Quality Assurance and Performance Improvement Workbook
The CMS QAPI Guide: What You Need to Know
A Companion to *QAPI at a Glance*

This companion guide is designed to help your team recognize and understand the major components of the Quality Assurance/Performance Improvement Initiative (QAPI). Refer to it often as a support tool in your facility’s quality improvement efforts. This resource is *not intended to replace* QAPI at a Glance; it can be used in conjunction with other materials to help your team stay on track in reaching your quality improvement goals.

**Background**
In December 2012, the Centers for Medicare & Medicaid Services (CMS) issued a memo announcing the release of *QAPI at a Glance*, a step-by-step guide detailing 12 key action steps to establish a foundation for quality assurance and performance improvement in nursing homes.

*QAPI at a Glance* is available online at [http://tiny.cc/QAPI](http://tiny.cc/QAPI).

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This material, originally developed by Ohio KEPRO, was adapted by Health Services Advisory Group, the Medicare Quality Improvement Organization for Arizona, California, Florida, Ohio, and the U.S. Virgin Islands under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication No. QN-115OW-C.2-11112014-01
According to QAPI at a Glance, there are twelve action steps on the pathway to QAPI implementation. These twelve steps do not need to be achieved sequentially; however, the steps do build on one another. Following them sequentially can be a great way to begin your strategic approach to implementing QAPI.

**12 Action Steps to QAPI**

- **STEP 1**: Leadership Responsibility & Accountability
- **STEP 2**: Develop a Deliberate Approach to Teamwork
- **STEP 3**: Take your QAPI “Pulse” with a Self-Assessment
- **STEP 4**: Identify Your Organization’s Guiding Principles
- **STEP 5**: Develop Your QAPI Plan
- **STEP 6**: Conduct a QAPI Awareness Campaign
- **STEP 7**: Develop a Strategy for Collecting & Using QAPI Data
- **STEP 8**: Identify Your Gaps and Opportunities
- **STEP 9**: Prioritize Quality Opportunities and Charter Performance Improvement Projects (PIPs)
- **STEP 10**: Plan, Conduct and Document PIPs
- **STEP 11**: Get to the “Root” of the Problem
- **STEP 12**: Take Systemic Action
What’s New about QAPI?
While nursing homes have long-since been required to have quality assessment and assurance programs, pending changes to the regulations will require that a **formalized approach** to performance improvement is also part of a facility’s ongoing systems.

**Quality Assurance (QA)**
Quality assurance can be characterized as a focus on current outcomes, with a retrospective (look-back) view of “what happened.” Often, this is done out of a need to ensure compliance and proper follow-up of identified issues. While the scope of a quality assurance committee may include such actions as conducting a root cause analysis and developing action plans, current regulations do not require any specific or formal improvement processes to be used.

**Performance Improvement (PI)**
Performance improvement can be thought of as a system that makes things better. Unlike quality assurance, which focuses on compliance, performance improvement focuses on “systems issues” that cause poor outcomes. While there are many formalized performance improvement tools, *QAPI at a Glance* refers to the Plan-Do-Study-Act (PDSA) model for improvement.

**Tip:** See page 5 of this document for more information about PDSA cycles.

**Putting It Together**
When QA initiatives and PI efforts are blended together, the result can be significant improvements to important outcomes: residents can experience fewer adverse clinical effects, satisfaction rates can improve and staff can become more engaged as facility processes are stabilized; all of this can lead to improved operational performance for your organization.

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<th>QUALITY ASSURANCE</th>
<th>PERFORMANCE IMPROVEMENT</th>
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<tr>
<td><strong>Motivation</strong></td>
<td>Measuring compliance with standards</td>
<td>Continuously improving processes to meet standards</td>
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<td><strong>Means</strong></td>
<td>Inspection</td>
<td>Prevention</td>
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<td><strong>Attitude</strong></td>
<td>Required, reactive</td>
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<td><strong>Focus</strong></td>
<td>Outliers: “bad apples”</td>
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<td>Individuals</td>
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<td><strong>Scope</strong></td>
<td>Medical provider</td>
<td>Resident care</td>
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<td><strong>Responsibility</strong></td>
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<td>All</td>
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*QA + PI = QAPI*

Source: *QAPI at a Glance*
QAPI Self-Assessment Tool *(QAPI at a Glance, page 26)*

This five-page, 24-item questionnaire is part of Step 3 of *QAPI at a Glance*. The Self-Assessment Tool is found in Appendix A, and will help your team determine the extent to which various QAPI practices are already established in your organization. It is recommended that you complete this self-assessment tool prior to beginning any QAPI planning, and re-assess your organization at routine intervals to show your progress.

