

QI Project Application/Report for Part IV MOC Eligibility

Instructions

Complete the project application/report to apply for UMHS approval for participating physicians to be eligible to receive Part IV MOC credit through the Multi-Specialty Part IV MOC Pilot program. 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.

Only a final application describing the completed project is required. However, submitting an earlier version helps assure that planned activities will meet Part IV requirements. Actions regarding the application depend on the stage of the project, as described below. As stages are accomplished, you may submit updates of the application with the description of planned activities replaced by descriptions of actual activities performed.

Preliminary approval. Plans are developed for the expected activities, but little actual work has been performed.

(Complete at least items 1-11, 13a, 16-18a, 19a, 20a, 21, 22a, 23a, 27-33.)

Part IV credit approval. Baseline data have been collected and the intervention performed, with completion of both steps documented on an application (or application update). The project has demonstrated its operational feasibility and the likelihood that subsequent data collections and adjustment will be performed. (Complete at least items 1-18a, 19a, 20a, 21, 22a, 23a, 27-33.)

Participation (“attestation”) forms provided. The project has been completed with the expected sequence of activities performed and documented on a complete final application, which is the “final report” on the project.

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

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Application/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 Application/Report for Part IV MOC Eligibility

A. Introduction

1. **Date** (*this version of the application*): 12/8/2013

2. **Title of QI project:**

Impact of Double Physician Coverage on Patient Flow during High Volume Evening Shifts in the Adult Medical Observation Unit.

3. **Time frame**

a. **At what stage is the project?**

- Design is complete, but not yet initiated
 Initiated and now underway
 Completed (*UMHS Part IV program began 1/1/11*)

b. **Time period**

- (1) **Date physicians begin participating (may be in design phase):** 1/01/2013
(2) **End date:** 10/30/2013 _____ expected _____

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

- a. **Name:** Jason Ham MD
b. **Title:** Director, Adult Medical Observation Unit (AMOU)
c. **Institutional/organizational unit/affiliation:** University of Michigan, Medical Center
d. **Phone number:** 734-763-7918
e. **Email address:** jasham@med.umich.edu
f. **Mailing address:** Department of Emergency Medicine
University of Michigan Health System
Taubman Center B1 354H

5. **What specialties and/or subspecialties are involved in this project?**

Emergency Medicine, Family Medicine, and Internal Medicine

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: _____

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?**

The problem is the length of patient waiting time associated with process patient admissions and discharges from the AMOU on evenings of high volume when only one physician is available. These

evenings were defined by comparing the occupancy at 6 am and grouping them into high and low need days (see attachment). The majority of these days are Tuesdays, Wednesdays or Thursdays.

b. Project goal. What outcome regarding the problem should result from this project?

To increase patient flow (#admits/Discharges) through the AMOU during high volume evening shifts.

8. Patient population. What patient population does this project address.

Short Stay patients admitting to the AMOU on Tues/Wed/Thurs from 3pm to 11pm.

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

- | | | |
|---|--|--|
| <input type="checkbox"/> Safety | <input type="checkbox"/> Equity | <input checked="" type="checkbox"/> Timeliness |
| <input checked="" type="checkbox"/> Effectiveness | <input checked="" type="checkbox"/> Efficiency | <input type="checkbox"/> Patient-Centeredness |

10. What is the experimental design for the project?

- 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?

- 1) Average Admissions from the AMOU, direct shift period (3p to 11p)
- 2) Average Discharges to the AMOU for direct shift period (3p to 11p)
- 3) Average LOS measured in hours of patients admitted to the AMOU for direct shift period (3p-11p)

b. Are the measures nationally endorsed? If not, why were they chosen?

Although not nationally endorsed specifically for Adult Medical Observation Units, these measures are used nationwide when evaluating patient flow and efficiency

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

Hospital administrative data

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

Data abstraction via hospital data analyst. Analysis conducted by participating physicians, as well as a hospital data analyst.

e. How reliable are the data being collected for the purpose of this project?

Very reliable: These are standard hospital reporting data.

f. How are data to be analyzed over time, e.g., simple comparison of means, statistical test(s)?

Simple comparison of means; no statistical testing was performed.

g. To whom are data reported?

Dr. Ham

h. For what time period is the sample collected for baseline data?

7/01/2012-12/31/2012

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.)

(See attached graph: Baseline)

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

Increased Flow (#Admits/#Discharges), while maintaining/improving LOS by 2 additional Admissions and 2 additional Discharges per designated high volume evening shift by September 2013.

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

No available benchmarks were available. Targets were obtained by using Group estimates.

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.**

An ad hoc committee was created. The group met independently, during staff meetings, and had additional communications via email and phone conferences. The members performed the following duties:

Ron Maio: Planning, Implementing, RCA Identification, Suggesting Interventions
 Jason Ham: Planning, Implementing, RCA Identification, Suggesting Interventions
 Scott Kelley: Planning, Interpreting Data, Suggesting Changes
 Vijay Singh: Planning, Interpreting Data, Suggesting Changes
 Jeff Desmond: RCA Identification, Suggesting Interventions
 Bob Neumar: RCA Identification, Suggesting Interventions

- 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.)

