

Report on a QI Project Eligible for MOC – ABMS Part IV and AAPA PI-CME

Inpatient Adult Sleep Medicine Consultations: Taking Out the Trash

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. (See section 3 of the website.) Final confirmation of Part IV MOC for a project occurs when the full report is submitted and approved.

An option for preliminary review (strongly recommended) is to complete a description of activities through the intervention phase and submit the partially completed report. (Complete at least items 1-20.) 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. Answers should be in regular font (generally immediately below or beside the questions). To check boxes, hover pointer over the box and click (usual “left” click).

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

R. Van Harrison, PhD, UMHS Part IV Program Co-Lead, 734-763-1425, rvh@umich.edu

J. Kin, MHA, JD, UMHS Part IV Program Co-Lead, 734-764-2103, jkin@umich.edu

Ellen Patrick, UMHS Part IV Program Administrator, 734-936-9771, partivmoc@umich.edu

Report Outline

Section	Items
A. Introduction	1-6. Current date, title, time frame, key individuals, participants, funding
B. Plan	7-10. Patient population, general goal, IOM quality dimensions, ACGME/ABMS competencies 11-13. Measures, baseline performance, specific aims 14-17. Baseline data review, underlying (root) causes, interventions, who will implement
C. Do	18. Intervention implementation date
D. Check	19-20. Post-intervention performance
E. Adjust – Replan	21-24. Post-intervention data review, underlying causes, adjustments, who will implement
F. Redo	25. Adjustment implementation date
G. Recheck	26-28. Post-adjustment performance, summary of individual performance
H. Readjust plan	29-32. Post-adjustment data review, underlying causes, further adjustments, who will implement
I. Reflections & plans	33-37. Barriers, lessons, best practices, spread, sustain
J. Participation for MOC	38-40. Participation in key activities, other options, other requirements
K. Sharing results	41. Plans for report, presentation, publication
L. Organization affiliation	42. Part of UMHS, AAVA, other affiliation with UMHS

QI Project Report for Part IV MOC Eligibility

A. Introduction

1. **Date** (*this version of the-report*): 05/02/18

2. **Title of QI effort/project** (*also insert at top of front page*): Inpatient Adult Sleep Medicine Consultations: Taking Out the Trash

3. **Time frame**

a. **MOC participation beginning date – date that health care providers seeking MOC began participating in the documented QI project** (*e.g. date of general review of baseline data, item #14c*): 10/25/17

b. **MOC participation end date – date that health care providers seeking MOC completed participating in the documented QI project** (*e.g., date of general review of post-adjustment data, item #29c*): 4/20/18

4. **Key individuals**

a. **QI project leader** [*also responsible for confirming individual's participation in the project*]

Name: Alok Sachdeva, M.D.

Title: Sleep Medicine Fellow

Organizational unit: Neurology/Sleep Medicine

Phone number: 734-232-4989

Email address: aloks@med.umich.edu

Mailing address: 1500 E Medical Center Dr, Ann Arbor, MI 48109

b. **Clinical leader who oversees project leader regarding the project** [*responsible for overseeing/"sponsoring" the project within the specific clinical setting*]

Name: Helena Schotland, M.D.

Title: Clinical Associate Professor

Organizational unit: Neurology/Sleep Medicine

Phone number: 734-936-9068

Email address: helenas@med.umich.edu

Mailing address: 1500 E Medical Center Dr, Ann Arbor, MI 48109

5. **Participants**

a. **Approximately how many health care providers (by training level for physicians) participated in this QI effort** (*whether or not for MOC*):

Profession	Number (<i>fill in</i>)
Practicing Physicians	1
Residents/Fellows	3
Physicians' Assistants	0
Nurses (APNP, NP, RN, LPN)	0
Other Licensed Allied Health (e.g., PT/OT, pharmacists, dieticians, social workers)	0

b. Approximately how many physicians (by specialty/subspecialty and by training level) and physicians' assistants participated for MOC?

Profession	Specialty/Subspecialty (fill in)	Number (fill in)
Practicing Physicians	Pulmonary, Sleep Medicine	1
Fellows	Internal Medicine, Neurology, Sleep Medicine	3
Residents		0
Physicians' Assistants	(Not applicable)	

6. How was the QI effort funded? (Check all that apply.)

- Internal institutional funds (e.g., regular pay/work, specially allocated)
- Grant/gift from pharmaceutical or medical device manufacturer
- Grant/gift from other source (e.g., government, insurance company)
- Subscription payments by participants
- Other source (describe):

The Multi-Specialty Part IV MOC Program requires that QI efforts include at least two linked cycles of data-guided improvement. Some projects may have only two cycles while others may have additional cycles – particularly those involving rapid cycle improvement. The items below provide some flexibility in describing project methods and activities. If the items do not allow you to reasonably describe the steps of your specific project, please contact the UMHS Part IV MOC Program Office.

