Quality Improvement Projects
Designated for Maintenance of Certification, Part IV
University of Michigan Health System

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Multi-Specialty Portfolio Approval Program

The Multi-Specialty Portfolio Approval Program (Portfolio Program) offers a pathway for healthcare organizations to support physician involvement in organizational quality improvement (QI) initiatives and provide physicians from multiple specialties the opportunity to receive credit in their ABMS Programs for Maintenance of Certification (ABMS Programs for MOC).

The Portfolio Program began in 2009 with three ABMS Member Boards—the American Board of Family Medicine (ABFM), American Board of Internal Medicine (ABIM), and American Board of Pediatrics (ABP)—and the Mayo Clinic in Rochester, Minn., the first Portfolio Sponsor. It offers a streamlined approach for organizations that sponsor and support numerous well-designed QI efforts involving physicians across multiple disciplines to work with ABMS Member Boards to obtain MOC Part IV credit. It promotes organizational effectiveness and efficiency through team-based QI initiatives that are directly related to physicians’ practice and influence the care they deliver. In doing so, the Portfolio Program delivers a more meaningful, relevant MOC experience for physicians that can be emulated in integrated multi-specialty systems across the country. Earlier this year, the Portfolio Program transitioned to ABMS.

Why Organizations Participate
Organizations that become Portfolio Sponsors are committed to supporting physician involvement in both QI and MOC. Portfolio Sponsors:

- Can award their physicians MOC Part IV credit for participating in healthcare QI efforts that originate from within
- Can use MOC credit to involve physicians in QI efforts that are aligned with organizational priorities and goals
- Are able to approve their own QI efforts for MOC Part IV credit from participating ABMS Member Boards
- Reduce effort and time associated with applying to multiple ABMS Member Boards for approval of one or more QI efforts Reduce cost associated with obtaining MOC Part IV approval for multiple QI efforts that span multiple medical specialties
- Foster communication among each other to learn and share successful QI practices

Why ABMS Member Boards Participate
ABMS Member Boards that participate in the Portfolio Program:

- Reduce the administrative burden of approving multiple QI efforts that cross multiple specialties
- Reduce the cost of building and maintaining resources to facilitate a similar program
- Offer an established option for recognizing valid QI efforts in which their Diplomates are engaged through their organization. Provide a vehicle for learning from, and collaborating with, other ABMS Member Boards
- Learn what QI efforts their Diplomates are working on or interested in
- Offer an opportunity to interact with leading organizations involved in QI and supportive of physician involvement in MOC

How Physicians Benefit
Physicians participating in the Portfolio Program can:

- Avoid duplication of efforts by earning MOC Part IV credit for engaging in organizational QI initiatives
- Engage in a more meaningful, relevant MOC experience as QI initiatives are directly related to a physician’s practice
- Promote organizational effectiveness and efficiency through team-based QI initiatives
- Work in an environment that supports their involvement in QI and MOC

How Patients Benefit
When physicians participate in the Portfolio Program, their patients may benefit because they:

- Receive care that is delivered using improved patient care processes and outcomes
- Receive care from physicians who are committed to improving patient care

For more information on the Portfolio Program, visit http://mocportfolioprogram.org/approved-portfolio-sponsors/
Examples of University of Michigan Health System QI Projects Designated for Part IV MOC

Summarized on the following pages are 8 of the more than 30 quality improvement (QI) projects performed at the University of Michigan Health System that were documented as meeting the requirements of the ABMS Multi-specialty Part IV MOC Portfolio Program. Participating physicians met their certifying Board’s expectation for this Maintenance of Certification requirement. A list of all UMHS QI projects approved for Part IV MOC is available at http://ocpd.med.umich.edu/moc/approved-umhs-projects

The descriptions are each composed of (1) the summary description of the project that is reported to the ABMS Multi-specialty Portfolio Program at the time the project is approved and (2) results and comments from the more detailed Application/Report that is prepared before participation is verified. An example of the full report for the first project summarized below is presented on the UMHS MOC website http://ocpd.med.umich.edu/moc/part-iv-credit%20designation (see section #3). A full report is available for all completed projects.

