



OKLAHOMA STATE UNIVERSITY
CENTER FOR HEALTH SCIENCES

OMECCO

**RESIDENT AND FELLOW
QUALITY IMPROVEMENT & PATIENT SAFETY
PROJECT HANDBOOK**

Table of Contents

Quality Improvement Program Background and 2023 Hospital National Patient Safety Goals (JCAHO)	2
Step-by-step guide for completion of projects	3-4
Appendices:	
A: CLER Pathways to Excellence, Health Care Quality	5
B: Setting Aims	6-7
C: Sample Project Worksheet/Timeline	8
D: Poster Information – Checklist	9-10
E: Poster Information – Sizing Resources	11
F: Recorded Zoom Presentation	12
G: Project Wrap-up	13
H: Judging Rubric	14-15
I: Osteopathic Recognition Rubric	16
J: Poster Information – 2024 Deadlines	17
K: Registration Information	18

OSU-CHS | OMECO CLER Symposium Committee:

Jenny J. Alexopoulos, DO	Director-CLER
Crystal David, Pharm-D, BCPS	Health Care Quality, Co-Chair
Kathy Cook, DO	Health Care Quality, Co-Chair
Lisa Cummins, RN	Quality Manager, CLER
Molleigh Robinson, BS	GME Website Specialist
MeLyssa D. Bailey, BA	Executive Assistant III

Contact Information:

Poster submissions and questions: qualitysymposium@okstate.edu

OSU-CHS | OMECO CLER Website: <https://medicine.okstate.edu/gme/health-care-quality.html>



OKLAHOMA STATE UNIVERSITY
CENTER FOR HEALTH SCIENCES

STEP-BY-STEP GUIDE: QUALITY IMPROVEMENT (QI) PROJECTS

1. SELECT A PROJECT AND CONTACT A QI FACULTY ADVISOR

There are a wide variety of options for QI projects. Past projects have focused on different areas including both inpatient and outpatient settings. QI projects related to hospital and clinic committees are also encouraged.

- All medical students, residents, and fellows that are engaged in a quality or patient safety project are encouraged to participate.
- Projects can be in progress or completed.
- Interdisciplinary and interdepartmental collaboration on these projects is highly encouraged.

The goal for each project is to present findings at the Annual Resident Quality Improvement and Patient Safety Symposium held each year.

2. REVIEW INSTITUTE FOR HEALTHCARE IMPROVEMENT (IHI) MODULES

IHI Modules

IHI offers "Open School for Health Professions," which includes free online courses, modules, and other excellent resources about quality improvement and patient safety. Students and residents may create a free account and log-in at: <https://www.ihl.org/education/ihl-open-school/Pages/Free-Courses-for-Eligible-Participants.aspx>

3. COMPLETE IRB DETERMINATION FORM

IRB Application

Submitting each QI project for exemption determination is required. Depending on the IRB outcome for your project, the words "IRB approved" or "IRB exempt" will need to be visible on your final poster.

Most QI projects will be exempt from formal IRB approval, but it may be necessary to complete the IRB process. You will need to submit the application for determination through your institution's IRB committee. Your faculty advisor should be able to help you complete the application.

Human Ethics Training

If your project is determined to be exempt, you do NOT need to complete human ethics training. However, if your QI project is not exempt and you have to complete a full IRB application you **MUST** complete the Human Ethics training. The training is conducted online and contains modules on topics including ethical principles, IRB regulations, informed consent, and vulnerable populations. Each module has a short quiz at the end to assess understanding.

4. CREATE AN AIM STATEMENT

See [Appendix B](#) (pgs. 6-7) for advice on creating an effective AIM statement from the Institute for Healthcare Improvement.

5. COMPLETE A PROJECT TIMELINE

Sample project timelines are included in [Appendix C](#) (page 8). The timeline should include pertinent steps and assigned duties and should be coordinated with and approved by the faculty advisor for the project. This will include items such as deadlines for data review and collection (literature review, analysis of the data with the who/what/when/where/how), project implementation, PDSA cycles, and poster preparation.

