Report on a QI Project Eligible for Part IV MOC

Instructions

Determine eligibility. Before starting to complete this report, go to the UMHS MOC website [ocpd.med.umich.edu], click on "Part IV Credit Designation," and review sections 1 and 2. Complete and submit a "QI Project Preliminary Worksheet for Part IV Eligibility." Staff from the UMHS Part IV MOC Program will review the worksheet with you to explain any adjustments needed to be eligible. (The approved Worksheet provides an outline to complete this report.)

Completing the report. The report documents completion of each phase of the QI project. Final confirmation of Part IV MOC for a project occurs when the full report is submitted and approved.

An option for preliminary review (recommended) is to complete a description of activities through the intervention phase and submit the partially completed report. (Complete at least items 1-16 and 27a-b.) Staff from the UMHS Part IV MOC Program will provide a preliminary review, checking that the information is sufficiently clear, but not overly detailed. This simplifies completion and review of descriptions of remaining activities.

Questions are in bold font and answers should be in regular font (generally immediately below the questions). To check boxes electronically, either put an "X" in front of a box or copy and paste "☒" over the blank box.

For further information and to submit completed applications, contact either:
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Report Outline

Section	Items	
A. Introduction	1-6.	Current date, title, time frame, project leader, specialties/subspecialties involved, funding
B. Plan	7-10.	General goal, patient population, IOM quality dimensions addressed, experimental design
	11-12.	Baseline measures of performance, specific performance objectives
	13.	Data review and identifying underlying (root) causes
C. Do	14-16.	Intervention(s), who is involved, initiated when
D. Check	17-18.	Post-intervention performance measurement, data collection, performance level
E. Adjust – Replan	19.	Review, continuing/new underlying causes,
F. Redo	20.	Second intervention
G. Recheck	21-22.	Post-adjustment performance measurement, data collection, performance level
H. Readjust plan	23.	Review, continuing/new underlying causes to address
I. Future plans	24-26.	Subsequent PDCA cycles, standardize processes, "spread" to other areas
J. Physician involvement	27-31.	Physician's role, requirements, reports, reflections, participation, number
K. Project Organization	32-34.	Part of larger initiative, organizational structure, resources, oversight, Part IV opportunity

QI Project Report for Part IV MOC Eligibility

A. Introduction

1. **Date** *(this version of the report):*
   9/4/2014

2. **Title of QI project:** *Monitoring the side effects of psychostimulant medications in patients being treated for an ADHD diagnosis*

3. **Time frame**
   a. **At what stage is the project?**
      ☐ Design is complete, but not yet initiated
      ☐ Initiated and now underway
      x Completed

   b. **Time period**
      (1) Date physicians begin participating (may be in design phase): June, 2013
      (**2) End date**: x actual April 2014 ☐ expected _____

4. **QI project leader *[responsible for attesting to the participation of physicians in the project]:***
   a. **Name**: Prachi Shah, MD
   b. **Title**: Assistant Professor, Pediatrics
   c. **Institutional/organizational unit/affiliation**: Dept of Pediatrics,Division of Child Behavioral Health, UMHS
   d. **Phone number**: 734-764-2641
   e. **Email address**: prachis@umich.edu
   f. **Mailing address**: 300 N Ingalls Street; Suite 1056 ; Ann Arbor, MI 48109

5. **What specialties and/or subspecialties are involved in this project?**
   Developmental Pediatrics; Adolescent Medicine

6. **Will the funding and resources for the project come only from internal UMHS sources?**
   X Yes, only internal UMHS sources
   ☐ No, funding and/or resources will come in part from sources outside UMHS, which are: _____

The Multi-Specialty Part IV MOC Program requires that projects engage in change efforts over time, including at least three cycles of data collection with feedback to physicians and review of project results. Some projects may have only three cycles while others, particularly those involving rapid cycle improvement, may have several more cycles. The items below are intended to provide some flexibility in describing project methods. If the items do not allow you to reasonably describe the methods of your specific project, please contact the UMHS Part IV MOC Program office.