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1. Pregnancy Risk Assessment for Women with Congenital Heart Disease

(9/1/11 – 11/1/12)

Specific Aim

The aim of the project is to improve communication of risks of pregnancy to women with congenital heart disease as well as other physicians caring for these patients, including primary care physicians and obstetricians.

Problem

Woman with congenital heart disease often do not receive proper counseling regarding cardiovascular risks of pregnancy. Women with significant heart disease often present well into pregnancy in situations where a pre-pregnancy evaluation or therapeutic regimen might have improved the pregnancy outcome. It is the recommendation the 2008 American College of Cardiology/American Heart Association guidelines for the care of adults with congenital heart disease that women undergo pre-conception counseling and risk stratification prior to pregnancy.

Patient population

The project includes women aged 18-45 with congenital heart disease. The project will involve women seen in the adult congenital cardiology clinic as well as adult women followed within the pediatric cardiology clinics. The physician will be responsible for identifying women aged 18-45 in their clinic. The average interval of follow-up for adults with congenital heart disease is one year, so it is not likely that there will be significant duplication of patients.

Measures

The measure will be documentation of the CARPREG score, a well-accepted method for risk stratification of women with heart disease. The numerator will be the number of patients for whom the CARPREG score is documented in the clinic letter. The denominator will be the number of women aged 18-45 seen by the physician practitioner. Both of the 2 adult congenital physician practitioners will participate in the project. All pediatric cardiologists who frequently see adult patients (>2-3 per month) will be encouraged to participate. For pediatric cardiologists, the pre-intervention compliance rate will be assumed to be 0 as pediatric cardiologists have not been educated as to pregnancy risk assessment tools.

Interventions

Education and calculation worksheet.

The initial phase of the intervention consisted of an education phase in which clinicians were educated regarding the CARPREG score. Participating physicians received the original paper describing the justification for the score, as well as how to calculate the score. They were also instructed in how to use a worksheet to simplify calculating the score. The physician lead for the project (TC) provided the physician education.

Process for identifying relevant patients and recordingscores.

The operational process differed slightly between the adult congenital clinic and the pediatric cardiology clinic because clinic processes and resource vary. Implementing the process involved educating other health care team members regarding the process.
Adult Congenital Program Process

The adult congenital program assistant reviewed the clinic list for the day and identified women aged 18-45.

- The clinic nurse brought this patient list to clinic. As patients were brought back, the clinic nurse affixed the CARPREG calculation worksheet to the patients’ paperwork.
- The attending physician calculated the CARPREG score at the time of the visit, and dictate the CARPREG score into the diagnosis list of the clinic letter.

Pediatric Clinic Process

- Currently, pediatric cardiologists review their patient list the day prior to or the morning of clinic and note what studies the patients will require at their visit. This is then written on a dry erase board next to the patients name during clinic.
- When pediatric cardiologists reviewed their patient lists, they identified women aged 18-45 and noted “CARPREG” next to the patients name
- The medical assistants then transcribed this to the dry erase board. This served as a reminder to do the CARPREG assessment
- CARPREG calculators were made available in bins in the clinic team rooms. This was done by the physician lead (TC)
- The attending physician calculated the CARPREG score at the time of the visit, and dictated the CARPREG score into the diagnosis list of the clinic letter. If a fellow performed the dictation, the fellow would dictate the CARPREG score.

Results

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Eligible Women Seen (Aged 18-45 with Congenital Heart Disease)</th>
<th>N</th>
<th>% with CARPREG Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline: 9/1/11 – 12/31/11</td>
<td></td>
<td>150</td>
<td>3%</td>
</tr>
<tr>
<td>Post-intervention 4/1/12 – 6/30/12</td>
<td></td>
<td>117</td>
<td>74%</td>
</tr>
<tr>
<td>Post-adjustment 9/1/12 – 10/31/12</td>
<td></td>
<td>96</td>
<td>80%</td>
</tr>
</tbody>
</table>

Comments/Plans

The continued reminder to physicians to document the CARPREG score should make the process sustainable. During the last time period a problem encountered by both clinics was the transition to a new electronic medical record (MiChart) that did not have a location for recording CARPREG scores. A template was ultimately created. This resulted in compliance rates of greater than 90% in the last month of the period.
2. Improving Diabetic Foot evaluation rates in UMHS Family Medicine Clinics  
(6/30/13 – 11/30/13)

Specific Aim
To improve the rate of diabetic patients having had their feet examined and documented each year.