B. Plan

7. Patient population. What patient population does this project address (e.g., age, medical condition, where seen/treated): Adult inpatients in University Hospital for whom the primary team requests a sleep medicine consult.

8. General purpose.

a. Problem with patient care (“gap” between desired state and current state)

- (1) What should be occurring and why should it occur (benefits of doing this)?
 Consults should be called when a clinical question for sleep medicine exists, or when the patient is an appropriate candidate for an inpatient sleep study.
- (2) What is occurring now and why is this a concern (costs/harms)?
 Many consults are called where the patient is not an appropriate candidate for a sleep study, or where the only reason for requesting a consult is to obtain an inpatient sleep study to assist in discharge with noninvasive ventilation, an inappropriate reason to consult. This can result in wasting time of the sleep medicine consult team, wasting resources spent doing inappropriate polysomnograms, and delaying discharges.

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

(State general goal here. Specific aims/performance targets are addressed in #13.)
 To reduce the number of inappropriate sleep consults, with a goal of reducing wastes.

9. Which Institute of Medicine Quality Dimensions are addressed? [Check all that apply.]
<http://www.nationalacademies.org/hmd/~media/Files/Report%20Files/2001/Crossing-the-Quality-Chasm/Quality%20Chasm%202001%20%20report%20brief.pdf>)

- Effectiveness Equity Safety

- Efficiency Patient-Centeredness Timeliness

10. Which ACGME/ABMS core competencies are addressed? *(Check all that apply.)*
[\(http://www.abms.org/board-certification/a-trusted-credential/based-on-core-competencies/\)](http://www.abms.org/board-certification/a-trusted-credential/based-on-core-competencies/)

- | | |
|---|--|
| <input type="checkbox"/> Patient Care and Procedural Skills | <input checked="" type="checkbox"/> Medical Knowledge |
| <input checked="" type="checkbox"/> Practice-Based Learning and Improvement | <input checked="" type="checkbox"/> Interpersonal and Communication Skills |
| <input checked="" type="checkbox"/> Professionalism | <input checked="" type="checkbox"/> Systems-Based Practice |

11. Describe the measure(s) of performance: *(QI efforts must have at least one measure that is tracked across the two cycles for the three measurement periods: baseline, post-intervention, and post-adjustment. If more than two measures are tracked, copy and paste the section for a measure and describe the additional measures.)*

Measure 1

- **Name of measure** *(e.g., Percent of . . . , Mean of . . . , Frequency of . . .):*
Percent of inappropriate consult orders.

- **Measure components – describe the:**
 Denominator *(e.g., for percent, often the number of patients eligible for the measure):*
Total number of consults ordered in a given period of time by primary teams

 Numerator *(e.g., for percent, often the number of those in the denominator who also meet the performance expectation):*
Number of consult orders that the Sleep Medicine consult team assesses to be inappropriate.

- **The source of the measure is:**
 - An external organization/agency, which is *(name the source):*
 - Internal to our organization and it was chosen because *(describe rationale):* Clinical judgement of the sleep medicine consult team who deals directly with the consults and decides if they are appropriate or not

- **This is a measure of:**
 - Process – activities of delivering health care to patients
 - Outcome – health state of a patient resulting from health care

- **This is a measure of:**
 - Process – activities of delivering health care to patients
 - Outcome – health state of a patient resulting from health care

(If more than two measures are tracked across the two cycles, copy and paste the section for a measure and describe the additional measures.)

12. Baseline performance

- a. What were the beginning and end dates for the time period for baseline data on the measure(s)?** 12/11/17 – 2/5/18

- b. **What was (were) the performance level(s) at baseline?** *Display in a data table, bar graph, or run chart (line graph). Can show baseline data only here or refer to a display of data for all time periods attached at end of report. Show baseline time period, measure names, number of observations for each measure, and performance level for each measure.*

Measure	Baseline (12/11/17-2/4/17)	Post Intervention (3/12/18 – 3/30/18)	Post Adjustment (3/12/18 – 3/30/18)	Goal
Number of consults received	41			
Percent of appropriate consults	11 (27%)			
Percent of inappropriate consults	30 (73%)			55% (or less)

13. Specific performance aim(s)/objective(s)

- a. **What is the specific aim of the QI effort?** *“The Aim Statement should include: (1) a specific and measurable improvement goal, (2) a specific target population, and (3) a specific target date/time period. For example: We will [improve, increase, decrease] the [number, amount percent of [the process/outcome] from [baseline measure] to [goal measure] by [date].”*

We aim to reduce the percent of inappropriate sleep medicine consults that are ordered for adult inpatients at the University of Michigan Hospital from 73% to 55% or less by April 2018,

- b. **How were the performance targets determined, e.g., regional or national benchmarks?**
 The target was determined by baseline level of percent of inappropriate consults and consideration of amount of change that could be expected in the time period.