6. PROJECT OVERVIEW

Discuss ways to determine the extent of the problem you are trying to address with your QI faculty advisor. Develop a better understanding of the problem and summarize the information you learn by completing the following:

- Perform a literature review related to your project.
- Create a general overview (ABSTRACT) of the project by outlining the following:
 - TITLE: Describe the initiative to improve health care by improving patient safety, effectiveness, patient centeredness, timeliness, or cost.
 - AUTHORS: Provide the name of team members and faculty advisor.
 - AIM STATEMENT:
 - State the specific goal of the project (What are you trying to accomplish?) – [See Appendix B](http://www.ih.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx)
<http://www.ih.org/resources/Pages/HowtoImprove/ScienceofImprovementHowtoImprove.aspx>
 - INTRODUCTION/BACKGROUND:
 - State the problem the QI project is addressing.
 - Summarize available current knowledge – describe the extent of the problem and why it is important.
 - State the rationale for the goal/aim.
 - METHODS:
 - Design and execute plan-do-study-act (PDSA) cycle(s):
<http://www.ih.org/resources/Pages/Changes/default.aspx>
 - PDSA worksheet and examples:
<https://www.ahrq.gov/health-literacy/improve/precautions/tool2b.html>
 - Identify the quality improvement tools you will utilize.
<http://www.ih.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx>
 - Develop measurement plan (summarize details of the data collection and analysis plan, using the IHI tools for improvement).
 - Describe the outcome measures you will be tracking for your project.
 - CONCLUSION:
 - Describe your plan for sustainability of project or end point of project.
 - State your plan for publication and/or presentation.

7. SCHEDULE REGULAR MEETINGS WITH YOUR QI FACULTY ADVISOR TO CHECK IN / CHECK OUT

It will be necessary to periodically (e.g., every 2-4 weeks) check-in with your advisor. Use these times to review your progress, ask for guidance, confirm PDSAs and data collection methods, review data, and make plans for scholarly activities related to your project (ex: institutional, local, state, and/or national conferences).

8. CONDUCT YOUR QI PROJECT

- Use the tools you have learned and apply the PDSA approach to test change.
- Work closely with your QI Faculty Advisor and team when using the tools and planning your PDSAs.
- Consult with your QI Faculty Advisor if you have questions or concerns.

9. PRESENT YOUR QI PROJECT

This year's presentation will be a combined in person and virtual presentation. All posters will be available for viewing on the website and in person on the date of the symposium. In addition, a three to five-minute recorded summary of each poster will need to be recorded and will be available for viewing.

Appendix A: CLER Pathways to Excellence

The optimal clinical learning environment provides experiential and interprofessional training in all phases of quality improvement aligned with the quality goals of the clinical site. In this way, it ensures that the residents and fellows engage in the entire cycle of quality improvement-from planning through implementation and reassessment.

Health Care Quality (HQ):

HQ Pathway 1: Education on quality improvement

HQ Pathway 2: Resident and fellow engagement in quality improvement activities

HQ Pathway 3: Data on quality metrics

HQ Pathway 4: Resident and fellow engagement in the clinical site's quality improvement planning process

HQ Pathway 5: Resident, fellow, and faculty member education on eliminating health care disparities

HQ Pathway 6: Resident, fellow and faculty member engagement in clinical site initiatives to eliminate health care disparities