B. Plan

7. **General goal**

   a. **Problem/need. What is the "gap" in quality that resulted in the development of this project? Why is this project being undertaken?**

Physicians in the Sections of Developmental Behavioral Pediatrics and Adolescent Medicine expressed concern that documentation of measurement and discussion of medication side effects could be improved. The American Academy of Pediatrics Guideline on ADHD states in the supplement "A face-to face follow-up visit is recommended …during which clinicians review the responses (to medication) … and monitor adverse effects, pulse, blood pressure, and weight." Our

physicians were concerned that discussion of side effects may not be uniformly performed with patients/families seen for initial ADHD management in our practices.

b. Project goal. What outcome regarding the problem should result from this project?
To optimize the monitoring and documentation of side effects in patients with ADHD who are being treated with a psychostimulant medication.

8. Patient population. What patient population does this project address.
Children with a history of ADHD and treated with stimulant medication

9. Which Institute of Medicine Quality Dimensions are addressed? *[Check all that apply.]*

x Safety	☐ Equity	☐ Timeliness
x Effectiveness	☐ Efficiency	☐ Patient-Centeredness

10. What is the experimental design for the project?
x Pre-post comparisons (baseline period plus two or more follow-up measurement periods)
☐ Pre-post comparisons with control group
☐ Other: _____

11. Baseline measures of performance:

a. What measures of quality are used? If rate or %, what are the denominator and numerator?
Documentation of side effects of stimulant medication:

% Documented: # of visits of ADHD cases in which complete review of side effects documented / Total # of visits of patients on ADHD medication

b. Are the measures nationally endorsed? If not, why were they chosen?
Yes : monitoring of side effects of stimulant medication for ADHD is endorsed by the American Academy of Pediatrics.

c. What is the source of data for the measure (e.g., medical records, billings, patient surveys)?
Retrospective chart review of patients diagnosed with ADHD (ICD-9 code 314.01)

d. What methods were used to collect the data (e.g., abstraction, data analyst)?
Data abstraction

e. How reliable are the data being collected for the purpose of this project?
Reliability was ensured by including only patients who had a diagnosis of ADHD (Diagnosis 314.01). Careful retrospective chart review was performed by trained individual to review patient records, and verify whether a complete list of side effects was assessed and documented.

f. How are data to be analyzed over time, e.g., simple comparison of means, statistical test(s)?
Single case design, with pre-post comparisons after intervention implemented.

g. To whom are data reported?
Data were reported to the Child Behavioral Health Physicians, with oversight from the DBP Section Chief, Dr. Barbara Felt.

h. For what time period is the sample collected for baseline data?
Baseline : 6/1/2013 – 9/1/2013

12. Specific performance objectives

a. What is the overall performance level(s) at baseline? *(E.g., for each measure: number of observations or denominator, numerator, percent. Can display in a data table, bar graph, run chart, or other method. Can show here or refer to attachment with data.)*

We identified at least 10 patients per physician who have an ADHD diagnosis (314.01) and who were being treated with a psychostimulant medication through a retrospective chart review from June – September, 2013. We reviewed the records to determine if there was a documentation of the following:

- Was a complete review of side effects of medication (eg. Headaches, Stomachaches, Appetite changes, Sleep disturbance, Tics, Irritability) discussed and documented in medical record?

Time Period	N of ADHD Patient Visits	% of Visits with Complete Review of Side Effects Documented
Baseline 6/1/13 - 9/30-13	72	0%

At baseline, there was no uniform documentation of specific side effects (e.g. tics, appetite changes, irritability, sleep disturbances). Providers may have included a statement that "side effects were reviewed" without further elaboration.

b. Specific aim: What is the target for performance on the measure(s) and the timeframe for achieving the target?

Target: to document monitoring of a complete list of side effects in patients with ADHD, treated with stimulant medication in >60% of cases as a group on average, after the end of 2 improvement cycles.

A compliance rate of 60% was chosen, based upon similar success rates of improved physician documentation after a QI intervention. (citation below).

c. How were the performance targets determined, e.g., regional or national benchmarks?