Problem
Screening for peripheral neuropathy is an important part of the management of diabetic patients. Diabetic neuropathy is one of the leading contributors to foot infections and ultimately amputations and other morbidity. Therefore yearly diabetic foot exams are an important quality measure by multiple payors and part of most if not all diabetes guidelines. In the past, in the department of Family Medicine, we used a population management system, called Cielo, with point of care (POC) prompts to help remind clinicians to perform the diabetic foot exam when one was due. With the implementation of EPICARE (Michart) in August of 2012, Cielo ceased to function. The reminder system within Michart, Best practice advisory (BPA), required a different workflow that up to this point was not developed as a standard workflow. We are now working to develop a standard workflow workflow and monitor adherence to that workflow to improve the rates of foot exams performed and documented.

Patient Population
Adult (age ≥18) Diabetic patients that see a UM family physician at one of 5 Family Medicine outpatient clinics.

Interventions
Feedback of performance data to those performing care (8/28/13)
Educational intervention with the faculty on how to properly document foot exams in Michart.
Develop/update standard procedures for medical assistants to see if a patient is due for the foot exam (BPA) and how to prepare the patient during the visit (remove shoes and socks, have monofilament available)
Educate medical assistants regarding these procedures
Educate medical assistants on initiation of documentation of the foot exam for the physician
Panel managers review GAP reports to correct errors, and contact patients overdue to schedule appointment or note on upcoming appointment to have it done.
Discussion with the endocrinologists at their faculty meeting to educate them on the methods and importance of properly documenting their foot exams
Panel managers notifying patients that they were due for the foot exam on an individual basis and noting in the appointment summary to alert medical assistants and providers
In some sites, medical assistants performed and documented part of the foot exam to help improve provider efficiency

Measures
% of patients from the above patient population that have a diabetic foot exam performed and recorded in Michart, as a Health Maintenance Modifier, in the last 365 days. Numerator is # of patients that have had the diabetic foot exam done and documented properly in the last 365 days. Denominator is the total number of diabetic patients fitting the above patient population.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N Patients</td>
<td>% with foot exam</td>
<td>N Patients</td>
</tr>
<tr>
<td>Fam Med Center 1</td>
<td>817</td>
<td>65%</td>
<td>839</td>
</tr>
<tr>
<td>Fam Med Center 2</td>
<td>809</td>
<td>56%</td>
<td>828</td>
</tr>
<tr>
<td>Fam Med Center 3</td>
<td>299</td>
<td>60%</td>
<td>300</td>
</tr>
<tr>
<td>Fam Med Center 4</td>
<td>452</td>
<td>53%</td>
<td>476</td>
</tr>
<tr>
<td>Fam Med Center 5</td>
<td>629</td>
<td>52%</td>
<td>655</td>
</tr>
<tr>
<td>All Family Medicine</td>
<td>3,006</td>
<td>58%</td>
<td>3,098</td>
</tr>
</tbody>
</table>

Note: Number of patients is the number with diabetes in the UM Health System’s registry of diabetic patients on the last day of the intervention period. The percent is the number of these patients who, on the last day of the intervention period, have had a diabetic foot exam performed in the previous 365 days.

Comments/Plans

Providers now know how to correctly document the intervention and staff training to assure proper preparation has been completed. We will need to continue to train new providers and staff to maintain our recent gains, and continue to require excellence from them.
3. Eliminating Non-Medically-Indicated Planned Delivery
   (1/1/11 – 9/30/12)

Specific Aim
Von Voitlander Women’s Hospital aims to eliminate non-medically-indicated early term planned delivery.

Problem
Non-Medically-Indicated early (prior to 39 weeks’) planned delivery is common nationally and at the VonVoightlander Women’s Hospital (VVWH). It is associated with excess neonatal morbidity. Appropriately delaying non-medically-indicated planned deliveries to 39 weeks reduces neonatal morbidity, reduces admission to the NICU, and lowers costs.