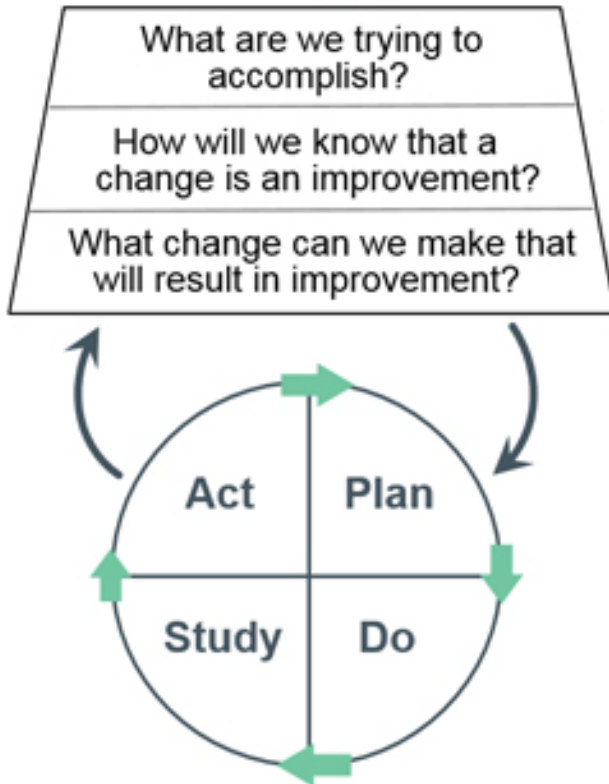
HQ Pathway 7: Resident, fellows, and faculty members deliver care that demonstrates cultural humility

<https://www.acgme.org/globalassets/pdfs/cler/1079acgme-cler2019pte-brochdigital.pdf>

Appendix B: Setting Aims

Science of Improvement: Setting Aims

Model for Improvement



Improvement requires setting aims. An organization will not improve without a clear and firm intention to do so. The aim should be time-specific and measurable; it should also define the specific population of patients that will be affected. Agreeing on the aim is crucial; so is allocating the people and resources necessary to accomplish the aim.

In 1999, the Institute of Medicine (IOM) in Washington, DC, USA, released [*To Err Is Human: Building a Safer Health System*](#), a report that brought much public attention to the crisis of patient safety in the United States. In 2001, the IOM issued a second report, [*Crossing the Quality Chasm: A New Health System for the 21st Century*](#), which outlines [six overarching "Aims for Improvement" for health care:](#)

- **Safe:** Avoid injuries to patients from the care that is intended to help them.
- **Effective:** Match care to science; avoid overuse of ineffective care and underuse of effective care.
- **Patient-Centered:** Honor the individual and respect choice.
- **Timely:** Reduce waiting for both patients and those who give care.
- **Efficient:** Reduce waste.
- **Equitable:** Close racial and ethnic gaps in health status.

Many organizations use the six IOM aims to help them develop their aims.

Appendix B: Setting Aims

Science of Improvement: Tips for Setting Aims (Institute for Healthcare Improvement/IHI)

- 1. State the aim clearly.** Achieving agreement on the aim of a project is critical for maintaining progress. Teams make better progress when they are very specific about their aim. Make sure that the aim statement describes the system to be improved and the patient population. In addition, ensure that the aim gives guidance on the approaches to improvement.
- 2. Include numerical goals that require fundamental change to the system.** Teams are more successful when they have unambiguous, focused aims. Setting numerical goals clarifies the aim, helps to create tension for change, directs measurement, and focuses initial changes. For example, the aim "Reduce operating room time" is not as effective as "Reduce operating room time by 50% within 12 months." Including numerical goals not only clarifies the aim but also helps team members begin to think about what their measures of improvement will be, what initial changes they might make, and what level of support they will need.
- 3. Set stretch goals.** A "stretch" goal is one to reach for within a certain time. Setting stretch goals such as "Reduce operating room time by 50% within 12 months" communicates immediately and clearly that maintaining the status quo is not an option. Effective leaders make it clear that the goal cannot be met by tweaking the existing system. Once this is clear, people begin to look for ways to overcome barriers and achieve the stretch goals.
- 4. Avoid aim drift.** Once the aim has been set, the team needs to be careful not to back away from it deliberately or "drift" away from it unconsciously. The initial stretch goal "Reduce operating room time by 50% within 12 months" can slip almost imperceptibly to "Reduce operating room time by 40%" or "by 20%." To avoid drifting away from the aim, repeat the aim continually. Start each team meeting with an explicit statement of aim, for example, "Remember, we're here to reduce operating room time by 50% within 12 months," and then review progress quantitatively over time.
- 5. Be prepared to refocus the aim.** Every team needs to recognize when to refocus its aim. If the team's overall aim is at a system level (for example, "Reduce adverse drug events in critical care by 30% within 12 months"), team members may find that focusing for a time on a smaller part of the system (for example, "Reduce adverse drug events for critical care patients on the cardiac service by 30% within 12 months") will help them achieve the desired system-level goal. Note: Do not confuse aim drift or backing away from a stretch goal (which usually is not a good tactic), with consciously deciding to work on a smaller part of the system (which often is a good tactic).