14. Baseline data review and planning. Who was involved in reviewing the baseline data, identifying underlying (root) causes of problem(s) resulting in these data, and considering possible interventions (“countermeasures”) to address the causes? *(Briefly describe the following.)*

- a. **Who was involved?** *(e.g., by profession or role)* Sleep Medicine Fellows and Faculty Clinical Leader
- b. **How?** *(e.g., in a meeting of clinic staff)* In a meeting of sleep fellows and faculty representatives who work on the inpatient service
- c. **When?** *(e.g., date(s) when baseline data were reviewed and discussed)* 2/4/18-3/7/18

Use the following table to outline the plan that was developed: #15 the primary causes, #16 the intervention(s) that addressed each cause, and #17 who carried out each intervention. This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a. As background, some summary examples of common causes and interventions to address them are:

Common Causes	Common Relevant Interventions
Individuals: Are not aware of, don't understand.	Education about evidence and importance of goal.
Individuals: Believe performance is OK.	Feedback of performance data.

<i>Individuals: Cannot remember.</i>	<i>Checklists, reminders.</i>
<i>Team: Individuals vary in how work is done.</i>	<i>Develop standard work processes.</i>
<i>Workload: Not enough time.</i>	<i>Reallocate roles and work, review work priorities.</i>
<i>Suppliers: Problems with provided information/materials.</i>	<i>Work with suppliers to address problems there.</i>

15. What were the primary underlying/root causes for the <u>problem(s) at baseline</u> that the project can address?	16. What intervention(s) addressed this cause?	17. Who was involved in carrying out each intervention? (List the professions/roles involved.)
<i>Primary teams: Are not aware of, or don't understand the correct indications and contraindications for a sleep study.</i>	The sleep medicine consult team gave verbal educational guidelines to the primary teams about when a sleep study should or should not be done	Sleep Medicine Fellows, primary teams
<i>Primary teams: Believe performance is OK.</i>	The sleep medicine consult team gave verbal educational guidelines and case-specific feedback to the primary teams about when a sleep study should or should not be done	Sleep Medicine Fellows, Primary teams
<i>Primary team: Individuals vary in how work is done.</i>	The sleep medicine consult team gave verbal educational guidelines to the primary teams about when a sleep study should or should not be done	Sleep Medicine Fellows, Primary teams

Note: If additional causes were identified that are to be addressed, insert additional rows.

C. Do

18. By what date was (were) the intervention(s) initiated? (If multiple interventions, date by when all were initiated.) 3/12/18

D. Check

19. Post-intervention performance measurement. Are the population and measures the same as those for the collection of baseline data (see items 10 and 11)?

Yes No – If no, describe how the population or measures differ:

20. Post-intervention performance

a. What were the beginning and end dates for the time period for post-intervention data on the measure(s)? 3/12/18 – 3/30/18

b. What was (were) the overall performance level(s) post-intervention? Add post-intervention data to the data table, bar graph, or run chart (line graph) that displays baseline data. Can show baseline and post-intervention data incrementally here or refer to a display of data for all time

periods attached at end of report. Show baseline and post-intervention time periods and measure names and for each time period and measure show number of observations and performance level.

Inappropriate consult requests were reduced from 73% to 60%.

Measure	Baseline(12/11/17-2/4/17)	Post Intervention (3/12/18 – 3/30/18)	Goal
Number of Consults received	41	5	
Percent of appropriate consults	11 (27%)	2 (40%)	
Percent of inappropriate consults	30 (73%)	3 (60%)	55% (or less)

c. Did the intervention(s) produce the expected improvement toward meeting the project’s specific aim (item 13.a)?

Education and feedback did help reduce the percent of inappropriate consults from 73% to 60%. However, the N for the study period was small and the goal of 55% was not met.

