

INQUIRY Project Worksheet Checklist

- Project name; learner name; unit/services affected; start/end dates
- Aims: Global; 3 “why’s”, 3 “how’s”; specific SMART aim
- PLAN: Metric choices clinical, process, financial, safety, balancing with current status/target/resources needed to get to target
- Team: leader, facilitator, members (content and process experts)
- Barrier assessment: problems, solutions, timeline to resolve barriers
- EBM: literature search, expert opinion, local data[^]
- First face-to-face meeting agenda*: introductions, data review, draft forms, action items, follow-up plans
- Timeline: include all P-D-S-A
- DO: Implementation strategy; actions; barriers
- STUDY: Compare pre and post data for each measure chosen; data interpretation
- ACT: Changes, resources needed for each measure to reach initial target; action taken (what can be done may not equal what needs to be done); due date; prioritization; next cycle time frame
- List/attach EBM list, forms/documents created

[^]Local data is critical to engage participants. Assist the learner with data presentation (bar graphs, etc).

*Review meeting expectations, leadership with learner. Expect to assist and/or have facilitator assist to assure meeting success

INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

INQUIRY RESIDENT/FELLOW: _____

Project name: _____

Unit(s)/divisions affected (anticipated): _____

Project start date: _____ **End date** (filled out @ end of meeting) _____

Global Aim: What are you trying to achieve?

Ask “why” and “how” three times

Make a specific SMART aim

Global aim:		
Why?	Why?	Why?
How?	How?	How?
Specific Aim Statement: (SMART: specific, measurable, actionable, relevant, time-bound)		

Plan *Complete all sections in “Plan” prior to having a first meeting*

Measures: How will you know it has been achieved?

Choose at least 2 measures

Measures (clinical, process, financial, safety, balancing)	Current status	Target	Resource needed
Clinical:			
Process:			



INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

Safety:			
Financial:			
Balancing:			

Who should be on your team? Label roles (examples in blue) What will you tell them to expect?

Team Leader	Team Facilitator	Team Member (Content expert)	Team Member (Pharmacy expert)	Team Member (Subspecialist expert)	Team Member (RNs; IT; QM experts; others)



INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

What barriers exist? What problems do you anticipate?

Barrier/problem	Resolution	Timeline for resolution

What EBM, local data, and expert opinion will you use?

EBM (sources to consider)	Local Data (type, source)	Expert Opinion (who and why)



INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

The first face-to-face meeting: what should be included in the agenda? What information should be reviewed? What tools will be used? (example in blue) Who should be responsible for which parts of the agenda, and why?

Agenda Issue	Responsible party	Time allotted
<i>Introductions: roles on the team</i>		<i>5 minutes</i>
<i>Review of local data</i>		<i>15 minutes</i>
<i>Review of EBM</i>		<i>15 minutes</i>
<i>Draft document(s) discussion (order set, algorithm, checklist, etc)</i>		<i>15 minutes</i>
<i>Create list of action items and follow-up plans</i>		<i>5 minutes</i>
Information/Handouts		
EBM list		
Tools (refer to tools list, such as Brainstorming, Flowchart, Fishbone, etc)		
NOTES FOR RESIDENT/FELLOW:		

INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

What is your timeline? (Example noted here in blue).

	Key Activity	Time (months) 1	2	3	4	5	6
<i>P</i>	<i>Finalize EBM review</i>	<i>x</i>					
<i>P</i>	<i>Collect, analyze local data</i>	<i>x</i>	<i>x</i>				
<i>P</i>	<i>Address gaps/barriers</i>	<i>x</i>	<i>x</i>				
<i>P</i>	<i>Distribution of all data to team/comments returned</i>	<i>x</i>	<i>x</i>				
<i>P</i>	<i>Follow-up meeting #1; Finalize measures, draft form</i>	<i>x</i>	<i>x</i>				
<i>P</i>	<i>Last call form edits</i>		<i>x</i>				
<i>D</i>	<i>Draft form completed</i>		<i>x</i>				
<i>D</i>	<i>Educate all users</i>			<i>x</i>			
<i>D</i>	<i>“Go live” date</i>			<i>x</i>			
<i>S</i>	<i>Post-implementation data review</i>				<i>x</i>		
<i>A</i>	<i>Follow-up actions, edits, revisions</i>					<i>x</i>	<i>XX next PDSA cycle</i>

INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

Do *What is your implementation strategy? Actions? Any barriers not considered already?*

Strategy:				
Issue	Action	Potential Barrier	Resolution	Notes for team

Study *What were the measured results? How did they compare to the predictions?*

Measures (clinical, process, financial, safety, balancing)	Pre-status	Target	Outcome	Why?
Clinical				
Process				



INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

Safety				
Financial				
Balancing				

Act *What changes are needed based on analysis of the above data? How will the changes be prioritized?*

Measure (from above)	Change needed	Resources needed	Action (what we will actually do)	Responsible party	Due date	Priority (H,M,L)
Clinical						
Process						
Safety						
Financial						



INQUIRY PROJECT WORKSHEET

Innovative Quality Improvement Research in Residency: QI Education For Residents and Fellows

Balancing						
NEXT CYCLE--- (time frame?)						

EBM references:

Algorithm or process or form template here:



Inquiry Project Worksheet Needs Assessment

Item	Have	Need?	Next steps (who, what, where)	Due Date (when)?
Aim Statement Development Expertise				
Clinical Measurement Expertise and Tools				
Process Measurement Expertise and Tools				
Safety Measurement Expertise and Tools				
Financial Measurement Expertise and Tools				
Balancing Measurement Expertise and Tools				
Team Leadership				
Team Facilitator				
Team Members				
EBM Expertise				
Face to Face Meetings				
Timeline Development Expertise and Tools				
Other				