Examples of Effective Aim Statements

- Reduce adverse drug events (ADEs) in critical care by 75 percent within 1 year.
- Improve medication reconciliation at transition points by 75 percent within 1 year.
- Reduce high-hazard ADEs by 75 percent within 1 year. For example, reduction of 75 percent in one of the following:
 - Overdoses from benzodiazepines and narcotics
 - Percentage of patients with incidence of bleeding in patients being treated with anticoagulant medications.
 - Percentage of patients on insulin with any blood sugar <50
- Increase the number of surgical cases between cases with a surgical site infection by 50 percent within one (1) year.
- Achieve > 95 percent compliance with on-time prophylactic antibiotic administration within 1 year.

Appendix C: Sample Project Worksheet/Timeline

Use this Project Worksheet/timeline to plan out your tasks. The dates in **bold** are the due dates for the QI Symposium. Other dates are suggestions to help keep the project workflow on time.

	Due by	Task	Who is responsible?
<input type="checkbox"/>	12/1/2023	Decide on QI Project	
<input type="checkbox"/>	12/1/2023	Assign a person to each of the tasks below	
<input type="checkbox"/>	12/1/2023	Contact a Faculty Advisor	
<input type="checkbox"/>	12/15/2023	Perform literature Review	
<input type="checkbox"/>	12/15/2023	Complete Project Outline	
<input type="checkbox"/>	12/15/2023	Report progress on plan for data collection to your advisor	
<input type="checkbox"/>	12/29/2023	Request IRB approval/exemption (see page 3 of this handbook)	
<input type="checkbox"/>	12/29/2023	Complete literature review	
<input type="checkbox"/>	12/29/2023	Develop plan for any identified barriers (include who/what/where/when/how)	
<input type="checkbox"/>	1/12/2024	Initial survey or data collection detailed	
<input type="checkbox"/>	02/02/2024	Formally review plan/progress with your faculty advisor	
<input type="checkbox"/>	02/05/2024 -- 02/29/2024	Implement Project. Conduct additional "mini" PDSAs as needed	
<input type="checkbox"/>	03/01/2024	Registration deadline	
<input type="checkbox"/>	03/08/2024	Analyze your results.	
<input type="checkbox"/>	03/15/2024	Email qualitysymposium@okstate.edu with abstract of your poster.	
<input type="checkbox"/>	03/29/2024	Complete the rough draft of your poster	
<input type="checkbox"/>	04/01/2024	Submit rough draft of your poster to your QI Faculty Advisor	
<input type="checkbox"/>	04/15/2024	Submit draft of your poster by 5pm to qualitysymposium@okstate.edu after review by your faculty advisor	
<input type="checkbox"/>	05/01/2023	Submit final recording of summary of project to qualitysymposium@okstate.edu after review by your faculty advisor	
<input type="checkbox"/>	05/01/2024	Submit final large poster template via PowerPoint (ppt): qualitysymposium@okstate.edu	
<input type="checkbox"/>	06/07/2024	Resident/Fellow Quality Improvement and Patient Safety Symposium Day!	