E. Adjust – Replan

21. Post-intervention data review and further planning. Who was involved in reviewing the post-intervention data, identifying underlying (root) causes of problem(s) resulting in these new data, and considering possible interventions (“countermeasures”) to address the causes? (Briefly describe the following.)

a. Who was involved? (e.g., by profession or role)

Same as #14? Different than #14 (describe):

b. How? (e.g., in a meeting of clinic staff)

Same as #14? Different than #14 (describe):

c. When? (e.g., date(s) when post-intervention data were reviewed and discussed)
3/30/2018

Use the following table to outline the next plan that was developed: #22 the primary causes, #23 the adjustments(s)/second intervention(s) that addressed each cause, and #24 who carried out each intervention. This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a.

Note: Initial intervention(s) occasionally result in performance achieving the targeted specific aims and the review of post-intervention data identifies no further causes that are feasible or cost/effective to address. If so, the plan for the second cycle should be to continue the interventions initiated in the first cycle and check that performance level(s) are stable and sustained through the next observation period.

<p>22. What were the primary underlying/root causes for the <u>problem(s)</u> following the <u>intervention(s)</u> that the project can address?</p>	<p>23. What adjustments/second intervention(s) addressed this cause?</p>	<p>24. Who was involved in carrying out each adjustment/second intervention? (List the professions/roles involved.)</p>
<p>Knowledge gaps persisted around appropriate indications for a sleep medicine consult.</p>	<p>Sleep fellows asked the chief internal medicine residents to disseminate the written consult guidelines via email to all internal medicine residents. Project clinical leader, Dr.Schotland, will disseminate the guidelines to pulmonary/critical care fellows</p>	<p>Sleep medicine fellow, Sleep medicine faculty member; Chief residents and residents in Internal Medicine, pulmonary/critical care fellows</p>

Note: If additional causes were identified that are to be addressed, insert additional rows.

F. Redo

25. By what date was (were) the adjustment(s)/second intervention(s) initiated? (If multiple interventions, date by when all were initiated.)
 4/16/18

G. Recheck

26. Post-adjustment performance measurement. Are the population and measures the same as indicated for the collection of post-intervention data (item #21)?

Yes No – If no, describe how the population or measures differ:

27. Post-adjustment performance

a. What were the beginning and end dates for the time period for post-adjustment data on the measure(s)?

4/16/18-4/20/18

b. What was (were) the overall performance level(s) post-adjustment? Add post-adjustment data to the data table, bar graph, or run chart (line graph) that displays baseline and post-intervention data. Can show here or refer to a display of data for all time periods attached at end of report. Show time periods and measure names and for each time period and measure show the number of observations and performance level.

Measure	Baseline(12/11/17-2/4/17)	Post Intervention (3/12/18 - 3/30/18)	Post 2 nd Intervention (4/16/18 - 4/20/18)	Goal
Number of Consults received	41	5	2	
Percent of appropriate consults	11 (27%)	2 (40%)	1 (50%)	
Percent of inappropriate consults	30 (73%)	3 (60%)	1 (50%)	55% (or less)

c. Did the adjustment(s) produce the expected improvement toward meeting the project’s specific aim (item 13.a)? Yes, sending out an email containing the guidelines for a sleep medicine consult to all internal medicine residents did reduce the percent of inappropriate consults. The N for this time period, however, was only 2.

28. Summary of individual performance

a. Were data collected at the level of individual providers so that an individual’s performance on target measures could be calculated and reported?

- Yes No – go to item 29

H. Readjust

29. Post-adjustment data review and further planning. Who was involved in reviewing the post-adjustment data, identifying underlying (root) causes of problem(s) resulting in these new data, and considering possible interventions (“countermeasures”) to address the causes? (Briefly describe the following.)

a. Who was involved? (e.g., by profession or role)

- Same as #21? Different than #21 (describe):

b. How? (e.g., in a meeting of clinic staff)

- Same as #21? Different than #21 (describe):

c. When? (e.g., date(s) when post-adjustment data were reviewed and discussed)
4/20/2018, end of day

Use the following table to outline the next plan that was developed: #30 the primary causes, #31 the adjustments(s)/second intervention(s) that addressed each cause, and #32 who would carry out each intervention. This is a simplified presentation of the logic diagram for structured problem solving explained at <http://ocpd.med.umich.edu/moc/process-having-part-iv-credit-designation> in section 2a.

Note: Adjustments(s) may result in performance achieving the targeted specific aims and the review of post-adjustment data identifies no further causes that are feasible or cost/effective to address. If so, the plan for a next cycle could be to continue the interventions/adjustments currently implemented and check that performance level(s) are stable and sustained through the next observation period.

