

Report on a QI Project Eligible for Part IV MOC

Improving Shingles Vaccination Rates in HIV Patients Aged 60 Years and Older

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:

Grant Greenberg, MD, UMHS Part IV Program Lead, 763-232-6222, ggreenbe@med.umich.edu

R. Van Harrison, PhD, UMHS Part IV Program Co-Lead, 734-763-1425, rvh@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, 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	20-21. 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*): 3/12/16
2. **Title of QI project:** Improving shingles vaccination rates in HIV patients aged 60 years and older
3. **Time frame**
 - a. **Date physicians begin participating (may be in design phase):** 1/1/2015
 - b. **End date:** 3/1/2016

4. Key individuals

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

Name: Suzanne F. Bradley, M.D.

Title: Professor of Internal Medicine

Organizational unit: Infectious Diseases Section, VAAHS

Phone number: 734-845-5820

Email address: sbradley@umich.edu

Mailing address: VA 2399

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

Name: Carol A. Kauffman, M.D.

Title: Professor of Internal Medicine, Chief, Infectious Diseases, VAAHS

Organizational unit: Infectious Diseases Section, VAAHS

Phone number: 734-845-5820

Email address: sbradley@umich.edu

Mailing address: VA 2399

5. Approximately how many physicians were involved in this project categorized by specialty and/or subspecialty?

One, Internal Medicine Infectious Disease. (Dr. Bradley)

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?**

1. HIV patients are living longer and healthier lives due to effective treatment.
2. Older adults are at increased risk of developing shingles and post-herpetic neuralgia.
3. HIV patients aged 60 years and older who meet criteria for shingles vaccine at our clinic are not receiving it.

b. Physician's role. What is the physician's role related to this problem?

ID Clinic physicians are to provide vaccinations and other appropriate preventive care to patients as part of routine care.

c. Project goal. What general outcome regarding the problem should result from this project?
(*Specific aims/targets are addressed in #12b.*)

Improve shingles vaccination rates in our vaccine eligible HIV population aged 60 years and older to 60%

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

HIV + patients aged 60 years and older without exclusion criteria for Shingles vaccine who receive treatment at the Ann Arbor VA ID Clinic.

See exclusion criteria list appended to the end of this report.

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

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

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?

Numerator: Shingles vaccine received

Denominator: Number of HIV patients aged > 60 years and older without an exclusion for Shingles Vaccination.

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

Centers for Disease Control and Prevention Recommendations, MMWR 2008

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

VA Patient Electronic Health Record (CPRS, VistaWeb)

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

A list of all HIV patients who attended the VA ID Clinic since January 1, 2015 was compiled on a weekly basis. Manual chart review was used to gather data for each eligible patient.

e. For what time period was the sample collected for baseline data?

Data for all HIV patients seen at the VA ID Clinic from 1/1/2014- -1/1/2015 were recorded at baseline.

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.)

	Baseline (1/1/2014 – 1/1/2015)
N eligible HIV patients	52
% Receiving shingles Vaccine	19%

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

To increase vaccination rate from 19% to 60% for HIV patients aged 60 years and older without exclusion criteria for Shingles vaccine by the end of the post-adjustment period 2/15/16.

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

Expert opinion and initial national (Healthy People) target rate for other vaccinations for older people (influenza, pneumococcal vaccine)

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?** Drs Bradley, Kauffman, Clinic physicians (Cinti, Rao, and ID Fellows), ID pharmacist (Dr. Steven Wiseman), and nursing staff (Ms. Starnes, Sams, and Mr. John)
- **How?** (e.g., in a meeting of clinic staff) Routine staff pre-clinic meeting prior to Friday am clinic
- **When?** January 14, 2015 (1-2 pm)

- 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.)

People

Difficult to remember the long and complicated list of vaccine exclusions in the context of a busy clinic

Processes

1. VA Shingles Order Webpage checkboxes incorrectly listed all HIV patients as compromised, excluding them from vaccination. Checkboxes had not been updated based on changes in practice
2. The live virus vaccine is kept in a common area and administered by ancillary personnel in a separate primary care clinic
3. The primary staff were not aware that some HIV patients could safely receive shingles vaccine and excluded patients even after the ID physician placed the order.