Guide to Develop Purpose, Guiding Principles and Scope for QAPI *(QAPI at a Glance, page 31)*

This important three-page guide will help you determine the manner in which your QAPI plan will be supported by your organization; it will serve as a solid foundation from which to continue building your QAPI practices. Using this tool can help guide your team through the creation of a separate document that may be used as the preamble to your QAPI plan.

Guide to Developing a QAPI Plan *(QAPI at a Glance, page 34)*

This action-based, three-page guide will help your team address the important elements of QAPI, and develop a formal QAPI plan. With concrete examples and actionable steps in a logical progression, the guide will walk you step by step through the creation of your plan.

Goal-Setting Worksheet *(QAPI at a Glance, page 37)*

This worksheet will help your Performance Improvement Project (PIP) teams develop SMART performance improvement goals. Effective goals are specific, measurable, attainable, relevant and time-bound.
The success of QAPI and the Performance Improvement Project (PIP) teams at your facility will depend on everyone’s knowledge of the Plan-Do-Study-Act (PDSA) model for improvement. While there are several different improvement methodologies, PDSA is a simple model that is easy to follow.

To begin, make observations in the system that has been targeted for improvement. Targeted areas could be anything – staff performance, actual processes or service delivery, documentation, staffing, organizational culture, or any other aspect of care or services where the outcomes are not meeting facility expectations or standards.

As a PIP team, answer these questions:
1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in improvement?

From there, follow these easy steps, and remember to document your team’s process and decision-making.

**PDSA Model for Improvement**

- **PLAN** to improve performance.
- What area(s) are not as strong as you would like? What can you do about it?

- **DO** carry out your plan.
  - Document what you see when the plan is carried out.

- **ACT** on the basis of your findings.
  - Continue with the change, make further changes, or stop?

- **STUDY** the results.
  - Step back and look at the big picture. Has there been improvement?

- **DO** carry out the plan
  - Document observations
  - Record data

- **STUDY**
  - Analyze data
  - Compare results to predictions
  - Summarize what was learned

- **PLAN**
  - Objective
  - Predictions
  - Plan to carry out the cycle (who, what, where, when)

- **ACT**
  - What changes are to be made?
  - Next cycle?
Root Cause Analysis

What is Root Cause Analysis?
Just as you would pull a weed out of your garden by its root (to ensure that it doesn’t grow back), getting to the “root” cause of a systems issue is important to prevent the problem from returning. There are many formalized root cause analysis tools; this handout includes a sample of tools that are easy to use.

Cause and Effect (Fishbone) Diagram
- The Cause-and-Effect (Fishbone) diagram starts with the problem at the head of the fish.
- Under each general category of the Fishbone, answer the question, “Why?” for the identified problem.
- Once the Fishbone diagram is completed, discuss the various causes to determine the root of the problem - or the real reasons why the problem exists. It is from this discussion that the focus for the improvement plan begins.

Five Whys
The Five Whys tool aids in the identification of the root cause of a problem. Begin by identifying a specific problem, and ask why this is occurring. Continue to ask “Why?” to identify causes until the underlying cause is determined. Each “Why?” should build from the previous answer. There is nothing magical about the number five; sometimes a root cause may be reached after asking “Why?” just a few times; at other times, deeper questioning is needed.

STEPS:
- Define a problem; be specific.
- Ask why this problem occurs, and list the reasons in Box 1.
- Select one of the reasons from Box 1 and ask, “Why does this occur?” List the reasons in Box 2.
- Continue this process of questioning until you have uncovered the root cause of the identified problem. If there are no identifiable answers or solutions, address a different reason.

The problem: ________________________________________________________________.

Why does this occur?

1. ____________________________________________ Why is that?
2. ____________________________________________ Why is that?
3. ____________________________________________ Why is that?
4. ____________________________________________ Why is that?
5. ____________________________________________
Q: Aren’t we already meeting the requirements of QAPI?
A: Nursing homes are currently required to have a Quality Assessment and Assurance (QAA) program through the regulatory requirement of F-520. While this federal regulation does require certain elements of quality improvement (for example, having a committee structure, holding regular meetings, identifying root causes, developing action plans, engaging in continuous improvement, etc.), the use of a formal improvement model and ongoing accountability is not specified. According to information on the CMS website:

“This provision provides a rule but not the details as to the means and methods taken to implement the QAA regulations. CMS is now reinforcing the critical importance of how nursing facilities establish and maintain accountability for QAPI processes in order to sustain quality of care and quality of life for nursing home residents.”