Because we were looking to demonstrate behavioral change in physician practice, we sought benchmarks in the scientific literature to demonstrate what level of compliance would demonstrate "meaningful behavioral change." A systematic review on "Effectivness of Teaching Quality Improvement to Clinicians" reviewed improvement in physician documentation before and after implementation of QI curricula in 5 studies. Pre-QI levels of physician documentation ranged from 18-24%, with levels of documentation post-intervention ranging from 34-37%, with one study documenting a "61% level of chart completeness" after implementation of a QI intervention (Boonyasai, R.T., *JAMA* 2007). Thus, a documentation rate of 60% post-QI intervention, was chosen based on the report that physicians demonstrated "completeness of documentation" in 61% of cases after implementation of a QI intervention (Mohr, JJ. *Ambulatory Pediatrics*, 2003).

13. Data review and identifying underlying (root) causes.

a. Who will be/was involved in reviewing the baseline data, identifying underlying (root) causes of the problem(s), and considering possible interventions ("countermeasures") to address the causes? Briefly describe who is involved, how *(e.g., in a meeting of clinic staff)***, and when.**
In a section meeting in September 2013, with all participating faculty members (CP, BF, JL, PS), baseline data for each individual and the group were discussed, and interventions to improve documentation were discussed, and consensus to implement intervention was achieved.

b. What are the primary underlying/root causes for the problem(s) that the project can address? *(Causes may be aspects of people, processes, information infrastructure, equipment, environment, etc. List each primary cause separately. How the intervention(s) address each primary underlying cause will be explained in #14.c.)*

- New EMR implemented in 2012, resulting in an increased burden of documentation for patient visits, which was thought to contribute to suboptimal level of documentation of medication side effects.

C. Do *(See Appendix A for Logic Diagram)*

14. Intervention(s).

a. Describe the interventions implemented as part of the project.

- After baseline data were obtained, participating physicians reviewed individual and group results at section staff in September, 2013.
- In this meeting, we discussed the importance of performing a complete review of side effects for all patients on ADHD stimulant medication, with documentation in the medical record, and we reviewed the barriers to consistent documentation.
- We came to a consensus that with the complexity of the new electronic medical record (EMR), with numerous fields requiring input, the burden of documentation was increased, and there was not a systematic method to prompt providers to assess and document side effects associated with ADHD medication.
- To address this barrier, we created a MiChart (EMR) .dot phrase that could be incorporated into our clinic encounters to document that we queried the family on a comprehensive review of side effects associated with stimulant medication use. The MiChart .dot phrase contained the following content, prompting providers to query and document a complete review of side effects:

  *[NAME] demonstrates symptoms consistent with a diagnosis of **ADHD,** and is being treated with stimulant medication. We monitored efficacy and side effects of medication as follows:*

  A list of side effects was reviewed with family:
  - *Headaches: ****
  - *Stomachaches: ****
  - *Appetite changes: ****
  - *Sleep disturbance: ****
  - *Tics: ****
  - *Irritability: ****

- In our section meeting, we discussed the use of the .dot phrase, and our Section Chief articulated expectations that all providers use the .dot phrase consistently, to document that a complete review of medication side effects was performed in patients on ADHD medication

b. How are underlying/root causes *(see #13.b)* **addressed by the intervention(s)?** *(List each cause, whether it is addressed, and if so, how it is addressed.)*

- By including a phrase in the EMR, providers are cued to ask about a complete list of side effects of stimulant medication, and the documentation of the discussion is included in the electronic medical record, thereby increasing success of documentation of medication side effects.

15. Who is involved in carrying out the intervention(s) and what are their roles?

PS was responsible for designing the QI project, creating the .dot phrase, training providers in the use of the .dot phrase, and encouraging consistent use in patient doumentation.
All participants (CP, BF, JL, PS) were actively involved in implementing intervention, reviewing individual results, and interpreting data.

