**Online Only Appendix List**

1. Online Appendix 1: U of Toledo QI Needs Assessment Semi-Structured Qualitative Interview Guide
2. Online Appendix 2: Quality Improvement Capacity Study Survey

**Tables and Figures:**Authors should follow the AMA Manual of Style guidelines for the [Visual Presentation of Data](http://www.amamanualofstyle.com/view/10.1093/jama/9780195176339.001.0001/med-9780195176339-chapter-4) when preparing tables and figures. Provide no more than a total of 5 tables or figures. Figures should be provided in their original form (ie, jpg, tif, etc). Tables must be supplied in an editable format (do not submit a graphic/image representation of a table).

**Online Appendix 1: U of Toledo QI Needs Assessment Semi-Structured Qualitative Interview Guide**

1. When you think about quality improvement at your clinical practice site, what do you think about?
2. What kind of training do you personally have in the science of quality improvement?
3. What has your involvement been with quality improvement in the practice?
4. What examples do you have, if any, of QI projects that went well?

* Probes: What about them led to them going well? Tell me about the team that was involved in that project? Was there something about the team that made it particularly successful? What kind of short-term improvements were noted? What kind of long-term improvements were noted?

1. What barriers can you identify that get in the way of successful quality improvement in your practice?
2. When you think about the populations of patients seen in your practice and living in your community, are there communities that experience health disparities or lack of equity?

* Probes: Do these populations tend to access the health center? Do these populations have specific needs that are difficult for the health center to provide?

1. What would be your main motivators for participating in quality improvement projects in the future?
2. If you’re comfortable telling me, what, if any, barriers have you experienced participating in quality improvement projects?
   * Probes: Time barriers, for example, caring for small children, family members, or elderly parents. Burnout or other work related stress; Need for further training or staff support; Other crucial work activities that crowd out time that could be spent on QI.
3. It’s important that QI projects support the needs of patients and community and the interest of faculty.
   * Probes: What ‘pain points’ ‘problems’ or research questions are most interesting to you in terms of quality improvement? What seems most prevalent and concerning for the patient population that you serve?
4. Some clinicians publish and present QI projects, either at a local quality poster day, a state, regional or national conference, or in a journal.
   * Probe: Tell me about any experience you have with presenting or publishing your QI work? Ideally, what would presenting or publishing look like for you?
5. Pressure from internal and external factors can affect our ability to be successful in QI.
   * Probe: What factors inside the health center and department affect QI work? What factors outside the health center affect QI work? (Examples might be organization value-based payment initiatives, state quality initiatives, etc.)
6. Anything else you would like to say about this topic?

**Online Appendix 2: Quality Improvement Capacity Study Survey**

We are asking you to take part in a study to help us learn more about quality improvement in the University of Toledo Department of Family Medicine. The survey will take about 5-10 minutes to complete. You can skip questions that you do not want to answer or stop the survey at any time. We will keep your answers confidential. The self-generated ID will help us make sure there are no duplicate responses. This study was approved as IRB exempt (HUM00197797) by the University of Michigan.

Here are some definitions that will help you answer the survey questions:

* Quality improvement (QI) is defined as using data and feedback to improve performance over time. In health care, QI is a vital tool to reduce medical errors and ensure all patients get the best medical care.
* Some examples of training in the science of quality improvement include LEAN, RONA, IHI, etc.
* Quality capacity can be defined as having the knowledge, tools, people, and support to continuously improve our care over time.
* Quality champions are people who have specific QI training, are passionate about improving care, and who motivate others in the practice to improve quality. They may or may not have a specific QI leadership title.