C. Do**14. Intervention(s). Describe the interventions implemented as part of the project.**System and tool changes

- The VA vaccine order-set was revised to reflect which HIV patients could potentially receive vaccine
- Development of a standardized checklist outlining the exclusions for Shingles vaccine.

Education

- Primary care staff were educated regarding which HIV patients could receive shingles vaccine

Care process for individual patients standardized

- HIV patients aged 60 years and older who were scheduled to attend the clinic were identified
- The exclusion checklist was placed in charts of eligible patients who had not been vaccinated.
- Eligibility status of each patient was discussed in the weekly staff meeting
- The clinic physicians who saw eligible patients could independently determine if vaccination was appropriate or should be deferred. The order for vaccine was placed if indicated.
- HIV patients who received the Shingles vaccine had that information recorded in their EHR per routine protocol by primary care personnel.

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

1. developed the Shingles vaccine exclusion checklist
2. identified eligible patients who had not yet received vaccine prior to each clinic visit
3. placed the checklist in eligible patient charts prior to each visit
4. recorded patients who received Shingles vaccination after each clinic in the database
5. updated the patient database weekly

Dr. Wiseman (ID Pharmacist)

1. assured that the VA order-set for vaccine was updated to include HIV patients
2. educated primary care personnel who administered vaccine about the changes in eligibility

ID Physicians

1. reviewed shingles exclusion criteria for each eligible HIV patient
2. ordered the shingles vaccine if appropriate
3. documented the rationale for not doing so in the chart

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

1/22/2015

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)?**xYes 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:**

1/22/15 – 7/22/15

- 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.)

	Baseline (1/1/2014 – 1/1/2015)	Post Intervention (1/22/15 – 7/22/15)
N eligible HIV patients	52	50
% Receiving shingles Vaccine	19%	40%

- c. **Did the intervention produce the expected improvement toward meeting the project's specific aim (item 12.b)?**

Shingles vaccination rates improved from 19% at baseline to 40% by 7/22/15, but fell short of the 60% vaccination goal.

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?** ID Clinic staff
- **How?** (e.g., in a meeting of clinic staff) ID clinic staff pre-Friday clinic meeting
- **When?** August 6, 2015 (1-2 pm)

- 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.)

Patient and Provider Factors

Addressable

1. Education - some of the patients were not aware of the importance of Shingles vaccine.
2. Education – some of the providers did not address the issue with the patients

Not addressable

1. HIV patients have to have a CD4 > 200/CD4% > 15% for at least one year to be eligible for vaccine. Response to medications takes time and compliance with HAART is an issue.
2. Compliance with visits is not assured. Loss to follow-up or transfer of care to other VAs for their HIV care
3. Older HIV+ adults are at increased risk of solid neoplasms, complications of hepatitis C, and cardiovascular disease. A number of patients required radiation or chemotherapy. While solid tumors and certain chemotherapeutic agents were not listed as exclusions for shingles vaccines, our providers felt that the vaccine could wait until the patients were more stable. A number of patients died of their comorbid conditions before vaccine status could be readdressed.

F. Redo

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

1. A fact sheet was given to patients eligible for Shingles vaccine at the time of their clinic visit by nursing staff on check-in (see attached)
2. The fact sheet was discussed with the patient by their ID physician.

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

8/15/15

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)?

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:

8/15/15 – 2/15/16

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.)

	Baseline (1/1/2014 – 1/1/2015)	Post Intervention (1/22/15 – 7/22/15)	Post Adjustment (8/15/15-2/15/16)
N eligible HIV patients	52	50	51
% Receiving shingles Vaccine	19%	40%	59%

c. Did the second intervention produce the expected improvement toward meeting the project’s specific aim (item 12.b)?

Yes, the vaccination rate improved from 19% to 40% to 58.8% which is just short of our target Shingles immunization rate of 60%

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?** ID Clinic staff
- **How?** (e.g., in a meeting of clinic staff) **ID clinic staff pre-Friday clinic meeting**

- **When?** February 19, 2016 (1-2 pm)

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.)