Thus, with QAPI, nursing homes are being asked to incorporate a standardized process for ongoing performance improvement, and to develop a written plan to ensure accountability and sustainability for their improvement efforts.

Q: When will the QAPI regulations be issued?
A: According to the Section 6102 of the Affordable Care Act (ACA), nursing homes will have one year from the date on which the regulations are promulgated to submit their plan to meet these standards and details as to how the quality assessment and assurance activities will be coordinated with the plan.

Q: Will surveyors have access to our QAPI documentation?
A: Until the regulations are promulgated, this remains unclear.

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The facility leadership (i.e. medical director, administrator, director of nursing and other key managers) is responsible for “setting the tone” to help staff identify how to meet the organization’s mission, vision, guiding principles, standards, and expectations. Without strong leadership, change efforts often fail or are not sustainable.

**Action Steps**

1. Develop a steering committee, which is a team that will provide QAPI leadership.
2. Provide resources for QAPI, including equipment and training.
3. Establish a climate of open communication and respect.
4. Understand your home’s current culture and how it will promote performance improvement.

**Probing Questions for Team Discussion**

1. Who is on our QAPI Steering Committee?
2. Is our Medical Director involved in QAPI?
3. How can we provide needed resources for QAPI?
4. Is our climate open, respecting and “just” (fair)? What does our climate look like?
5. How can QAPI blend with our existing QA efforts?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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QAPI at a Glance states that QAPI relies on teamwork in several ways. Do teams at your organization have a clear purpose? Do teams have defined roles for each team member to play? Do teams have commitment and active engagement from each member?

**Action Steps**

1. Assess the “effectiveness” of teamwork in your organization.
2. Discuss how Performance Improvement Project (PIP) teams will work to address QAPI goals.
3. Determine how direct care staff and residents and families can be involved in PIPs.
4. Identify any communication structures that need to be implemented or enhanced.

**Probing Questions for Team Discussion**

1. How can residents and families be involved in our QAPI efforts?
2. Do we have effective teamwork? How do we know? What does it look like?
3. How does leadership support the development of effective teams?
4. Do we have effective communication in our facility? How do we know?
5. Do team members support one another?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
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Assessing your facility’s current practice is a necessary part of implementing QAPI. Since facilities are already required to have quality assessment and assurance committees, take the time now to find out to what degree you have already mastered the concepts of QAPI.

**Action Steps**

1. Determine a date and time for completing the Self-Assessment Tool.
2. Assemble the right people to complete the Self-Assessment Tool.
3. Complete the QAPI Self-Assessment Tool, recording your answers for future comparison.
4. Determine a date for the next Self-Assessment Tool review.

**Probing Questions for Team Discussion**

1. Who should be involved in this assessment of our current practices?
2. What is our timeline for completing it?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
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Is the care provided by your facility tied to your organization’s fundamental purpose or philosophy? How do you determine programmatic priorities? Taking time to articulate the purpose, the guiding principles and the scope of QAPI will help you integrate these efforts into your organization.

**Action Steps**

1. Locate or develop your organization’s vision statement.
2. Locate or develop your organization’s mission statement.
3. Develop a purpose statement for QAPI.
4. Establish guiding principles
5. Define the scope of QAPI in your organization.
6. Assemble the document.

**Probing Questions for Team Discussion**

1. What beliefs do we have about our facility’s purpose and philosophy?
2. What beliefs do we have about our approach to QA and PI?
3. What is our mission and vision statement?
4. What are some of the ways in which we expect care to be provided?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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A QAPI plan should be a living, breathing document that you revisit periodically to ensure that it evolves as your facility grows in its capacity to effectively implement QAPI. This is the main document that will support your QAPI implementation.

**Action Steps**

1. Determine date(s) and time(s) for writing the QAPI plan.
2. Print copies of the Guide for Developing a QAPI plan (QAPI at a Glance, page 34) for all team members.
3. Work toward writing the QAPI plan until it is complete.
4. Determine a future date for reviewing the QAPI plan.

**Probing Questions for Team Discussion**

1. What goals do we have for how QAPI will work?
2. How will QAPI be integrated into leadership’s accountability?
3. How will we strive to use data and performance improvement teams?
4. How will direct-care staff be involved in QAPI and PIPs?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
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QAPI Step 6: Conduct a QAPI Awareness Campaign

Taking time to create a deliberate communication plan about QAPI will help ensure that everyone in your organization is familiar with the plan, the goals and their roles and expectations in the process.