1. Please select the role that best fits you:

|  |  |  |  |
| --- | --- | --- | --- |
| [ ] Administration | [ ] Behavioral health | [ ] Faculty physician | [ ] Medical assistant |
| [ ] Nurse | [ ] PGY 1 resident | [ ] PGY2 resident | [ ] PGY3 resident |
| [ ] Pharmacist | [ ] Physician assistant | [ ] Care manager | [ ] Other\_\_\_\_\_\_\_\_\_\_ |

1. How long have you worked in the University of Toledo Department of Family Medicine?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [ ] <1 year | [ ] 1 year | [ ] 2-4 years | [ ] 5-9 years | [ ] 10+ years |

1. How many hours of prior training have you had in the science of quality improvement? Please make your best estimate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [ ] None | [ ] 1-4 hrs | [ ] 5-9 hrs | [ ] 10-19 hrs | [ ] 20+ hrs |

1. Which reasons for wanting to improve quality at your practice apply to you? Pick all that apply.

|  |  |  |
| --- | --- | --- |
| [ ] Make a difference to patients | [ ] I like to improve things | [ ] Improve burnout at work |
| [ ] Reduce unnecessary care | [ ] Committed to high quality | [ ] Improve team efficiency |
| [ ] Improve patient satisfaction | [ ] Improve my job satisfaction | [ ] Produce scholarly work |
| [ ] Other: |  |  |

1. Which barriers to improving quality (QI) at your practice apply to you? Pick all that apply.

|  |  |
| --- | --- |
| [ ] I don’t have enough training in QI | [ ] Patient care tasks are prioritized over QI |
| [ ] Other roles (eg teaching) are prioritized over QI | [ ] Prior quality projects were not effective |
| [ ] I don’t have motivation to participate | [ ] I haven’t been asked to participate in QI |
| [ ] QI doesn’t make a difference in patient care | Other: |

1. In which topics have you had prior training? Pick all that apply.

|  |  |  |
| --- | --- | --- |
| [ ] Setting a project aim | [ ] Creating a driver diagram | [ ] Generating ideas for change |
| [ ] Picking an outcome measure | [ ] Running a PDSA cycle | [ ] Writing up results as a poster |
| [ ] Leading a team meeting | [ ] Other: |  |

1. In which of the following QI training would you like to participate? Pick all that apply.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| [ ] Lectures | [ ] Reading articles | [ ] Online modules | [ ] Participation in a mock QI project with a small team | [ ] Participation in a QI team meeting on an ongoing project |

1. Who is responsible for conducting quality improvement in the clinical practice? In this question, dedicated resources means QI team members have the time set aside and administrative resources to do their job.

|  |  |  |  |
| --- | --- | --- | --- |
| [ ] No specific group is responsible for leading QI. | [ ] A specific team is responsible for leading QI without dedicated resources. | [ ] A specific team is responsible for leading QI with dedicated resources. | [ ] A specific team is responsible for leading QI with dedicated resources and the team involves all team members from different roles in QI activities. |

1. How would you describe the role of quality champions in the clinical practice? Pick all that apply.

|  |  |  |  |
| --- | --- | --- | --- |
| [ ] We do not have a quality champion in the practice. | [ ] We have a non-physician quality champion. | [ ] We have a physician quality champion. | [ ] We have a department leader or administrator who is a quality champion. |

1. How would you describe the role of non-physician employees in quality improvement? Pick one.

|  |  |  |  |
| --- | --- | --- | --- |
| [ ] They are not involved in developing or implementing QI projects. | [ ] They are not involved in developing QI projects. They are involved in implementing projects. | [ ] They are involved in both developing and implementing QI projects. | [ ] They are involved in both developing and implementing QI projects and also encouraged to bring up problem points in the practice and ideas for QI projects to leadership. |

1. How would you describe the role of patients and families in quality improvement projects? Pick one.

|  |  |  |
| --- | --- | --- |
| [ ] Patients and family members are not involved in developing or implementing QI projects. | [ ] There is a structured way for patients and family members to provide ideas for quality improvement in our practice. | [ ] There is a structured way for patients and family members to provide ideas and assist in implementation of quality improvement in our practice. |

Anything else you want us to know about quality improvement?