16. The intervention will be/was initiated when? (For multiple interventions, initiation date for each.)

Wave 1 intervention: 10/1/2013 – 2/28/2014

D. Check

17. Post-intervention performance measurement. Is this data collection to follow the same procedures as the initial collection of data described in #11: population, measure(s), and data source(s)?

X Yes ☐ No – If no, describe how this data collection

18. Performance following the intervention.

a. The collection of the sample of performance data following the intervention either:
Has occurred for the period: 10/1/2013 – 2/28/2014

b. If the data collection has occurred, what is post-intervention performance level? *(E.g., for each measure: number of observations or denominator, numerator, percent. Can display in a data table, bar graph, run chart, or other method. Can show here or refer to attachment with data.)*

Time Period	N of ADHD Patient Visits	% of Visits with Complete Review of Side Effects Documented
Baseline 6/1/13 - 9/30-13	72	0%
Post Intervention 10/1/13 – 2/28/14	149	34%

E. Adjust – Replan

19. Review of post-intervention data and identifying continuing/new underlying causes.

a. Who will be/was involved in reviewing the post-intervention data, identifying underlying (root) causes of the continuing/new problem(s), and considering possible adjustments to interventions ("countermeasures") to address the causes? Briefly describe who is involved, how *(e.g., in a meeting of clinic staff)***, and when.**

- **Who was involved?** All participating faculty members (CP, BF, JL, PS)
- **How?** *(e.g., in a meeting of clinic staff)* **:** Clinical Section meeting
- **When? :** After first wave of intervention, data were discussed in a section meeting in March, 2014

b. What are the primary underlying/root causes for the continuing/new problem(s) that the project can address? *(Causes may be aspects of people, processes, information infrastructure, equipment, environment, etc. List each primary cause separately. How the intervention(s) address each primary underlying cause will be explained in #20.c.)*

One predominant root cause was identified as barriers to implementation:

- Differences in Ages of Patient Population / Duration of time on ADHD Medication (e.g. new diagnosis / recent initiation of ADHD medications vs. chronic diagnosis of ADHD, on a stable dose of medication)
  - Two providers (BF, CP) saw predominantly older children and adolescents, many of whom who had a longstanding diagnosis of ADHD, and were on a stable dose of medication, with no changes in medication dosage made, and less likelihood of new onset of side effects. With these older patients and adolescents who have been on medication for a longer period, documentation of medication side effects was not always included in every follow up visit.
  - Two providers (PS, JL) saw predominantly younger children, in whom the diagnosis of ADHD was made for the first time, and medications were begun, and titrated, resulting in a need to monitor more closely the side effects of medication to determine optimal dose for titration.

Providers were encouraged to use dot phrase to document medication side-effects. Consensus to continue to implement intervention was achieved.

F. Redo

20. Second intervention.

a. The second intervention will be/was initiated when? (For multiple interventions, initiation date for each.)
3/1/2014 – 3/31/2104

b. If the second intervention has occurred, what interventions were implemented?
To address differences in provider practice, due to the varying ages of the patient population served, we instituted the following additional interventions:

- Education and feedback – at the meeting on date (see above) providers were provided feedback on performance deficiencies and patterns of patients likely to be overlooked.
- Tool adjustment – .dot phrase individualized by provider to improve documentation (e.g. "Patient has been on a stable dose of medication with no recent changes. Patient endorsed the following concerns related ADHD medication use:
  - o *Headaches: yes / no*
  - o *Stomachaches: yes / no*
  - o *Appetite changes: yes / no*
  - o *Sleep disturbance: yes / no*
  - o *Tics: yes / no*
  - o *Irritability: yes / no*

c. How are continuing/new underlying/root causes *(see #19.b)* **addressed by the intervention(s)?** *(List each cause, whether it is addressed, and if so, how it is addressed.)*
Continued encouragement to use EMR dot phrase fosters provider consistency in documentation.

G. Recheck

21. Post-second intervention performance measurement. Is this data collection to follow the same procedures as the initial collection of data described in #11: population, measure(s), and data source(s)?