Patient population
Parturients with no fetal or maternal medical indications for delivery.

Measures
Denominator: all deliveries (cesarean or vaginal) 37 weeks + 0 days to 38 weeks +6 days gestation, with Leapfrog / Joint Commission PC-01 exclusion criteria applied, and in addition. (Roughly, this group is spontaneous labor + elective deliveries). Numerator: elective deliveries (induced labor or planned cesarean).

Interventions

Education
- Educate providers about evidence which suggests early elective delivery is associated with significant neonatal risk.
- Educate about the multiple national efforts directed toward reducing the rate of elective early delivery.
- Educated about standard of care that has been defined due to these widespread efforts.
- Define department expectations (0 early elective deliveries.)

Methods
- M&M presentation (August 2012)
- Division meeting presentations (June 2012; July 2012)
- Department-wide communication (September, 2012)
- e-mail to all disciplines (including staff nurses)

Define QI process (peer review) that will address non-compliance.
- Early non-medically-indicated delivery is now QI Indicator (June 2012)
- Pernatal Joint Practice Committee Guideline endorses the avoidance of early non-medically indicated delivery. (May 2012)
- All Early non-medically-indicated deliveries (QI Indicator) reviewed by QI Committee peer review. Determination and action taken (verbal, written feedback to surgeons, department action via OPPE when necessary) QI ‘Advisory Letters’ sent to non-compliers.
Inform department about rates

- Present to individual faculty their 2011 data and department data (blinded) (August, 2012)

Plan Birth Center O.R process improvement:
“Scheduled Cesarean Team” (Nov., 2012-ongoing)

- Committee comprised of Clinical leaders, Residency leaders, Residents, Nursing leaders, Staff nurses, Scrub techs.
- Improved access: 3 spots per day instead of 2 to 3
- Defined scheduling guidelines
- Maintain direct access of surgeons to the schedule (no intermediary)
- Separate Team (outside of on-duty call team) for scheduled cases (separate faculty, residents, anesthesia, operating room staff)

QI Director presented data to faculty at M&M, Faculty meetings. Faculty feedback invited and received.
(Nov. and Dec., 2012)

- Individual rates reported to faculty, QI Letters sent to non-compliers (ongoing)
- QI Director sent resources to faculty.
  (January 2013)
- These included patient education materials to help convince patients of the reason to wait
- Posters sent to all offices from March of Dimes
- Communication sent via email about the success of the effort, reminding everyone of the goals.
- QI Director worked with individual faculty to identify barriers, plan strategies for compliance.

New PJPC Guideline (Feb 2013)

- with updates, mainly in language.
- Also added a required consultation with Maternal Fetal Medicine in order to schedule an early planned non-medically-indicated delivery. (“Hard Stop”)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>N Eligible Deliveries 37+0 to 38+6 Weeks Gestation</th>
<th>N of These Elective</th>
<th>% Elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline: 1/1/11 – 12/31/11</td>
<td>358</td>
<td>54</td>
<td>15%</td>
</tr>
<tr>
<td>Post intervention: 07/01/2012 – 09/30/2012</td>
<td>90</td>
<td>2</td>
<td>2.2%</td>
</tr>
<tr>
<td>Post-adjustment: 01/01/2013 – 06/30/2013</td>
<td>129</td>
<td>2</td>
<td>1.6%</td>
</tr>
</tbody>
</table>

Comments/plans

Ob/Gyn Database will be fully operational by August, 2013. This will automate much of the data gathering and make manual analysis/review easier to accomplish and to track.
- Implementation of Scheduled Cesarean Team July 1, 2013
- Statit OPPE Dashboard will display individuals performance, real-time
- This project will continue with quarterly reporting within the department, then twice-yearly reporting to the Joint Commission, annual reporting to Leapfrog.
4. **Enhancing Access to Primary Care at the VA Ann Arbor Healthcare System**

(5/1/11 – 9/30/12)

**Specific Aim**

As a result we wanted to improve the access of VA patients to care as demonstrated by the following national VA performance measures:

- Percentage of appointments made on the same day as the desired date by the patient (target of 66%)
- Percentage of appointments made within 7 days of the desired date by the patient (target 90%)
- Percentage of all visits to primary care that include telehealth or telecommunication with either the primary care physician or primary care nurse case manager (target 20%).