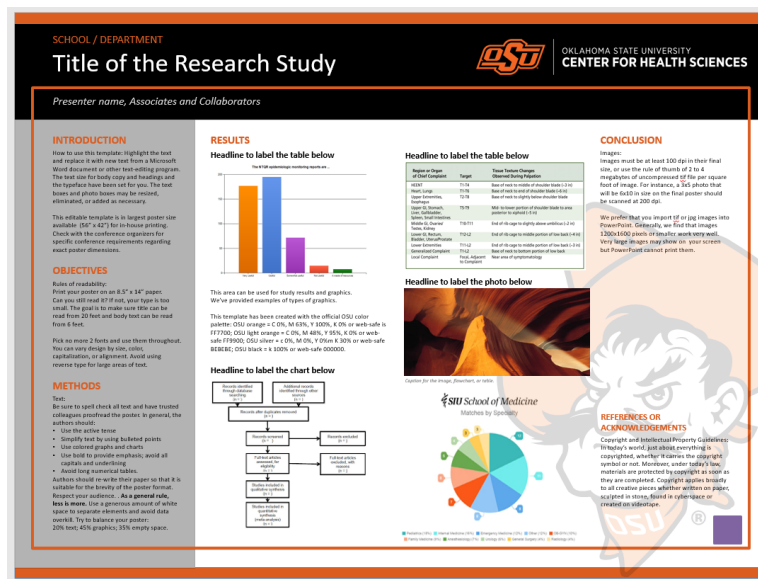
APPENDIX D: Poster Information - Checklist

Content

- Add poster title to presentation:
 - List faculty advisor(s) with credentials
 - List authors with credentials and PGY status.
 - Include institutional affiliation. **Please include your institution's logo on the poster.**
- Logical sequence of information flow (left to right, and top to bottom).
- Photographs, graphs, tables, and charts are used whenever possible to display data or convey valuable information.
- Each section is concise and clear. Wording should allow for each graphic, section, table to 'stand alone.'
- Avoid abbreviations.
- Cite references in standard style (there should be several references utilized).
- Copywritten material is prohibited. Regarding any photos of residents, fellows and/or faculty, permission must be obtained and noted in the poster presentation.
- Review with Faculty Advisor for the project prior to submitting.**

Appearance

- You may utilize the OSU-CHS templates provided in the links referenced in [Appendix E](#) on page 11, but feel free to use any templates to which you have access. The template meets the size restrictions of the scientific program (maximum size is 36" tall by 48" wide).
- Poster construction will accommodate method of display at the meeting.
- The poster does not appear cluttered.
- Font is similar throughout (no more than three font sizes used for poster title, section title, and text).
- Color, lines, boxes, and arrows are used to emphasize important points.
- Content can be absorbed in 10 minutes or less.
- Leave 2"x2" space in lower right-hand corner of poster for placement of QR code as shown by the purple box below in the sample poster below. The QR code will take the viewer to the recorded Zoom presentation referenced in Appendix F on page 11.



Sections

- ❑ **Background:** This is the introduction; it provides the reader a short background of the topic you are discussing/presenting. The reader needs to very quickly understand why you chose this general topic (why is it important?). This can be a bulleted list or paragraph, maximum length of approximately two hundred words. Avoid providing an overview of the entire project.
- ❑ **Aim Statement:** One sentence that includes the goal of the project with specific percentage improvement (if applicable) and end date (can be Month/Year).
- ❑ **Methods:** Briefly describe qualitative and quantitative results using bullets or limited text.
- ❑ **Results:** Use figures with figure legends, graphs, and tables to enhance the presentation of your results, not just a text description.
- ❑ **Conclusions:** Remind the reader of your aim, discuss the relevance of your findings and limitations. This would include a brief discussion of things that went well, and reasons goals may not have been met (limitations). (Example: Order set utilization did not seem to be related to lack of knowledge of its existence, but rather the difficulty in navigating the order set.)
- ❑ **Next Steps:** Describe how you will use this information to continue to improve quality of care and patient safety (further PDSA for your project or implementation).

APPENDIX E: Poster Information - Sizing

- ❑ **All Participants** are required to send their final file in MS PowerPoint to qualitysymposium@okstate.edu. Please proofread all material prior to submission (especially resident/fellow names). Posters will be retained on the OSU CHS CLER webpage <https://medicine.okstate.edu/gme/health-care-quality.html>.
- ❑ Maximum size is 36" Tall by 48" Wide. To create a true size slide in PowerPoint, select Design-> Slide Size->Custom Slide Size-> **Width: 48" Height 36"**-> Ensure Fit
- ❑ Do not name your file "Presentation." When naming your file use this format: Primary author name-> dash symbol-> brief project name-> dash symbol->QI 2024.
Example: T. Smith-Blood Transfusions-QI 2024

