Report on a QI Project Eligible for Part IV MOC

Improving Rates of Foot Examination for Patients with Diabetes

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	
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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	20-21.	Second intervention
G. Recheck	22-23.	Post-adjustment performance measurement, data collection, performance level
H. Readjust plan	24.	Review, continuing/new underlying causes to address
I. Future plans	25-28.	Subsequent PDCA cycles, standardize processes, "spread" to other areas
J. Physician involvement	29-31.	Physician's role, requirements, reports, reflections, participation, number
K. Sharing results	32.	Plans for report, presentation, publication
L. Project Organization	33.	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):* 10/29/2015

2. Title of QI project: Improving Rates of Foot Examination for Patients with Diabetes

3. Time frame

a. Date physicians begin participating (may be in design phase): October 1, 2013

b. End date: October 16, 2015

4. Key individuals

a. QI project leader *[also responsible for attesting to the participation of physicians in the project]*

Name: Jennifer Wyckoff, MD
Title: Clinical Assistant Professor
Organizational unit: MEND Division, Department of Internal Medicine
Phone number: 734-647-6513
Email address: jwyckoff@umich.edu
Mailing address: Domino's Farms (Lobby C, Suite 1300) 24 Frank Lloyd Wright Drive PO Box 451, Ann Arbor, MI 48106

a. Clinical leader to whom the project leader reports regarding the project *[responsible for overseeing/"sponsoring" the project within the specific clinical setting]*

Name: Craig Jaffe, MD
Title: Associate professor
Organizational unit: MEND Division, Department of Internal Medicine
Phone number: 734-936-5504
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5. Approximately how many physicians were involved in this project categorized by specialty and/or subspecialty? 41 endocrinologists

6. Will the funding and resources for the project come only from internal UMHS sources?

☒ 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?
For patients with diabetes, foot exam can detect early neuropathy and pre-ulcerous lesions. Detection can initiate appropriate intervention to prevent foot ulcers and ultimately its complication including amputation. National recommendations for patients with diabetes are to have a foot exam annually. However only 57%of our patients had foot exam performed between July 1, 2012- June 31, 2013.

b. Physician's role. What is the physician's role related to this problem?
Physicians must perform and document a foot exam every year, which should include pulses check, monofilament exam, and skin exams.

c. Project goal. What general outcome regarding the problem should result from this project?
*(Specific aims/targets are addressed in #12b.)*To improve the rate of diabetes foot examination to reach the institutional goal of 79%

8. Patient population. What patient population does this project address. All patient with diabetes followed by the MEND division at the University of Michigan who have been seen by a MEND physician at least once in the last 13 months and at least twice in the last two years.

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

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

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?

This project uses institutional measures of the status of patients in our diabetes registry. The status of all patients in the registry is measured on June 30 and December 31 of each year.

For this project the measure is the percentage of adult patients who have been seen in clinic with diabetes and who have had a documented foot exam within the year prior to the date performance is measured. (The data reflect an annualized rate of foot exams for eligible patients.)

The denominator is the number of eligible patients in the diabetes registry on a measurement date who received their diabetes management through the MEND clinic. To be on the registry, a patient must have been seen at least once in the MEND clinic within the 395 days prior to the measurement date and twice within the 2 years prior to the measurement date.

The numerator is the number of eligible patients who had a documented foot exam within the 12 months previous to the date performance is measured.

Most patients followed in our clinic are seen every 3-6 months, so most of the effect of an intervention can be measured over the six months after an intervention is initiated. Therefore the project was designed for interventions to be fully implemented by six months before a planned institutional measurement date. This approach has two minor methodological limitations.

- A few people will have been seen before, but not during the 6 months after an intervention is initiated. The institutional measures are collected for individuals seen within the previous 395

days. Therefore a few patients may have only been seen in the 7 to 13 months before an intervention is initiated at six months before a measurement date. The intervention will not have been applied to these individuals and the registry-based data will slightly underrepresent the actual effect of the intervention,

- A few people will have more than one visit during the 6 months after an intervention is initiated. Multiple exposures to the intervention during a short time period may slightly overestimate the actual effects of the intervention for individuals with more typical time periods between visits.

These methodological limitations apply to relatively small groups of individuals. For our project measures using the diabetes registry provide reasonable assessments of the general level of performance and of meaningful changes in the level of performance.

b. Are the measures nationally endorsed? If not, why were they chosen?
Yes (eg: HEDIS, CMS Meaningful Use)

c. What is the source of data for the measure (e.g., medical records, billings, patient surveys)?
Electronic Medical Records

d. What methods were used to collect the data (e.g., abstraction, data analyst)?
Data analysts in the Quality Management Program of the Faculty Group Practice collect and analyze the data electronically, producing reports on UMHS All Payer Adult Diabetes Performance Measures that are used by the Diabetes Quality Improvement Committee and other UMHS personnel.

e. For what time period was the sample collected for baseline data?
July 1, 2012- June 31, 2013

12. Specific performance objectives

a. What was 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.)*

Data Collection Period	N of Eligible Patients *	% of Patients with Documented Foot Exam within Previous 12 Months
Baseline 7/1/12 – 6/30/13	4,215	57%

* As of the last day of the reporting period.

b. Specific aim: What was the target for performance on the measure(s) and the timeframe for achieving the target?
We would like to achieve a goal of 79% of MEND patients with diabetes having a documented foot exam through two cycles of improvement across the 24 months from July 2013 through June 2015.

c. How were the performance targets determined, e.g., regional or national benchmarks?
The UMHS goal of 79% was set to align with the 90th percentile HEDIS criteria.