**Problem**

To improve overall clinic access to primary care for both standard face-to-face visits and telephone visits by implementing a panel management process and by instituting telephone visits. Nationally the VA has a significant interest and focus on assuring that all patients can be seen in a timely fashion (both new patients and established patients). The VA Ann Arbor is not currently meeting the targets for access as established by the Department of Veterans Affairs. Additionally the VA Central Office wants primary care providers to integrate telephone care/visits into their daily management of patients. The VA Ann Arbor is not currently meeting targets for telephone visits.

**Patient population:** The population of patients is all veterans utilizing primary care clinic at the VA Ann Arbor Healthcare System. This includes established patients and new patients to primary care.

**Measures**

**National VA performance measures for Access**

- Percentage of appointments made on the same day when the patient desires to be seen the day they call for an appointment (target 66%). Numerator: appointments made the day of the request when same day requested/ Denominator - all primary care appointments requested to be scheduled specifically on the day of the request/call

- Percentage of appointments made within 7 days of the desired date by the patient (target 90%). Numerator - date of appointment is within 7 days of the desired date as determined by the patient/Denominator - all primary care appointments for a provider or a nurse manager in primary care

- National VA performance measures for Telephone Visits:

- Percentage of all visits to primary care that include telehealth or telecommunication with either the primary care physician or primary care nurse case manager (target 20%). Numerator is phone visits by provider or assigned nurse case manager/Denominator is all visits to the primary care provider or primary care nurse manager
Interventions

- Providers were educated about the concepts of panel management, return visit intervals and open access scheduling. This occurred during scheduled administrative meetings prior to the intervention period beginning.
- Development and Implementation of a panel management process. This involved providing primary care providers prospective lists of their upcoming appointments two weeks in advance. In addition, providers were provided lists of all patients with future appointments who were currently scheduled beyond 7 days of their desired date. Providers reviewed this list to evaluate if any of the current scheduled patients were inappropriately scheduled (i.e. didn’t truly need an appointment) or could be seen by other members of the primary care team to provide the appropriate clinical care (i.e. Nurse Case Management face-to-face or phone visit, Clinical Pharmacist clinic face-to-face or phone visit, integrated primary care mental health clinic or specialty clinics). Providers were also encouraged to create additional access by opening clinics if possible.

- The clerical staff was taught how to print the data for the providers they support.
- Physicians received data on return visit interval for their patients as well as peer comparison data.

Telephone Visit Interventions:

- Primary care providers and nurses were instructed on what types of patients would be appropriate for phone visits versus face-to-face visits.
- PACT (Patient Aligned Care Team) phone clinics were created and mandated for all primary care providers and primary care nurse managers. These clinics could be utilized in place of traditional face-to-face visits.

<table>
<thead>
<tr>
<th>Measurement Period</th>
<th>Same Day Access</th>
<th>N of Visits</th>
<th>% within 7 Days of Desired Date</th>
<th>% with Telehealth or Telecommunication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N of Requests</td>
<td>Visits on Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline: 5/1/11–8/31/11</td>
<td>190</td>
<td>39%</td>
<td>7,181</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>Post-Intervention 10/1/11–3/31/12</td>
<td>155</td>
<td>60%</td>
<td>6,227</td>
<td>88%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34%</td>
</tr>
<tr>
<td>Post-adjustment: 4/1/12–8/31/12</td>
<td>269</td>
<td>27%</td>
<td>5,583</td>
<td>80%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35%</td>
</tr>
</tbody>
</table>

Comments/plans

This project has fundamentally helped to change the manner in which our group of physicians and support staff view access to care. Panel management will be an ongoing part of standard weekly and daily work within each primary care teamlet. The goals will continue to be to create timely access for all our veteran patients. Additionally, we have been successful in meeting our telephone visit measure and anticipate that this will remain a standard part of our access to patients in the coming years. Telephone visits will remain a part of the standard physician schedule and we will continue to monitor their use as will the VA nationally and regionally.
5. Use of Point of Care Clinical Reminders to Improve Tdap Vaccination Rates
(12/1/08 – 11/30/11)

Specific Aim
This project aims to improve tdap immunization rates for patients with no prior tdap documented.