X Yes ☐ No – If no, describe how this data collection

22. Performance following the second intervention.

a. The collection of the sample of performance data following the intervention(s) either:
Has occurred for the period: 3/1/2014 – 3/31/2014

b. If the data collection has occurred, what is the performance level? *(E.g., for each measure: number of observations or denominator, numerator, percent. Can display in a data table, bar graph, run chart, or other method. Can show here or refer to attachment with data.)*

Time Period	N of ADHD Patient Visits	% of Visits with Complete Review of Side Effects Documented
Baseline 6/1/13 - 9/30-13	72	0%
Post Intervention 10/1/13 – 2/28/14	149	34%
Post Adjustment 3/1/14 – 3/31/14	44	63%
In post adjustment period, for nurse practitioner and 1st return visits only*		96-100%

*see H and I below

H. Readjust

23. Review of post-second intervention data and identifying continuing/new underlying causes.

- **Who will be/was involved in reviewing the data, identifying underlying (root) causes of the continuing/new problem(s), and considering additional possible adjustments to interventions ("countermeasures") to address the causes? Briefly describe who is involved, how** *(e.g., in a meeting of clinic staff)***, and when.**

  - **Who was involved?** All participating faculty members (CP, BF, JL, PS)

  - **How?** *(e.g., in a meeting of clinic staff)* **:** Clinical Section meeting

  - **When? :** After second wave of intervention, data were discussed in a section meeting in April, 2014

- **What are the primary underlying/root causes for the continuing/new problem(s) that the project can address?** *(Causes may be aspects of people, processes, information infrastructure, equipment, environment, etc. List each primary cause separately.)*

  Upon further review of the data at the April section meeting, we found that new patient evaluations and first medication follow up for younger patients were more likely for providers JL and PS. Documentation of the ADHD review of medication side effects during the second wave was 100% for these providers.

  Older patients seen in follow up over time for ADHD or with other medical-mental health issues (ADHD a diagnosis but not the primary reason for the appointment) were more likely to be seen by BF and CP. The documentation of side effects by these physicians was 100% for the new patient evaluations and first follow-ups. However, the documentation didn't occur for return visits for the long-term established patients. BF had one case during the follow up period where, upon review, the ADHD review of medication side effects should have been used. The appropriate use of the ADHD review of medication side effects was 96% for this provider.

  We reviewed the AAP guideline supplement language again and after discussion we agreed as a group that documentation of review of all side effects was not necessary at each follow up visit. The AAP guideline has no recommendation for monitoring specific target symptoms longer term. Therefore, we found that our appropriate use of the ADHD-MOC phrase (for New Patients, first follow up on medication) ranged from 96-100% for all providers although our overall rate of MOC use was ~63%.

  To summarize our current standard of care for patients on ADHD medication:
  - For new patients and for patients with recent medication changes, ADHD medication side effects should be documented.
  - For patients who are long term, no recent medication changes, and stable, no documentation of medication side effects is required.

  Our results on the MOC-IV QI intervention indicates that we have met the appropriate standard of care, no further barriers are present and no further interventions needed.

If no additional cycles of adjustment are to be documented for the project for Part IV credit, ***go to item #24.***

If a few additional cycles of adjustments, data collection, and review are to be documented as part of the project to be documented, document items #20 – #23 for each subsequent cycle. Copy the set of items #20 – #23 and paste them following the last item #23 and provide the information. When the project to be documented for Part IV credit has no additional adjustment cycles, go to item #24.

If several more cycles are included in the project for Part IV credit, contact the UM Part IV MOC Program to determine how the project can be documented most practically.

I. Future Plans

24. How many subsequent PDCA cycles are to occur, but will not be documented as part of the "project" for which Part IV credit is designated?

NONE – we have met our goal of use of the ADHD-MOC-IV QI

25. How will the project sustain processes to maintain improvements?
Consider chart review in 1 year to determine fidelity to documentation of side effects associated with ADHD medication at New Patient and/or first follow up appointments on medication.

