergies. Since 2012, MedPeds connected to Maryland's Health Information Exchange (HIE) and automatically sends medical summaries, which included medications and allergies, to the exchange through eClinicalWorks eEHX. The EHR provided the ability to track patient populations, view lab and diagnostic imaging results, and alert patients to medication recalls. Overall, the technology functioned as a critical instrument to allow providers to deliver excellent care, and remove past constraints by inefficient paper charts.

As a result, the EHR allowed the practice to meet nationally recognized clinical outcomes for its patients. Since 2009, MedPeds received certification as a Level III Patient Centered Medical Home (PCMH). In addition, all of its physicians met the quality guidelines to achieve Meaningful Use in both 2011 and 2012. MedPeds' ability to reach patients who did not complete ordered tests demonstrated the clinical value of the EHR. In 2011, the practice utilized the technology to identify patients over 50 who were past due for a colonoscopy. During this process, the practice identified one patient who missed his annual test. Soon after contacting the patient, the patient scheduled the colonoscopy, and the test revealed early stage colon cancer. Due to early detection and treatment, the patient fully recovered.

1. Background Knowledge

MedPeds, a private practice of eight providers and 23 employees situated in the DC suburb of Laurel, Maryland, provided outpatient services to nearly 18,000 patients over the past three years. Patient demographics included 854 patients over the age of 64, and 4,606 patients under age 18. The patient population also included various ethnic and socioeconomic groups.

In 2004, MedPeds implemented eClinicalWorks comprehensive EHR to improve overall functionality. As a result of its successful adoption of the EHR, the practice participated in the CareFirst PCMH pilot in 2008, and received the NCQA Quality Award. Three years later, MedPeds was one of only 50 practices in Maryland selected for the state PCMH pilot program. In addition, MedPeds became the first private practice in Maryland to send Care Coordination Medical Record (CCMR) data to the state of Maryland's Health Information Exchange (CRISP). MedPeds also became one of the first primary care offices in Maryland to offer HIPAA compliant telemedicine visits for urgent care and mental health visits.

2. Local Problem Being Addressed and Intended Improvement

Prior to implementing an EHR, MedPeds' initial goals included cutting the cost of staffing the practice, finding patient charts when needed, improving the quality of patient care, and competitively positioning the practice for the future. Before EHRs, providers at MedPeds expressed frustration when paper charts "disappeared," and found perceived gaps in quality of care as unacceptable. Consequently, the desire to improve the practice's overall performance drove the effort to optimize functionality. The practice anticipated improvement in clinical documentation, providing the ability to follow-up with efficient care for the sickest of patients. In addition, MedPeds hoped to reduce scheduling and billing errors, improve collection of patient demographics, and enhance communication between the patients and providers.

3. Design and Implementation

In 2004, while MedPeds was in the process of converting to an EHR, few successful EHR conversion models existed. None of the providers or staff at MedPeds had prior training with EHRs prior to implementing. Consequently, everyone learned and banded together, to assist each other to obtain the practice's goals. Luckily, the practice had excellent providers and staff and became a coherent team dedicated to successful conversion of the EHR.

MedPeds paid $50,000 to have a company scan all active paper charts, dating back to 1984. Once scanned, on the weekend prior to conversion, the practice removed paper charts from the office and placed them in storage. The practice collectively decided to eliminate all opportunities to revert to paper records. This approach produced both a significant, positive cultural shift within the practice and yielded a technically efficient system conversion.

For the first two weeks of implementation, while the practice learned how to use the EHR, the practice scheduled no patient appointments other than urgent care. Over the next few weeks, providers saw both urgent care and scheduled patients, however, the practice maintained a

lighter than normal schedule. By the end of the eighth week, the practice returned to a normal patient load. Only six months after adoption, the MedPeds operated comfortably with EHR.

Over the years, as eClinicalWorks added new upgrades and features, the practice implemented all those that would enhance workflow. As a result, in 2007, MedPeds became the first practice
to beta test the Patient Portal. To continue further EHR education, several staff attended the 2010 eClinicalWorks National Users Conference and learned extensive new in-service programs skills.

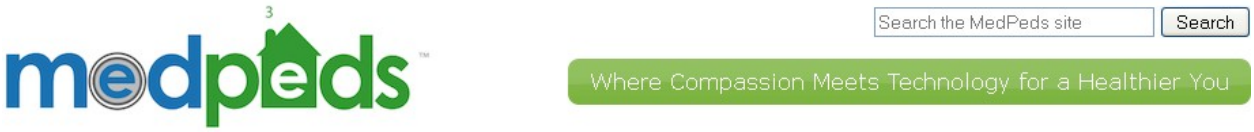
To support optimization, MedPeds added an employee incentive program to support quality improvement and best practices. Utilizing eCWs dashboarding tool, incentives were established for top performing medical assistants to receive $500 per quarter, The top scoring MA receives an additional $100 with an additional $50 going to the second top scorer. For MA's we measure on a number of criteria using either the registry or custom eEBO reports. Some areas measured include rates of lead testing in children, alcohol use, depression screening, breast, cervical and colon cancer screenings, BMI, nutritional counseling, and rates of various vaccinations. Attached is a recent score for one top-rated Provider/MA team. At the end of each quarter, the nurse manager compiles the scores and we post the results on a message board in the staff area,