Problem
The Advisory Committee on Immunization Practice (ACIP) added a new recommendation for Tdap immunization booster for all adults in 2006 (MMWR 226:55 (RR-17):1-33). Despite this, there was only minimal increase in Tdap vaccination for eligible patients ages 11-64 who obtained care at the University of Michigan Family Medicine clinics subsequent to this new guideline.

Implementing substantial changes in clinical practice, even with clear cut, agreed upon guidelines, is challenging to accomplish. Even when physicians agree with the changes, clinical practice does not easily follow suit. At UMHS Family Medicine, a patient population management database program (Cielo Clinics) has been in place since 2004 to facilitate clinical care which follows evidence-based guidelines. Among the tools available with this program is a point of care reminder system which prompts specific interventions for a defined patient population.

This project was undertaken to both improve tdap vaccination rates in our patient population, and more broadly, to evaluate the effectiveness of a point of care reminder system which can be applied to multiple clinical areas if shown to be an effective intervention.

Patient Population
All patients without prior documentation of tdap vaccination, ages 11-64, receiving care at UMHS Family Medicine clinics.

Measures
# patients seen without tdap documentation during base year and project time period (denominator). # of these patients receiving a tdap vaccine during base year and project time period (numerator). The fraction = response rate to cielo prompt for tdap vaccine.

Interventions
Given the CDC recommendation to improve Tdap Vaccination rates, in discussion during faculty meetings we established a point of care reminder with the following simple wording: “Tdap Vaccine”. The agreed upon method of addressing this reminder was that when it occurred, the medical assistant would confirm with the patient if they had not had a tdap vaccine administered elsewhere. If so, they would enter this information into the electronic medical record (careweb). If not, the providers agreed to offer the tdap vaccine to the patient. Providers agreed to inform patients of the differences between Td and Tdap when this question arose. If the patient agreed to the immunization, the vaccine would be administered and recorded in careweb.
Results

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Number of Patients in Overall Population</th>
<th>Number of Patients with Tdap documented</th>
<th>Percentage of patients with Tdap</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/1/2008-11/30/2009</td>
<td>42,738</td>
<td>13,733</td>
<td>32%</td>
</tr>
<tr>
<td>12/1/2009-11/30/2010 (post intervention)</td>
<td>42,361</td>
<td>24,781</td>
<td>58%</td>
</tr>
<tr>
<td>12/1/2010-11/30/2011 (post-adjustment)</td>
<td>43,081</td>
<td>30,298</td>
<td>70%</td>
</tr>
</tbody>
</table>

Cielo Responses

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Number of Patients Seen</th>
<th>Cumulative Tdap Administered</th>
<th>Prompt Tdap Administered and documented</th>
<th>Prompt Tdap not given</th>
<th>Prompt not addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/1/2010-11/30/2011</td>
<td>21,776</td>
<td>12,861</td>
<td>6,033</td>
<td>1,516</td>
<td>2,369</td>
</tr>
</tbody>
</table>

Note: 5517 patients had additional documentation of Tdap during the post-adjustment period. Cielo data indicates 6033 had Tdap addressed or documented during this same time frame. This discrepancy is due to a process issue, not all providers indicated outside Tdap by entering the data directly into careweb, instead, this was only indicated on the cielo form. Indicating a Tdap on a cielo form does not automatically result in documentation in Careweb.

Comments/plans

To facilitate the process further, we are establishing standing orders for Tdap administration by the medical assistant when a prompt occurs. The other causes are variations that are typically individual (not systemic). To address individual variation monthly team meetings will occur at which individual process issues will be addressed.
6. Improving the Appropriateness of Packed Red Blood Cell Transfusions for Patients admitted on the General Medicine Services
(2/9/10 – 4/1/12)

Specific Aim
This project aims to improve the overall appropriateness of RBC transfusions given to patients admitted to the general medicine services. This will be accomplished by improving physicians’ understanding and awareness of institutional guidelines that are in place to help direct RBC transfusion practices, as well as allowing physicians to review their own transfusion practices and compare them to their peers’ in addition to monitoring the appropriateness of their RBC transfusions based on lab parameters.