Patient and provider Factors

Addressable

1. Education - some of the patients were informed but deferred making a decision about the importance of Shingles vaccine
2. Education – one of the providers rarely informed the patients about vaccine.
3. More patients are approaching the age of 60 and need to be identified and educated about shingles

Not addressable

3. HIV patients have to have a CD4 > 200/CD4% > 15% for at least one year to be eligible for vaccine. Response to medications takes time and compliance with HAART remains an issue.
4. Compliance with visits is not assured. Loss to follow-up or transfer of care to other VAs for their HIV care. Four patients were lost to follow-up or transferred to a VA closer to their home during the study period
5. Older HIV+ adults are at increased risk of solid neoplasms, complications of hepatitis C, and cardiovascular disease. A number of patients required radiation or chemotherapy. While solid tumors and certain chemotherapeutic agents were not listed as exclusions for shingles vaccines, our providers felt that the vaccine could wait until the patients were more stable. Five patients died of their comorbid conditions before vaccine status could be readdressed.

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

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 – #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.

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

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 clinic has indicated that this process is useful

1. Dr. Bradley will continue to maintain her list of HIV patients and identify those that reach the age of 60 years and older.
2. The exclusion checklist will be placed in eligible patient charts along with patient information on shingles vaccine on a weekly basis
3. A list of vaccinated patients will be maintained.
4. Feedback to clinic staff will be provided at weekly staff meetings.

- 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?**
1. Yes, exclusion criteria for shingles vaccination are not well known.
 2. Our pharmacist asked for copies of our exclusion criteria to disseminate to physicians in primary care clinics.
- 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??**
1. A simple reminder and constant reinforcement markedly improved our vaccination rates.

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.)*

Only Dr. Bradley was seeking credit for this MOC activity. She was engaged in all elements (a-e) as noted below.

- 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?**

Clinic physicians noted that there were potential exclusions to receiving shingles vaccine in HIV patients where clear guidance was not provided by the CDC Recommendations. Chemotherapy in patients with solid tumors was an area that was not specifically addressed.

- 31. How did the project ensure meaningful participation by physicians who subsequently request credit for Part IV MOC participation?**

The physicians involved either were not ABIM certified or already had credit for this activity through the UM ID clinic.

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 Presentation (verbal or poster) at a regional or national meeting?
 Yes No Manuscript for publication?

L. Project Organizational Role and Structure

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

- University of Michigan Health System

• Overseen by what UMHS Unit/Group?

• 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? Infectious Diseases Section Outpatient Clinic

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

- X 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*):

APPENDIX

1/13/2015

**HERPES ZOSTER (ZOSTAVAX) VACCINE – EXCLUSIONS
INFECTIOUS DISEASES CLINIC
VA ANN ARBOR HEALTHCARE SYSTEM****Age**

- Age less than 60 years

History anaphylaxis to the following substances:

- neomycin, gelatin, aminoglycosides

Recent administration live attenuated viral vaccines

- administer Zostavax at least 4 weeks later

History of immunosuppressive conditions:

- HIV - CD₄ count less than 200 cells/mm³ (15%): patients should have a CD4 count more 200/(15%) for 12 months to receive vaccine
- Malignant neoplasms bone marrow or lymphatic system unless: no chemotherapy or radiation within the prior 3 months or in remission
- Other unspecified cell-mediated immunodeficiency including pregnancy
- HSCT transplantation within 24 months (decide on case by case basis)

History of immunosuppressive medications such as:

- Wait at least 4 weeks after discontinuation of any of the following:
- Prednisone \geq 20 mg orally daily (or equivalent) for more than 14 days
- Methotrexate > 0.4 mg/kg/week
- 6-mercaptopurine > 1.5 mg/kg/day
- Azathioprine > 3.0 mg/kg/day
- Immune modulators, e.g., etanercept, infliximab, and adalimumab

Anti-virals active against H. zoster

- Stop acyclovir, famciclovir, or valacyclovir 24 hours prior to vaccination.
- Do not restart anti-virals for at least 14 days following vaccination