- ❑ POSTER GUIDELINES AND TEMPLATES: 

<https://libraryguides.medicine.okstate.edu/posters>

*This link provides you with poster templates and instructions for creating your template as a file. **This website contains information for Research Day, please use our guidelines provided in this handbook for the QI Symposium.***

Additional General Resources for Academic Posters:

Designing Conference Posters (includes dos and don'ts)

<http://colinpurrington.com/tips/poster-design>

How to make an Academic Poster

Annals of Surgery and Medicine

<http://www.sciencedirect.com/science/article/pii/S2049080116301303>

Appendix F: Recorded Zoom Presentation

- ❑ **All Participants** are required to submit their final presentation recording. These will be available on the website for judges and visitors to watch. This presentation should be no longer than 5 minutes and should highlight the most important aspects of your QI project.

- ❑ **To record your presentation in Zoom:**
 1. Open the PowerPoint file of your poster on your computer.
 2. Sign in to Zoom on your computer. Open a meeting with Zoom. Join with Computer Audio. Video is not necessary. Check to see that your microphone is unmuted.
 3. Click “Share Screen” to share your PowerPoint.
 4. Select which PowerPoint you would like to present. Click Share.
 5. Ensure you are in presenter mode.
 6. Ensure the correct screen is being recorded. You can tell which screen is being recorded by the Zoom green/red bar at the top. This is what will be recorded unless you swap this view.
 7. Click on the three dots and select “Record.”
 8. Record your presentation.
 9. When you are finished, click on the three dots, and select “Stop Recording.”
 10. When you finish the meeting, your recording will be converted to an mp4 file and saved on your computer.
 11. You will then email your recording with the title of the poster, presenter’s names, and faculty advisor(s) to qualitysymposium@okstate.edu.

Appendix G: Project Wrap-up

Agenda Items:

1. Review final report, including tools used and PDSA cycles.
2. Discuss what went well with your project and what could have been done differently.
3. Discuss suggestions to improve the learning experience during your QI project (i.e., resources, readings, etc.).
4. Discuss key learning you will apply in your future work.
5. Discuss the sustainability of your project even after you are gone. Who will sustain the project? What will it look like?
6. Discuss the importance of lifelong learning and application of QI knowledge and skills throughout your career (i.e., if you are in practice, and someone asked you to do a project, how would you do it?).



Appendix H: Judging Rubric

Please utilize the following rubric when determining scores for the posters you are judging. These are meant as a guide to help facilitate the scoring process. While guidance is defined for 5 points, 3 points and 0 points, you may give any number of points between 0 and 5. Scores for this section of the rubric will be used to determine the 1st, 2nd, and 3rd place overall winners.

	5 points	3 points	0 points
Background of project	Background description clearly identifies the need for the project	Background description is identified, but context provided is unclear	No background description: context not provided
Aim Statement	Aim statement clearly identifies the problem being addressed; includes overall goal	Aim statement does not clearly identify the problem being addressed or does not include overall goal	Aim statement is missing.
Project design and strategy	Clearly communicated project design and strategy	Project design and strategy were included but lacked information to understand what was done	There was no discussion of the study design or procedures
Results	Results included sufficient amounts of high-quality data that were clear and easy to comprehend	Results did not include sufficient amounts of high-quality data or data were difficult to comprehend	Results were not provided
Relevance/importance of project	There was clear communication of relevance/importance of project	There was some communication of relevance/importance of project	There was no communication of relevance/importance of project
Practical application/potential impact of the research project	Next steps were identified as a result of the clear application/potential impact of findings from the project	Next steps or application/potential impact of the findings from the project were unclear	There was no indication of the impact of results; no next steps identified.
Outcomes/lessons learned support the results/changes made	Project findings clearly support the conclusion and align with changes that will be made	Project findings somewhat support the conclusion and partially align with changes that will be made	Project findings do not support the conclusion and do not align with changes that will be made
Progress towards the Aim statement	There was clear evidence of progress towards the Aim statement	There was some evidence of progress towards the Aim statement	There was no evidence of progress towards the Aim statement