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

a. Who 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 was involved?**
  All the physicians working in MEND who take care of patients with diabetes were involved.

- **How?** *(e.g., in a meeting of clinic staff)*
  All the involved physicians met in monthly faculty meetings and periodic clinic staff meetings.

- **When?** The meeting took place in October 11, 2013.

b. What were 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.)*
The following underlying causes were identified:

- With the implementation of new EMR (MiChart), determining the date of the last foot exam became more difficult since the previous EMR had automatically generated a paper form with health maintenance information including date of last foot exam. With the implementation of new EMR (MiChart), documenting last foot exam became more difficult to document as the physician had previously done it on paper and handed it to the medical assistant to enter into the EMR. With Michart, the physician was expected to document that exam in a manner that could be tracked by the EMR. This entailed manually updating the patient's foot exam status in the "Health Maintenance" section of the .EHR
- Lack of time since there are multiple aspects of diabetes care which need to be covered during a short visit.
- Simply forgetting to do the foot exam

C. Do

14. Intervention(s). Describe the interventions implemented as part of the project.
After reviewing the underlying cause, the following interventions were implemented.

- Development of new tool: A new Michart order for documentation of foot exam "HM foot exam" which updates the health maintenance section of the chart where tracking can occur electronically.
- New system implementation: MA's to place an order for a foot exam in MICHART for all patients who have not had foot exam in the last 1 year.
- Education of the MA's and MEND physicians
  - MA's were instructed regarding placement of an order of foot exam for patients with diabetes who have not had foot exam in the last 1 year.
  - All physicians at MEND: instructed to complete the foot exam when the order is placed and then sign the order.

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

- Michart created the order tool for us. Our clinic manager arranged for our medical assistant's (MA's) to be trained in placing the order and to incorporate it into their standard workflow. The MA's placed order of foot exam for patients with diabetes who have not had foot exam in the last 1 year.
- All physicians at MEND: completed the foot exam when the order is placed, document the exam in their clinic note, and then signed the order. They were also involved in periodic data review and analysis for the QI project.
- The MA's and physicians work as a team and so they worked to reinforce this system change with each other.

16. When was the intervention initiated? (For multiple interventions, initiation date for each.)
Jan 01, 2014

D. Check

17. Post-intervention performance measurement. Did this data collection 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 occurred for the time period: Jan 01, 2014 to June 30, 2014

b. What was 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.)*

Data Collection Period	N of Eligible Patients *	% of Patients with Documented Foot Exam within Previous 12 Months
Baseline 7/1/12 – 6/30/13	4,215	57%
Post-intervention ** 01/01/2014 to 06/30/2014	4,258	77%
Specific aim		*79%*

* As of the last day of the reporting period.

** The intervention was initiated by the first day of the period. Most patients were seen within the 6-month period, but a few were seen only in the 6 months before the period and a few were seen multiple times during the 6-month period.

c. Did the intervention produce the expected improvement toward meeting the project's specific aim (item 12.b)?
The intervention produced improvement that almost achieved the project's aim.

E. Adjust – Replan

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

a. Who 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 was involved?**
  All the physicians working in MEND who take care of patients with diabetes were involved.

- **How?** *(e.g., in a meeting of clinic staff)*
  All the involved physicians met in monthly faculty meetings and periodic clinic staff meetings.

- **When?** The meeting took place in November 14, 2014

b. What were 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.)*
The problem with capturing the documentation of a foot exam within the new EMR was addressed with the initial intervention**.** A persistent root cause identified was lack of time. A new cause identified was patient refusal of a foot exam for various reasons, e.g., use of compression stockings made them reluctant to take the stockings off to facilitate the exam.

F. Redo

20. Second intervention. What additional interventions/changes were implemented?

The intervention worked well and we almost achieved the departmental goal. Therefore we did the following for the second part of the project:

- Reinforcement: The need for foot exam and the importance of signing the order for proper documentation reinforced to the faculty and fellows and medical assistants.
- Sustainability trial: to evaluate the sustainability of the results, the reinforced intervention was continued.