30. What were the primary underlying/root causes for the <u>problem(s)</u> following the <u>adjustment(s)</u> that the project can address?	31. What further adjustments/ intervention(s) might address this cause?	32. Who would be involved in carrying out each further adjustment/intervention? <i>(List the professions/roles involved.)</i>
Not everyone may have seen the email, or may not remember the guidelines	Putting the guidelines online so they are easily accessible for reference, place a link in the EPIC order for a sleep consult	Sleep medicine consult team, EPIC team, Primary team

Note: If additional causes were identified that are to be addressed, insert additional rows.

33. Are additional PDCA cycles to occur for this specific performance effort?

- No further cycles will occur.
- Further cycles will occur, but will not be documented for MOC. *If checked, summarize plans:*
- Further cycles will occur and are to be documented for MOC. *If checked, contact the UM Part IV MOC Program to determine how the project's additional cycles can be documented most practically.*

I. Reflections and Future Actions

33. Describe any barriers to change (i.e. problems in implementing interventions listed in #16 and #23) that were encountered during this QI effort and how they were addressed.

Finding time to educate primary teams - The first intervention that involved giving the guidelines over the phone resulted in longer phone conversations about why the patient would not be seen or get an inpatient sleep study. The second intervention was implemented without facing any barriers.

34. Describe any key lessons that were learned as a result of the QI effort.

Events that occur infrequently make it hard to gather meaningful data on baseline rates and to subsequently demonstrate improvement.
After identifying a problem, repeated reviews of processes giving rise to that problem can result in increasing efficiency.

35. Describe any best practices that came out of the QI effort.

A best practice was not discovered and but may be found after additional adjustments and PDCA cycles are completed. For example, putting the consult guidelines on line with a link to the sleep study consult request in EPIC, our EHR, may prove to be a strong countermeasure.

36. Describe any plans for spreading improvements, best practices, and key lessons.

The data and conclusions from the project will be available to future fellow classes and sleep providers at our institution as well as an oral presentation at sleep medicine grand rounds.

37. Describe any plans for sustaining the changes that were made.

The final set of guidelines will be made available to future sleep fellows and sleep providers at our institution.

J. Minimum Participation for MOC

38. Participating directly in providing patient care.

a. Did any individuals seeking MOC participate directly in providing care to the patient population?

Yes No *If "No," go to item #39.*

b. Did these individuals participate in the following five key activities over the two cycles of data-guided improvement?

- Reviewing and interpreting baseline data, considering underlying causes, and planning intervention as described in item #14.
- Implementing interventions described in item #16.
- Reviewing and interpreting post-intervention data, considering underlying causes, and planning intervention as described in item #21.
- Implementing adjustments/second interventions described in item #23.
- Reviewing and interpreting post-adjustment data, considering underlying causes, and planning intervention as described in item #29.

Yes No *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40.*

39. Not participating directly in providing patient care.

a. Did any individuals seeking MOC not participate directly in providing care to the patient population?

Yes No *If "No," go to item 40.*

b. Were the individual(s) involved in the conceptualization, design, implementation, and assessment/evaluation of the cycles of improvement? (*E.g., a supervisor or consultant who is involved in all phases, but does not provide direct care to the patient population.*)

Yes No *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40. If "No," continue to #39c.*

c. Did the individual(s) supervising residents or fellows throughout their performing the entire QI effort?

Yes No *If "Yes," individuals are eligible for MOC unless other requirements also apply and must be met – see item # 40.*

40. Did this specific QI effort have any additional participation requirement for MOC? (*E.g., participants required to collect data regarding their patients.*)

Yes No *If "Yes," describe:*

Individuals who want their participation documented for MOC must additionally complete an attestation form, confirming that they met/worked with others as described in this report and reflecting on the impact of the QI initiative on their practice or organizational role. Following approval of this report, the UMHS QI MOC Program will send to participants an email message with a link to the online attestation form.

K. Sharing Results

41. 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?
 Yes No Manuscript for publication?

L. Project Organizational Role and Structure

42. **UMHS QI/Part IV MOC oversight – indicate whether this project occurs within UMHS, AAVA, or an affiliated organization and provide the requested information.**

University of Michigan Health System

• **Overseen by what UMHS Unit/Group? (name):** Sleep Medicine Fellowship Program

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

No Yes – the initiative is (name or describe):

Veterans Administration Ann Arbor Healthcare System

• **Overseen by what AAVA Unit/Group? (name):**

• **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 (name):**

• **The type of affiliation with UMHS is:**

Accountable Care Organization (specify which member institution):

BCBSM funded, UMHS lead state-wide Collaborative Quality Initiative (specify which):

Other (specify):