Problem
There is a growing body of data that shows judicious use of packed red blood cells to be associated with decreased cost to the hospital system as well as improved patient outcomes. To this end, institutional guidelines were developed to promote a more restrictive transfusion practice here at the U of M. Despite this, transfusion practices vary significantly between individual physicians and need to be monitored and reviewed.

Patient population
General medicine adult patients admitted to inpatient medicine services at University Hospital.

Measures
Percentage of total orders for red blood cell transfusions that do not meet pre-transfusion lab criteria for hemoglobin and hematocrit

Denominator
All RBC transfusions for patients on the General Medicine service during the measured quarter. Excluding RBC transfusions used to treat bleeding episodes (i.e., transfusions of four or more units within four hours or less, active GI bleeding, etc).

Numerator
RBC transfusions from the denominator where the patient’s pre-transfusion hemoglobin was less than 8.3 g/dL or hematocrit was less than 25% during the measured quarter.

Interventions
1. An educational campaign was presented to the group drawing attention to data indicating improved outcomes with a restrictive transfusion protocol as well as drawing attention to institutional guidelines.
2. Individual-specific feedback was presented to each individual physician on a quarterly basis in the form of an email containing the data mentioned in 1. Each physician could then assess how they are performing as compared to their peers as well as enabling them to go back and review specific cases that were felt to be outliers based on laboratory parameters.
3. Each physician was encouraged to communicate any suggestions and potential improvements in this QI initiative with each emailing, as well as at multiple group-wide conferences.
Comments/Plans

This will continue to occur via a continuation of the educational campaign (as new physicians are coming into the group on a regular basis), regular quarterly review of data by each physician, as well as culture change within the group. Additionally, new guidelines have been published that further support a restrictive blood transfusion protocol, which should help to standardize this process.
7. Identifying Overweight and Obese Patients in Pediatric Primary Care Clinics
(3/1/11 – 2/1/12)

Specific Aim
This project aims to increase the percentage of pediatric patients with an annually documented BMI.

Problem
Obesity is reaching "epidemic" proportions among children in the U.S. Evidence-based guidelines from the American Academy of Pediatrics and the Endocrine Society recommend that as a first step in developing a systematic program to address obesity in pediatric patients, annually their height and weight should be documented and Body Mass Index (BMI) calculated and documented. The annual BMI measurement provides an empirical basis to initiate treatment and over time to evaluate treatment success and need for change in treatment. However, BMI is currently not documented annually for many of our patients. This project to document children’s BMI annually is the first in a series of linked projects to improve the clinical management of overweight and obese pediatric patients.

Patient population
The population in this project includes all patients aged 3 years and older seen in primary care pediatrics clinics within the University of Michigan Health Care System.

Measures
For all pediatric patients aged 3 years or greater, the numerator will be the number with a documented BMI within the past 12 months, and the denominator will be all patients in that age range seen for any doctor or nurse practitioner visit during the time frame.

Interventions
The intervention objective was to have the medical assistant measure each child’s height at all visits in pediatric primary care clinic, both at health maintenance exams as well as sick and follow-up visits. Measuring weight was already a system standard for all visits. However, previously the system standard was to measure a height only at health maintenance exams. Also measuring height at sick and follow-up visits provided BMI information at all visits. This provided an annual BMI measure for most patients since most patients are seen at least annually for some type of visit.
To accomplish this objective, a physician QI site lead was identified at each clinical site. The QI site lead was responsible for working with the site medical director, administrator, physicians, and other site staff to define and implement local standard procedures for height to be measured at all visits. This was in addition to the site’s current standard procedure for measuring weight at all visits.
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>% with BMI*</td>
<td>N</td>
</tr>
<tr>
<td>Peds Health Center 1</td>
<td>2,372</td>
<td>85%</td>
<td>2,357</td>
</tr>
<tr>
<td>Peds Health Center 2</td>
<td>1,308</td>
<td>77%</td>
<td>1,275</td>
</tr>
<tr>
<td>Peds Health Center 3</td>
<td>2,243</td>
<td>77%</td>
<td>2,114</td>
</tr>
<tr>
<td>Peds Health Center 4</td>
<td>1,812</td>
<td>86%</td>
<td>1,835</td>
</tr>
<tr>
<td>Peds Health Center 5</td>
<td>1,682</td>
<td>91%</td>
<td>1,550</td>
</tr>
<tr>
<td>Peds Health Center 6</td>
<td>1,471</td>
<td>88%</td>
<td>1,366</td>
</tr>
<tr>
<td>Peds Health Center 7</td>
<td>1,134</td>
<td>73%</td>
<td>1,097</td>
</tr>
<tr>
<td>Peds Health Center 8</td>
<td>595</td>
<td>81%</td>
<td>599</td>
</tr>
<tr>
<td>Peds Health Center 9</td>
<td>1,198</td>
<td>85%</td>
<td>1,199</td>
</tr>
<tr>
<td>General Peds Overall</td>
<td>13,815</td>
<td>83%</td>
<td>13,374</td>
</tr>
</tbody>
</table>