Action Steps

1. Inform everyone (staff, residents, families, consultants, ancillary service providers, etc.) about QAPI and your organization’s QAPI plan.
2. Provide training and education on QAPI for all caregivers.
3. Develop a strategy for communicating with all caregivers.
4. Develop a strategy for communicating with residents and families.

Probing Questions for Team Discussion

1. How will we inform staff about QAPI?
2. How much education and training will be needed?
3. How will we engage residents and families in QAPI efforts?

Surpassing the Hurdles

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
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Effective use of data will ensure help ensure that decisions are made based on fact, and not on an assumption of the truth. Just as a physician needs “data” about a patient in order to diagnose a condition, QAPI teams and Performance Improvement Project (PIP) teams will need data to ensure they are targeting the right areas.

**Action Steps**

1. Determine what data to monitor routinely.
2. Set targets for performance in the areas you are monitoring.
3. Identify benchmarks for performance.
4. Develop a data collection plan, including who will collect which data, who will review it, the frequency of collection and reporting, etc.

**Probing Questions for Team Discussion**

1. What data does our facility routinely monitor? How are these data displayed and used?
2. What benchmarks will we use when assessing our performance?
3. How can we better make use of the data we have? Do we track and trend our progress over time?
4. How are data shared with others in the organization? Staff? Residents/families? The Board or corporate office?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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QAPI Step 8: Identify Your Gaps and Opportunities

Whether you are reviewing data from the Minimum Data Set (MDS) or quality measure reports, data from satisfaction surveys or consultant reports, or any other data source, be sure you are identifying any trends in the data you review. Use this time to observe for any areas where processes are breaking down.

Action Steps
1. Review information to determine if gaps or patterns exist in your systems of care, or if opportunities exist to make improvements.
2. Discuss any emerging themes with residents and caregivers.
3. Notice what things your organization is doing well in this identified area.
4. Set priorities for improvement.

Probing Questions for Team Discussion
1. When reviewing your data, what stands out?
2. How strong is your organizational capacity for assessing facility systems (i.e., policies, protocols, actual care delivery, etc.)?
3. What are some areas of strength and weakness?
4. What opportunities do you see?

Surpassing the Hurdles
1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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The CMS QAPI Guide: What You Need to Know
Be sure you are choosing areas that you consider important (for example, areas of high risk, frequent occurrence, or areas that are known problems). Remember that not all identified problems require Performance Improvement Projects (PIPs), but for those that do, the projects need to be structured, or “chartered.”

**Action Steps**
1. Prioritize opportunities for more intensive improvement work.
2. Consider which problems will become the focus of a PIP.
3. Charter PIP teams, by selecting a leader and defining the mission.
4. The PIP team should develop a timeline and indicate budget needs.
5. The PIP team should use the Goal Setting Worksheet to establish appropriate goals.

**Probing Questions for Team Discussion**
1. How will organizational priorities be determined?
2. Who will be responsible for monitoring the overall progress of our PIPs?
3. What education is needed for PIP teams?

**Surpassing the Hurdles**
1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
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For those areas that require Performance Improvement Projects (PIPs), PIP teams should use a methodic or standardized process for making improvements. PDSA is one well-known model, but there are others that may also work for your organization. The important point is to use a strategic methodology, and not a haphazard, “throw it at the wall and see if it sticks” approach.

Action Steps

1. Determine what information is needed for the PIP.
2. Determine a timeline and communicate it to the Steering Committee.
3. Identify and request any needed supplies or equipment.
4. Select or create measurement tools.
5. Prepare and present results.
6. Use a problem-solving model (e.g., PDSA).
7. Report results to the Steering Committee

Probing Questions for Team Discussion

1. According to our data, what area(s) do we need to work on?
2. Who should be involved? What is the timeline?
3. What resources are needed?
4. What ideas can we test?

Surpassing the Hurdles

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

CHECKLIST

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QAPI Step 11: Get to the “Root” of the Problem

Prevent recurring problems by ensuring that all possible root causes have been identified and addressed. Remember to use systematic tools, such as the Cause & Effect Diagram, or the “Five Whys” to dig down below the surface.

**Action Steps**

1. Using a methodical approach, determine all potential root cause(s) underlying the performance issue(s).
2. Determine which factors are controllable.
3. Ensure that the PSDA cycles address the root cause(s).