To keep the non-clinical staff engaged in the concept of improving patient care, we offer $250 per quarter to non-clinical staff for also achieving goals. Half of the $250 is based on the results of patient satisfaction surveys and the incentive is paid out only if there are few negative surveys. The other half of the bonus is tied to an achievement relevant to that person's work. For example, the front desk staff must be careful about collecting demographic information (less than 2% clearinghouse rejection rate for demographic information). Our telephone receptionists are measured on reducing the percentage of dropped telephone calls, measured by our Shoretel phone system reports. Billers must keep AR over 120 days under a certain percent of total AR, Triage nurses log into the state HIE and follow up via telephone encounter on every hospital or ER discharge and record their efforts. For triage nurses, we are using the Diagnostic Imaging portion of the EHR to record a hospital discharge and we compare the number of these DI's with the number of discharges that the state HIE shows.

To fund the incentive program,we doubled the amount normally spent on holiday bonuses, which we eliminated in favor of the incentive bonuses. The other half is an additional expense, however arguably, our staff is helping make it easier for the practice to enjoy the benefits of meeting national quality measures.

MedPeds also utilizes eCW's registry functionality to develop a workflow for outreach to high-risk patients. Using the registry, MedPeds identifies patients who are past due for follow-up appointments, physicals, cancer screenings, immunizations and for diabetics who have not been tested recently for HgA1C. For example, we may pull up a list of men and women over 50 who have not had a colonoscopy recorded. Once identified in the registry, the practice can send SMS, voice and web portal messages directly to those patients from the same registry screen, en masse. All messages have been pre-configured in both English and Spanish and the appropriate message is sent to the patients in the method and language recorded in each patient's preferences. Pulling up the patients and sending the messages takes only a few minutes. In 2014, the practice will begin using ECW 'Campaigns' to automate this process based on a pre-selected schedule and criteria. Once set, the messages for the campaigns will go out indefinitely to the appropriate

groups of patients.



from MedPeds website

4. Utilization of Health IT

Registry – MedPeds utilized eClinicalWorks registry to generate clinical quality reports required for certification as an NCQA Level III PCMH (recertified in 2012), and to document practice participation in both the Carefirst and State of Maryland's pilot PCMH programs.

MAQ Dashboards - eClinicalWorks software contains provider-specific reports to help individual providers track performance relative to meeting Meaningful Use. MedPeds monitored dashboards frequently, consequently making the appropriate workflow adjustments. As a result, all MedPeds providers achieved Meaningful Use in both 2011 and 2012.

eBO – eBO contains numerous useful clinical reports to help providers monitor clinical data. When the registry and other reports don't target the specific clinical information needed, the practice utilized eBO to create custom reports.

Remote after Hours Access to MedPeds' Server and to eClinicalWorks - MedPeds providers gained access to its server and eClinicalWorks since implementation in 2004. After moving to the cloud in 2013, MedPeds' on-call providers had access to the EHR anywhere with an internet connection.

Enhanced Patient Communication with Patients via Patient Portal, Text and Voice Messaging – MedPeds' patients used the web-based Patient Portal extensively, regularly communicating with their providers since 2007. In 2011, the practice actively texted and voice messaged patients to relay clinical results or recall patients for follow-ups, vaccines, and tests. MedPeds sent predefined messages in English or Spanish, according to the patient's preference.

P2POpen- The practice served as beta site for eClinicalWorks P2POpen web messaging in 2010. MedPeds recruited practices in the area that had interest in embracing the technology and a desire to increase communication of clinical data among their providers.

Health Information Exchange via eClinicalWorks eEHX - In 2012 MedPeds became the first non-hospital owned practice to send CCMR data through eClinicalWorks server to CRISP. In the near future, hospitals and emergency rooms throughout Maryland will have access to the practice's patient medical summaries, medications and allergies, making hospital treatment of MedPeds' patients safer and more informed.

Meeting Nationally Recognized Quality Measures - MedPeds developed an incentive-based

quality performance program, using nationally recognized key clinical data points to function as performance metrics. The incentive-based system pays bonuses to providers and medical assistants who meet the quality measures, such as PCMH, Meaningful Use, and ACOs.

Mid Atlantic Primary Care ACO - In 2013, MedPeds became a leader in establishing a primary care-owned ACO. The ACO plans to leverage CCMR technology to integrate multi-location practices on a single cloud-based platform to achieve coordination of care needed for an ACO.

5. Value Derived Outcomes

MedPeds demonstrated the clinical value of eClinicalWorks EHR, especially in the areas of clinical quality measurement, reporting, and improvement.