21. The second intervention was initiated when? (For multiple interventions, initiation date for each.)
Jan 01, 2015

G. Recheck

22. Post-second intervention performance measurement. Did this data collection 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

23. Performance following the second intervention.

a. The collection of the sample of performance data following the intervention(s) occurred for the time period: Jan 01, 2015 to June 30, 2015

b. What was 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.)*

Data Collection Period	N of Eligible Patients *	% of Patients with Documented Foot Exam within Previous 12 Months
Baseline 7/1/12 – 6/30/13	4,215	57%
Post-intervention ** 01/01/2014 to 06/30/2014	4,258	77%
Post-adjustment ** 01/01/2015 to 06/30/2015	4,042	81%
Specific aim		*79%*

* As of the last day of the reporting period. .

** The intervention/adjustment was initiated by the first day of the period. Most patients were seen within the 6-month period, but a few were seen only in the 6 months before the period and a few were seen multiple times during the 6-month period.

c. Did the second intervention produce the expected improvement toward meeting the project's specific aim (item 12.b)?
The foot exam rate improved somewhat further, slightly exceeding the project's aim of 79%.

H. Readjust

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

a. Who 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 was involved?**
  All the physicians working in MEND who take care of patients with diabetes were involved.

- **How?** *(e.g., in a meeting of clinic staff)*
  All the involved physicians met in monthly faculty meetings and periodic clinic staff meetings.

- **When?** The meeting took place in October 16, 2015

b. What were 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.)*

Departmental goal achieved, intervention continued. However not 100% patients had documented foot exam. The other causes which couldn't be addressed with the project were:

- Time constraints for physicians
- Patient refusal due to various reasons

<u>If no additional cycles</u> of adjustment are to be documented for the project for Part IV credit, go to item #25.

<u>If a few additional cycles</u> of adjustments, data collection, and review are to be documented as part of the project to be documented, document items #20 – #24 for each subsequent cycle. Copy the set of items #20 – #24 and paste them following the last item #24 and provide the information. When the project to be documented for Part IV credit has no additional adjustment cycles, go to item #25.

<u>If several more cycles</u> 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

25. 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

26. How will the project sustain processes to maintain improvements?
The project will sustain by continued reinforcement on the need for documenting and performing foot exam to the physicians and making the steps performed in the project a part of regular workflow in the clinic. While no formal improvement effort is planned, performance will be monitored through routine institutional data collection and reports. If performance deteriorates, formal improvement efforts will recommence.

27. 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? Primary care/Family Medicine also have similar problems of inadequate foot exam documentation. A similar project was carried out by them with good results. After completion of the foot examination project, family practice has started best practice alert that has foot exam built in it.

28. What lessons (positive or negative) were learned through the improvement effort that can be used to prevent future failures and mishaps or reinforce a positive result??
The most important lesson learned from the project was : In order to improve performance measure we have to find a simple method of improving it and make it a part of standard workflow.

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

29. Physician's role. What were the minimum requirements for physicians to be actively involved in this QI effort? *(What were physicians to do to meet each of the basic requirements listed below? If this project had additional requirements for participation, also list those requirements and what physicians had to do to meet them.)*

a. Interpreting baseline data, considering underlying causes, and planning intervention. *(As appropriate, use or modify the following response.)*
Physicians had to participate as described in item #13a.

b. Implementing intervention. *(As appropriate, use or modify the following response.)*
Physicians had to participate as described in items #14, #15, and #16.

c. Interpreting post-intervention data, considering underlying causes, and planning changes. *(As appropriate, use or modify the following response.)*
Physicians had to participate as described in item #24a.

d. Implementing further intervention/adjustments. *(As appropriate, use or modify the following response.)*
Physicians had to participate as described in items #20 and #21.

e. Interpreting post-adjustment data, considering underlying causes, and planning changes. *(As appropriate, use or modify the following response.)*
Physicians had to participate as described in item #24a.

30. How were reflections of individual physicians about the project utilized to improve the overall project?
Project was discussed during each faculty meeting and the feedback from individual physicians was incorporated.

31. How did the project ensure meaningful participation by physicians who subsequently request credit for Part IV MOC participation?
The project goals and progress were reviewed at faculty meetings and discussed. In addition, emails reviewing the goals and progress and soliciting feedback and comments were also sent to all participating faculty.

K. Sharing Results

32. Are you planning to present this QI project and its results in a:

☐ Yes ☐ No Formal report to clinical leaders?
☐ Yes ☐ No Presentation (verbal or poster) at a regional or national meeting?
X☐ Yes ☐ No Manuscript for publication?

L. Project Organizational Role and Structure

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

X☐ **University of Michigan Health System**

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

  MEND

- **Is the activity part of a larger UMHS institutional or departmental initiative?**

  ☐ No **X**☐ Yes – the initiative is: one of the initiatives under University of Michigan Diabetes Quality improvement committee, however this project was exclusively performed by and at the MEND division.

☐ **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 state-wide Collaborative Quality Initiative** *(specify which):*

  ☐ **Other** *(specify):*