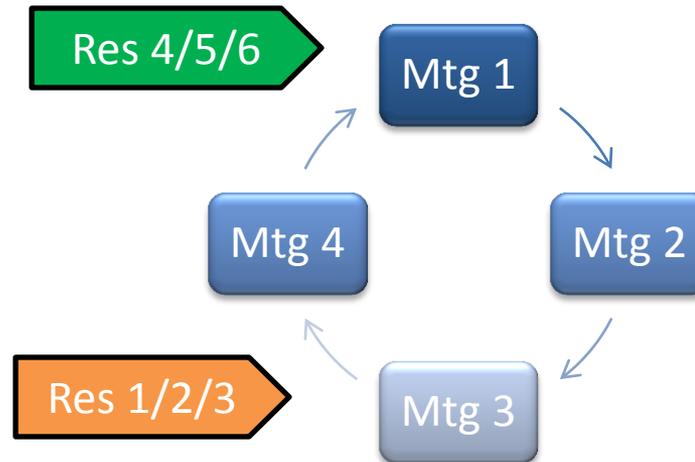
Mentoring Residents

- Phase 1 → Phase 2 → Phase 3

QI/PS Core
Content

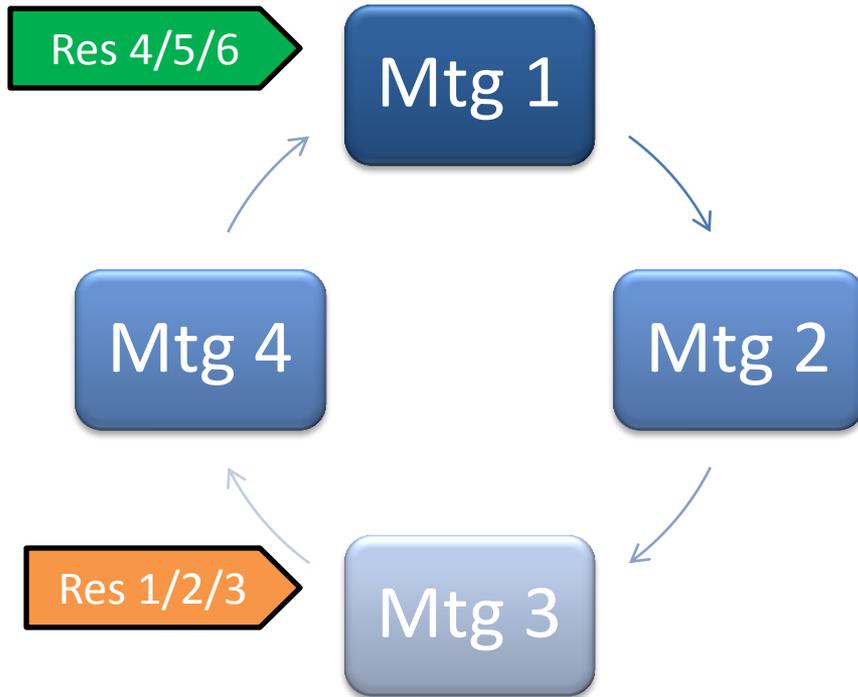
Project Management

Dissemination



Mentoring Residents

Lives within Phase 2



Meeting - Discuss	Homework
1 - Aims	Plan Measures
2 – Measures Team Barriers EBM/data	EBM/data summary [measures-pre] 1 st meeting Timeline
3-EBM 1 st meeting Timeline Implementation	Have 1 st meeting -> call to review, finalize plan, implement [measures-post]
4- Study Act	...Act

Facilitator Guide for 4:00 – 5:15 Mentor Group DAY 1

Mentoring Residents in QI Work

Erin Stucky Fisher, Eric Warm

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Goal: Participants will determine what resources they need to successfully mentor residents and develop curriculum for QI/PS work

Objectives:

1. Participants will reflect on their current knowledge and comfort level in mentoring residents in QI/PS work
2. Participants will work through an Inquiry Project worksheet
3. Participants will begin to think about how to move these concepts into curriculum development

Method:

Table work with interactive discussion; participants should have paper and pen. Flip charts per table would be helpful but not critical. **Structure of session:**

1. **Brief introductions**[5 minutes]
 - a. Who are you, and what is your background in QI/PS work and teaching?
2. **Review current knowledge and comfort in mentoring residents in QI/PS work** [20 minutes]
 - a. What was your initial emotional response to the first day of QI/PS content?
 - b. Were there any concepts from the previous discussions that were unclear to you?
3. **Review QSEA faculty home institution project summaries** [10 minutes]
4. **Review Inquiry Project worksheets** [30 minutes]
 - a. Think about a QI/PS project you would like to complete at your home institution, and work through each section of the worksheet
 - b. What resources do you need to succeed?
 - c. How will you secure these resources?
5. **Next Steps**
 - a. Review the 'Top 10' mentorship tips for QI/PS work
 - b. Reflect your emotional response discussion above and begin to think about how you might set up a successful curriculum under these circumstances – this will be the main topic tomorrow

QSEA: Models for Longitudinal QI Projects Within Residency/Fellowship Programs

Beth Israel Deaconess Medical Center: Quality and Safety Curriculum

- Years in Existence: 10
- Logistics:
 - All interns receive a QI/PS module in ambulatory curriculum
 - All residents take a three week elective in PS and QI (Stoneman Rotation)
 1. Didactics
 2. Hands on adverse event review which is presented at Department Committee
 3. Hands on QI group project
 4. Attendance at departmental and hospital committees
 - Seniors volunteer for week long QI retreat focused on Lean improvement
- Resources:
 - 0.8 FTE divided among 8 faculty core faculty who mentor twice/year (total 50 residents/year); started with three volunteer faculty (10-12 residents/year)
 - Tight links with health care quality department ensure projects align with departmental and hospital goals
 - Support of department chair, residency program director, and health care quality
- What has worked well:
 - Very limited didactic and mostly hands on learning keeps them engaged
 - Committee attendance opens their eyes to the hospital as an organization
 - Having residents work on specific projects has increased buy-in on frontlines when trying to make programmatic changes
 - We now have grads who are taking on leadership roles in PS/QI around the country
- What we struggle with:
 - Finding projects that are doable in three weeks. Often have to link groups
 - initial QI project selection (completely open vs. very prescriptive)
- Future directions: expansion to fellowships underway, have incorporated students as well

For more information, the curriculum has been published in two articles referenced below or email Anjala Tess atess@bidmc.harvard.edu

1. Weingart SN et al. Creating a quality improvement elective for medical house officers. J Gen Intern Med 2004;19:861-867.
2. Tess AV et al. Combining clinical microsystems and an experiential quality improvement curriculum to improve residency education in internal medicine. Acad Med 2009 Mar;84(3):326-334.