MedPeds achieved the following scores in its 2012 re-certification of Level III PCMH:

Patient-Centered Medical Home	POINTS RECEIVED	POSSIBLE POINTS
PCMH1: Enhance Access and Continuity	**20.00**	20.00
PCMH2: Identify and Manage Patient Populations	**16.00**	16.00
PCMH3: Plan and Manage Care	**17.00**	17.00
PCMH4: Provide Self-Care Support and Community Resources	**9.00**	9.00
PCMH5: Track and Coordinate Care	**18.00**	18.00
PCMH6: Measure and Improve Performance	**16.25**	20.00
category total:	**96.25**	100.00

MedPeds scored competitively in relation to 54 other Maryland State PCMH programs in reporting quality measures. See some of MedPeds' scores below:

38	Alternate Core: Childhood Immunization Status			
	DTaP vaccine	428	507	84.42%
	IPV	472		93.10%
	MMR	456		89.94%
	HiB	479		94.48%
	Hepatitis B vaccine	473		93.29%
	VZV	449		88.56%
	Pneumococcal vaccine	433		85.40%
	Hepatitis A vaccine	198		39.05%
	Rotavirus vaccine	441		86.98%
	Influenza vaccine	293		57.79%
	Combination 1	386		76.13%
	Combination 2	375		73.96%
41	Alternate Core: Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old	495	1056	46.88%
43	Pneumonia Vaccination Status for Older Adults	408	711	57.38%
47	Asthma Pharmacologic Therapy	155	572	27.10%
59	Diabetes: HbA1c Poor Control	166	2037	8.15%
61	Diabetes: Blood Pressure Management	871	2037	42.76%
67	Coronary Artery Disease (CAD): Oral Antiplatelet Therapy Prescribed for Patients with CAD	82	109	75.23%
75	Ischemic Vascular Disease (IVD): Complete Lipid Panel and LDL Control	392	784	50.00%
	LDL test present	90		11.48%
	LDL test present and value < 100 mg/dL			
81	Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD)	29	40	72.50%
105	Anti-depressant medication management: (a) Effective Acute Phase Treatment, (b) Effective Continuation Phase Treatment			
	Prescribed antidepressant medications >=84 days after the FIRST diagnosis of major depression	88	211	41.71%
	Prescribed antidepressant medications >=180 days after the FIRST diagnosis of major depression	110		52.13%
421	Core: Adult Weight Screening and Follow-Up			
	(age) >= 65 years	374	845	44.26%
	(age) >= 18 years and <= 64 years	1855	10423	17.80%
575	Diabetes: HbA1c Control (<8%)	150	351	42.74%

6. Lessons Learned

Everyone must be on board with the change. Research shows that successful implementation of an EHR requires a culture of innovation for all providers and staff within the practice. MedPeds' experience supports this, in that key stakeholders such as providers, office managers, and staff had to commit to the culture of innovation and demonstrate willingness to embrace change.

Have an EHR "champion." Each practice must have a "champion" to further adoption of IT integration. Leaders need to be comfortable with the natural trials and tribulations of implementing healthcare IT solutions.

Help physicians understand the positive effect on the practice's bottom line. The financial incentives of various PCMH pilot programs, meaningful use, and ACOs play key roles in motivating physicians to adopt new workflows and embrace new technologies.

You can have the technical ability to do something, but until workflows are examined and changed, you may not resolve the issue. You cannot rely solely on the EHR, you have to provide oversight and be willing to make changes.

Wanting to meet quality measures may force a practice to change workflows – For example, MedPeds started using Action Plans and tracking referrals when it was necessary to meet quality measures. For MedPeds, the PCMH program was the catalyst that forced us to make changes to workflows.

Software matures over time. Examples in ECW that matured over time were the Patient Portal and eClinicalMessenger.

7. Financial Considerations

MedPeds carefully considered the financial impact to the practice as it began the process of converting the practice to the EHR. The initial conversion required a significant capital investment, and as a result, it severely reduced K1 income for the partners in the first year. Since that time, the benefits of the conversion, both operational and monetary, underscore the worth of having implemented EHR.

MedPeds realized a significant ROI as a result of adopting and utilizing an EHR, such as having fewer employees per provider, and participating in several quality initiatives yielding substantial income for the practice (PCMH pilots, achieving meaningful use for all doctors in 2011 and 2012). In addition, the practice co-founded an ACO with the anticipation of further improving outcomes and receiving shared savings. None of this would have been possible without the adoption of an EHR. Soft "ROI" cannot be measured in terms of dollars, but it played a significant role in the maturational growth of the practice.

The organization matured after adopting the EHR, allowing providers and MA's work as a team to improve the health of patients. All staff reached out to patients via the Patient Portal, voice messaging, and text messaging to bring patients for appointments, labs, or other studies. The

EHR expanded the knowledge and responsibility parameters for the practice's MAs and administrative staff grew in knowledge and responsibility.

MedPeds funded its EHR implementation, using the practice's operating funds exclusively. In addition to the initial cost of the EHR and hardware, there were significant costs associated with changing the workflows that impacted quality improvement.

- Cost of Care Coordinator $45,500/yr
- Cost of Incentive Program 2012 $33,322/yr
- Estimated Cost of Incentive Program 2013 $35,000/yr