Appendix H: Judging Rubric

Quality and Patient Safety	There was clear evidence the project led to learning about quality and patient safety	There was some evidence the project led to learning about quality and patient safety	There was no evidence the project led to learning about quality and patient safety
Poster Design	Poster is clear and easy to read; good flow; content is understood without further explanation	Poster is relatively easy to read; content may require further explanation for clarity	Poster is overly cluttered; design overwhelms content; content is impossible to understand without further explanation
Charts and images	Charts and images are organized, add appeal to the poster, and enhance the understanding of the material	Charts and images are organized and are clearly connected to the study	Charts and images are unclear and do not enhance the presentation
Literature citations	Scholarly sources are clearly cited in body of poster as well as in references section and provide context for the study	Scholarly sources are used but not clearly cited in body of poster or references section is missing	Scholarly sources are not used or are inappropriate
Title and authors	Appropriate project title: authors clearly identified including PGY status, faculty designation and departments	Title and authors identified. May be missing one of the following: PGY status, faculty designation and/or department	No designation of PGY status, faculty designation or department
Recorded Presentation	Presentation increases the audience's understanding of the project; presentation is within the 5-minute time limit; presentation is professional	Presentation adds no additional information to what is provided in the poster; presentation if over the 5-minute time limit	No presentation is available for viewing
Overall quality of the project	Excellent	Fair	Poor

Appendix I: Osteopathic Recognition Rubric

Please utilize the following rubric when determining scores for the posters you are judging. These are meant as a guide to help facilitate the scoring process. While guidance is defined for 5 points, 3 points and 0 points, you may give any number of points between 0 and 5. Scores for this section of the rubric will be used to determine the winner of the Osteopathic Recognition Award.

Please consider the four osteopathic tenets when scoring the poster.

- 1) The body is a unit; the person is a unit of body, mind and spirit
- 2) The body is capable of self-regulation, self-healing, and health maintenance
- 3) Structure and function are reciprocally interrelated
- 4) Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function.

	5 points	3 points	0 points
Osteopathic tenets	Topic and poster integrate two or more tenets of osteopathy	Topic and poster integrate one tenet of osteopathy	Topic and poster do not integrate the tenets of osteopathy
Osteopathic impact	Topic and poster offer a strong impact to the osteopathic profession	Topic and poster offer a weak impact to the osteopathic profession	Topic and poster do not offer an impact to the osteopathic profession

Appendix J: Poster Information – 2024 Deadlines



OMEKO

Resident/Fellow Quality Improvement and Patient Safety Symposium

Friday – June 7, 2024

Poster Presentation and Awards Ceremony

Deadlines:

- | | |
|------------------|---|
| February 2, 2024 | Review project plan/progress with your faculty advisor. |
| March 1, 2024 | Deadline to register for symposium: Link |
| March 15, 2024 | Email qualitysymposium@okstate.edu with abstract of poster. |
| April 15, 2024 | Submit draft of your poster by 5pm to qualitysymposium@okstate.edu after review by your faculty advisor. Poster will be reviewed by QI committee with suggested corrections. You will receive email confirmation with further details and instructions for the symposium. |
| May 1, 2024 | Submit recorded presentation via email to qualitysymposium@okstate.edu .
Your recorded ZOOM will be used for virtual presentation, see Appendix F on page 12. |
| May 1, 2024 | Submit final large poster template via PowerPoint (ppt) to qualitysymposium@okstate.edu .
Posters will be printed and displayed by OSU-CHS. |
| June 7, 2024 | Resident/Fellow Quality Improvement and Patient Safety Symposium Day!
Posters will be available to view in person and online beginning at 7 am. <u>Please join us for the awards presentation in person or via Zoom 12-1pm on day of symposium.</u> |

Appendix K: Registration Information

Registration Fee

1 poster \$50

2 or more posters \$100

Space is limited to 50 posters

Do not wait, register now!

[7th Annual OSU CHS | OMECO Quality Improvement and Patient Safety Registration Link](#)