We think that the primary root cause for this problem is inadequate physician availability on high-volume days—specifically during the afternoon shift (3-11pm). This precludes the efficient discharge and admission of AMOU patients---and leads to increased LOS for admitted patients.

C. Do**14. Intervention(s).****a. Describe the interventions implemented as part of the project.****a. What is the intervention?**

Increase from single to double physician coverage on the evening shift (3-11 pm). The initial physician dedicates duties to screening patients and admitting them with the assistance of two Mid-Level Providers. The additional physician dedicates duties to rounding and making disposition on remaining patients.

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.)

Having more physician coverage will allow for enhanced:

1) Physician examination and evaluation of patients for discharge; and, 2) Physician examination and evaluation for admission. This should result in enhanced patient flow.

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

The physician staff of the AMOU, led by the AMOU Director.

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

1/01/2013

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)?**

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: Interval 1: 1/01/2013-6/30/2013

c. 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.)

See Table Attached Interval1

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.**

July 11, 2013, the ad hoc Committee met and performed the following duties:

Ron Maio: Planning, Implementing, Interpreting Data, Suggesting Changes
 Jason Ham: Planning, Implementing, Interpreting Data, Suggesting Changes
 Scott Kelley: Planning, Interpreting Data, Suggesting Changes
 Vijay Singh: Planning, Interpreting Data, Suggesting Changes

July 29, 2013, Emergency Department Leadership met and performed the following duties:

Bob Neumar: Interpreting Data, Suggesting Changes
 Jeff Desmond: Interpreting Data, Suggesting Changes
 Jason Ham: Interpreting Data, Suggesting Changes

- d. 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.)*

We concluded that the intervention needed a little more time to work. Physicians and mid-level staff were still modifying their usual practice (with single coverage) based on the presence of physician double coverage. Also, there are substantial numbers of physicians who are working in the AMOU who do so on a part-time basis. It will therefore take these physicians more time to adjust to the modification.

F. Redo

20. Second intervention.

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

7/01/2013

- b. If the second intervention has occurred, what interventions were implemented?**

1. Maintained 2 physician coverage.
2. Refined more specific roles of each physician. One physician focused on new admissions, and the other focused on rounding and disposition of already present patients.
3. Educated the providers of these roles.

- 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.)*

Physicians were still modifying their practice. The development of standard roles was expected to result in the more uniform and efficient practice.

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: 7/01/2013-9/30/2013

c. 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.)

See Attached Tables

H. Readjust

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

a. 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.

Oct, 2013: Ad hoc Committee

Jason Ham:Interpreting Data, Suggesting Changes

Ron Maio:Interpreting Data, Suggesting Changes

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.)

We were disappointed that the number of admissions and discharges did not improve with a second physician present on higher volume evening shifts. Root cause considerations include:

1: Lower than expected need for a physician to make disposition on present patients

2: Other operational improvements that caused more upstream disposition to occur during the day shift: additional Mid-Level Providers during high volume days, more admission scrutiny to avoid patients with high complexity and difficult disposition (admit decisions)

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?

No more cycles will be attempted.

25. How will the project sustain processes to maintain improvements?

Focus will be moved toward making disposition on day shifts, improving admission efficiency to allow more rounding during evening shifts, further study of demand and flow.

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?

Yes much of this study pertains to any unscheduled short stay population of patients.

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:
Participate in the ad hoc or leadership meetings.
- b. Implementing intervention:
Participate as a second physician during the study or oversaw implementation of the system.
- c. Interpreting post-intervention data and planning changes:
Participate In the ad hoc or leadership meetings.
- d. Implementing further intervention/adjustments:
Participate as a second physician during the study or oversaw implementation of the system.
- e. Interpreting post-adjustment data and planning changes:
Participate In the ad hoc or leadership meetings.

28. How are reflections of individual physicians about the project utilized to improve the overall project?

Input from each physician is discussed as group at all phases of the project. Decisions are reached by consensus

29. How does the project ensure meaningful participation by physicians who subsequently request credit for Part IV MOC participation?

At the start of this project, all participating physicians were told of the requirements for participation. To facilitate timely and efficient interaction, much of the communication for the project was done via emails and phone conference: this facilitated physician participation.

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?

Emergency Medicine- 4
 Family Medicine- 2

K. Project Organizational Role and Structure

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

University of Michigan Health System

- **Overseen by what UMHS Unit/Group? Dept. of EM, Adult Medical Observation Service**

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

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*):

32. What is the organizational structure of the project? [Include who is involved, their general roles, and reporting/oversight relationships.]

Emergency Department Chair, Ad Hoc Committee, Project Lead, Other Participating Physicians

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

Department Chair

Table

Comparison of Average Number of Admission, Discharges, LOS, on 3p-11p (EVE)

Shifts on Tues/Wed/Thurs with and without 2nd EVE doc

Time Period	Ave Admissions	Ave Discharges	LOS (hrs)	Ave Daily Census (*)
Baseline: July 2012-Dec 2012 withOUT 2nd EVE Doc	6.27	6.58	25.29	15.2
Interval 1: Jan 2013-June 2013 with 2nd EVE Doc	7.19	6.56	25.97	15.06
Interval 2: July 2013-Sept 2013 with 2nd EVE Doc	6.47	6.23	25.28	13.87

(*) 6am Census for flow comparisons