Comments/Plans

The next intervention will be to utilize the data on BMI to target appropriate counseling and education for children with elevated BMI. Sites that continue to fall below the benchmark will continue to work on the identified barriers to obtaining a BMI.
Specific Aim
Reduce delay in patient scheduling, optimize clinic visit time and avoid delays in charge entry.

Problem
1. Excessive delay in scheduling patient visits.
2. Unnecessary extension of patient visits.
3. Delay in charge entry.

Patient population
Patients seen by the department of physical medicine and its subspecialties at the Burlington Office Complex.

Measures

% new patients scheduled and seen within four weeks:
Denominator is total # of patients scheduled. Numerator is # of these patients seen within three weeks.

% of calls to the call center that are answered within 3 minutes:
Denominator is # of calls to the call center. Numerator is # of these calls that are answered within 3 minutes.

% of patient appointments completed within their scheduled time:
Denominator is number of patient appointments scheduled. Numerator is # of these appointments that are completed within their scheduled time. This can be calculated separately for new patients and for returning patients.

% of PEFs that are entered within three days:
Denominator is total number of PEF entered. Numerator is # of these PEFs entered within three days.

Interventions:
1. Modify/add physician clinics.
2. Restructure our prescription refill and call system for better telephone efficiency.
3. Provide physician awareness of the importance of:
   a. maintaining appropriate clinic visit time and
   b. charge entry.
<table>
<thead>
<tr>
<th>Time Period</th>
<th>New patients scheduled/seen within 4 weeks</th>
<th>Calls answered within 3 min.</th>
<th>Appointments completed within scheduled time</th>
<th>PEFs entered within 3 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline 6/11–7/1/11</td>
<td>32% of 299</td>
<td>&lt; 68% of 4,989</td>
<td>23% of 328</td>
<td>14% of 1,215</td>
</tr>
<tr>
<td>Post-Intervention 8/1–9/1/11</td>
<td>47% of 464</td>
<td>78% of 5,239</td>
<td>48% of 418</td>
<td>40% of 1,091</td>
</tr>
<tr>
<td>Post-Adjustment 10/1–11/1/11</td>
<td>61% of 438</td>
<td>84% of 5,489</td>
<td>51% of 419</td>
<td>40% of 1,458</td>
</tr>
</tbody>
</table>

**Comments/plans**

Ongoing reviews of performance review will occur at monthly physician meetings, implementing recommended process changes, and reviewing the results at subsequent physician meetings. The stated goals will be used as benchmarks. Future plans include consideration of Saturday clinics to enhance access further.
ABMS Member Boards participating in the Portfolio Program include the following:

American Board of Allergy and Immunology
American Board of Anesthesiology
American Board of Dermatology
American Board of Emergency Medicine
American Board of Family Medicine
American Board of Internal Medicine
American Board of Medical Genetics and Genomics
American Board of Obstetrics and Gynecology
American Board of Ophthalmology

American Board of Orthopaedic Surgery
American Board of Otolaryngology
American Board of Pathology
American Board of Pediatrics
American Board of Physical Medicine and Rehabilitation
American Board of Preventive Medicine
American Board of Psychiatry and Neurology
American Board of Surgery
American Board of Thoracic Surgery

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