QSEA: Models for Longitudinal QI Projects Within Residency/Fellowship Programs

University of Pennsylvania: QI Track for Internal Medicine Residents

- Years in Existence: 2
- Logistics:
 - Interns self-select into program at the end of their intern year
 - Track is 2 years long and has 3 components
 1. Didactics
 2. Integration into a unit-based clinical team/microsystem (mostly inpatient unit-based teams but we experimented with an outpatient clinic this year)
 3. Scholarly QI capstone project
- Resources:
 - 0.25 FTE divided among 2 faculty co-directors
 - Modest budget for food, books, etc
 - Support of department chair, residency program director, and health system CMO
- What has worked well:
 - self-selection!
 - mandatory 2 week didactics introduction/immersion which involve diverse faculty and a variety of educational formats and activities
 - peer and faculty support and enthusiasm for QI within residency program has grown due to completed QI projects
- What we struggle with:
 - mentorship!
 - Time for resident attendance at QI team meetings
 - initial QI project selection (“top-down” versus “bottom-up” approach)
- Future directions: expansion to other residency programs planned for AY 2012-13.
- Other notes: We experimented with including a few medical students in the track last year and it worked well.

For more information go to <http://www.med.upenn.edu/chips/> and click on the “Training” link to find info on Residency Track or email the co-directors neha.patel@uphs.upenn.edu or jennifer.myers@uphs.upenn.edu

QSEA: Models for Longitudinal QI Projects Within Residency/Fellowship Programs

University of California San Diego: QI Track for Pediatric Residents

The INQUIRY Program: Innovative Quality Improvement Research in Residency

- Years in Existence: 6
- Logistics:
 - Mandatory (to level 2) for pediatric residents and pediatric subspecialty fellows; voluntary for pediatric subspecialty surgical fellows
 - 3 levels:
 - 1. Level one: completion of 5 course training covering topics such as methods, aims, project management, and more. Each course has a test completed at the end of each session. This level is typically completed during the internship/F1 year.
 - 2. Level two: participation in a mentored QI project and brief presentation at the end of the academic year at end of year Resident meeting. This level is typically completed in the R2-4/F2-3 years.
 - 3. Level three: leader of a mentored QI project
- Resources:
 - Support of chair, TPD, Vice Chair for Education, GMEC
 - Modest budget for food for level one sessions
 - Data analyst from quality department
 - Key faculty and project mentors: QM department staff – Patient safety officer, QM Medical director; Hospital medicine leaders – Pharmacy and Therapeutics Committee Chair, two hospital medicine members
 - Content experts: many, project specific
 - Program Director: Pediatric Hospital Medicine who is the QM Medical Director
- What has worked well: Mandatory participation; multiple opportunities to participate in meaningful clinical quality pathways that are relevant and used by the trainees; ability to flex to support projects that are off site (community clinic work); street credibility after the first few years, having presented to GMEC and leveraging trainees who are enthusiastic as presenters
- What we struggle with: number of project mentors remains too few for the number of trainees/projects that are ongoing; resident sustained attention given the periodicity of rotation blocks; data analyst work on projects that are not hospital priority often get lowest priority
- Future directions: expand to surgical subspecialty fellows.