26. Do other parts of the organization(s) face a similar problem? If so, how will the project be conducted so that improvement processes can be communicated to others for "spread" across applicable areas?

ADHD is a common condition. Primary care doctors in General Pediatrics and Family Medicine also see children for diagnosis and management. The use of the EMR dot phrase to document the review of medication side effects might be of value to these groups. We do not have the resources to specifically address these groups, but will recommend that Ambulatory Care Services consider sharing this tool.

J. Physician Involvement

Note: To receive Part IV MOC a physician must both:
a. Be actively involved in the QI effort, including at a minimum:
- *Work with care team members to plan and implement interventions*
- *Interpret performance data to assess the impact of the interventions*
- *Make appropriate course corrections in the improvement project*

b. Be active in the project for the minimum duration required by the project

27. Physician's role. What are the minimum requirements for physicians to be actively involved in this QI effort?

a. Interpreting baseline data and planning intervention:
- Prior to implementation of QI intervention, participants will attend a staff meeting in September 2013 to review individual baseline data, and participate in self-reflective exercise to determine barriers to documentation of side effects

b. Implementing intervention:
- Starting 10/1/13 use .dot phrase for stimulant side effects as appropriate to practice

c. Interpreting post-intervention data and planning changes:
- At staff meeting in March, 2014, participants will review individual data, participate in self-reflective exercise to determine barriers to documentation of effects

d. Implementing further intervention/adjustments:
- Starting 3/1/14 use modified .dot phrase.

e. Interpreting post-adjustment data and planning changes:
- At staff meeting in April, 2014, participants will review individual data, and overall level of success, as a Section, with QI intervention will be determined.

28. How are reflections of individual physicians about the project utilized to improve the overall project?
The physicians meet and discuss the project. Modifications made to .dot phrase to help ease of use.

29. How does the project ensure meaningful participation by physicians who subsequently request credit for Part IV MOC participation?
Tracking done for physician participation at the section meetings to discuss and of implement the interventions.

30. What are the specialties and subspecialties of the physician anticipated to participate in the project and the approximate number of physicians in each specialty/subspecialty?
There are four participating physicians: 3 from Developmental Behavioral Pediatrics; 1 from Adolescent Medicine.

K. Project Organizational Role and Structure

31. UMHS QI/Part IV MOC oversight – this project occurs within:

x **University of Michigan Health System**

- **Overseen by what UMHS Unit/Group? Child Behavioral Health**

- **Is the activity part of a larger UMHS institutional or departmental initiative?**
  x No ☐ Yes – the initiative is:

☐ **Veterans Administration Ann Arbor Healthcare System**

- **Overseen by what AAVA Unit/Group?**

- **Is the activity part of a larger AAVA institutional or departmental initiative?**
  ☐ No ☐ Yes – the initiative is:

☐ **An organization affiliated with UMHS to improve clinical care**

- **The organization is:**

- **The type of affiliation with UMHS is:**
  ☐ **Accountable Care Organization type** *(specify which):*

  ☐ **BCBSM funded, UMHS lead Collaborative Quality Initiative** *(specify which):*

  ☐ **Other** *(specify):*

- **Who is the individual at UMHS responsible for oversight of the QI project regarding Part IV requirements?**
  Name: Richard Van Harrison, PhD
  Title: Professor of Learning Health Sciences
  Institutional/organizational unit/affiliation: UM Medical School
  Phone number: 734-763-1425
  Email address: rvh@umich.edu

32. What is the organizational structure of the project? *[Include who is involved, their general roles, and reporting/oversight relationships.]*
Lead: Prachi Shah, MD Clinical Assistant Professor
Participants: Julie Lumeng, MD, Barbara Felt, MD, Christian Pariseau, MD.
Assistance: Kylie Steenbergh (medical student)

33. To what oversight person or group will project-level reports be submitted for review?

Dr. Barbara Felt, Section Chief: Developmental Pediatrics, Division of Child Behavioral Health

Appendix A: Logic Diagram for Proposed Improvement Cycle