QSEA: Models for Longitudinal QI Projects Within Residency/Fellowship Programs

University of Cincinnati: Ambulatory Long Block

- Years in Existence: 5+
- Logistics:
 - Year-long ambulatory block (part of an ACGME Educational Innovations Project) during second and third year of residency
 - Ambulatory group practice consisting of residents, attendings, nurses (mostly RN), social worker, pharmacists, and administrators (NCQA Level III Patient-Centered Medical Home)
 - Entire team has yearly retreat at start of Long Block focusing on QI/PS
 - Residents learn basic tools, and common approach to QI/PS
 - Entire team (including all Long Block residents) meets weekly to review performance (patient care outcomes, satisfaction, throughput, financial)
 - Residents receive monthly data reports drilled down to their specific patients with relative rankings and measurement of change over time; data is compared to team as a whole and national benchmarks
 - Data is used as part of resident formative and summative evaluation
 - Core improvement team consisting of self selected residents (usually about 1/3 of entire Long Block class meets with trained QI/PS faculty drives major improvement initiatives
- 4. Didactics – (basic for all, advanced for core improvement team)
- Resources:
 - 0.30 FTE divided among 2 faculty co-directors plus ambulatory chief resident
 - Faculty member in IT department assists with gathering data as part of larger data warehouse grant
 - Support of department chair, residency program director, and health system CMO
- What has worked well:
 - Weekly team meetings – most transformative feature of practice
 - Involving nursing and other allied health staff to share in accountability for resident care and education
 - Having ‘friend in IT’ as we developed our registry
 - Tying clinical performance to resident formative and summative evaluation
 - Having a core improvement team
 - Faculty trained in QI/PS
- What we struggle with:
 - Not every resident likes QI/PS, and morale can lag when it seems to be ‘forced’
 - Getting consistent data streams as information systems constantly change over
 - Choosing too many things to measure, and getting lost in the data
 - Prioritizing projects
- Future directions: continue to refine data registry, and expand to include transitions of care measures (interfacing with in-hospital improvement teams for unplanned readmissions and ED visits)
- Other notes: We had an excellent program with first year medical students that has been supplanted by a completely revamped medical school curriculum and will be looking for new ways to expose students to the components of a high quality clinical microsystem
For more information go see:
https://www.aamc.org/download/263606/data/176_fulldescription.pdf

Top 16 Tips in Mentoring Residents in QI/PS Work

1. Clarify the goals of mentoring. How will you and the resident define success?
2. For a given project, determine the relative value of these goals -- to improve care right now, or to teach someone to improve care, or both?
3. Have a clear timeline. Check in and set meetings on a regular basis.
4. Be a link between the learner and the organization. You cannot do this work in a vacuum - build or join a successful QI/PS team.
5. Provide protected time for this work -- don't try to fit QI/PS work into the resident's already busy schedule.
6. Teach residents how to "tune in" when they go on service. No one expects residents to ignore clinical work, but QI work requires deliberate attention over time. Teach them to check email once or twice a day and give them tips for how to keep projects moving in small sound bites of communication and work. These will be lifelong skills.
7. Scope the project correctly in terms of resources and ability -- smaller successful projects will be more valuable than larger more ambitious ones that fail. Don't start a project with residents unless you can set them up for success.
8. Whenever possible, let the resident choose the area/project that is to be worked on. A "top down-bottom up" approach to selection of QI projects where the bottom is resident interest and the top is what the department/hospital is interested in frequently works best.
9. Don't do the work for the residents....even though it is much easier to do so. Show them an example, give tips, but have them struggle to come up with the "words" themselves (i.e. words = problem statement, aim, measures)
10. Teach residents how to take their ideas for change and categorize them in the 4-quadrant "hi-easy-low-hard" diagram. This helps them visually differentiate and identify the quick wins from the high effort/low impact and high effort/high impact projects. Categorizing into these buckets can help channel and focus
11. Give residents tips for organizing and running productive meetings - particularly in the beginning. This is often the hardest thing for residents to do given the different types of people and personalities required to change a system or process. Sometimes they will need you there as a decision maker or to prevent things from getting off track.
12. Look out for resident blind spots and protect! Common resident blind spots are not including a certain person or group in the project planning stage which can lead to failure to build consensus early on.
13. Give residents every opportunity to present, even if it is just sharing their project idea in front of their peers. Use this opportunity to build rich presentation and communication skills.
14. Normalize failure. Let them know it's happened to you. Making any change is an experiment and there is a significant chance of failure. Reframe failure as a potential positive: "we learned now what NOT to do."
15. Tell the resident/resident team frequently that what they are doing is really important. Validate their hard work. QI work is hard and coaches sometimes need to be cheerleaders too.
16. Give thoughtful feedback along the way; the more, the better.