**Probing Questions for Team Discussion**

1. What are the obvious and less obvious reason(s) the problem surfaced?
2. What is at the root of those factors?
3. What systems and processes are involved (not people)?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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Just as pulling a weed at the ground level will not prevent it from growing back, “weak” interventions such as staff education, new policies, or reminders often do not prevent the recurrence of the original problem. Whenever possible, use strong interventions, such as simplifying a process or making physical or environmental changes, in order to “hardwire” the change into the existing system.

**Action Steps**

1. Implement changes or corrective actions that will result in improvement or reduce the chance of the event recurring.
2. Target the root cause(s) with strong interventions.
3. Pilot test large-scale changes (through PDSA cycles) prior to launching the changes facility-wide.

**Probing Questions for Team Discussion**

1. How strong are the interventions?
2. Do the selected interventions address systems issues, or do they address individual performance?
3. Is what we’re doing working? How do we know?
4. What are our next steps?

**Surpassing the Hurdles**

1. What barriers do you anticipate with these action steps?
2. What additional information does your team need?
3. What additional resources would be helpful?
4. What structures can you create to help ensure your success with this step?

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The following strategies were excerpted from the National Nursing Home Quality Care Change Package, available at: www.ofmq.com/Websites/ofmq/images/IIPCNCC/Resource_Page/NH_ChangePackage_V1.2_2013_03_05_Final.pdf.

**STEP 1: Leadership Responsibility and Accountability**
- Institute an “open-door” policy for all levels of leadership to establish presence and consistent availability for staff.
- Provide training and gain staff, resident and family member commitment for your QAPI initiatives.
- Routinely spend time in all neighborhoods and during all shifts.
- Talk directly to staff and residents. Establish a practice to ask how they are doing, what they need in order to do their best work and provide excellent care, and how you can help reduce frustrations that prevent them from doing their best work.
- Commit to following through on issues brought to you—keep that commitment
- Set the example and pitch in.
- Recognize and honor staff and resident opinions. Demonstrate your sincere appreciation.
- Credit others for their contributions that positively affect your performance.
- Ensure necessary equipment is readily available and in good working order.
- Involve all staff in changes and improvement to increase the feeling of ownership and accountability.
- Build leadership skills through training, support and coaching to help staff be effective.
- Openly admit your unintentional errors so people are less afraid to admit theirs.
- As a leader, uphold high expectations of the organizations. If you see an issue, take action and set the tone for high expectations.

**STEP 2: Develop a Deliberate Approach to Teamwork**
- Set the expectation for leaders and staff to look for and share ideas for ways to grow and innovate.
- Build trust with and between your staff (do what you say you are going to do) Celebrate successes—it’s the little things that matter.
- Establish the use of learning circles and huddles to foster relationships and create an opportunity for all to be heard.
- Remove boundaries between departments (hold neighborhood meetings that all disciplines attend, use interdisciplinary teams for problem-solving, etc.)
- Use templates or methods for consistency and to support shared expectations of process (agendas, minutes and a place to share information with the team.
- Encourage and reward staff for supporting each other.
- Expect that the medical director/providers listen to nurses, aides and other staff, and actively seek their suggestions, assessments and recommendations.
- Encourage the medical director and physicians to keep track of opportunities for improvements, and bring those to leadership (and the QAPI Steering Committee).

**STEP 3: Take your QAPI “Pulse” with a Self-Assessment**

**STEP 4: Identify Your Organization’s Guiding Principles**
- Use an inclusive process to establish, review, and reaffirm your mission. Involve staff, residents and families.
- Ensure values are considered core to the facility and those who live and work there.
- Translate the mission into action.
STEP 5: Develop Your QAPI Plan

STEP 6: Conduct a QAPI Awareness Campaign
- Share the mission, vision [and guiding principles] with all staff.
- Include the mission, vision and guiding principles in orientation for new staff.
- Develop communication plans that use multiple approaches (email, verbal, newsletters, etc.) throughout the facility and across all shifts.
- Hold neighborhood meetings.
- Openly and transparently share your performance data with staff, board, residents and families.
- Set up a scoreboard for staff that monitors progress toward important goals. Example: days at zero pressure ulcers. Post progress in common areas such as halls, staff room, etc.

STEP 7: Develop a Strategy for Collecting & Using QAPI Data

STEP 8: Identify Your Gaps and Opportunities
- Measure important indicators of care that are relevant and meaningful to the residents that you serve.
- Guide and empower staff to solve problems. For example: Leaders should respond to problems that are raised—not by proposing a solution but instead by asking the team to investigate and determine what they believe would work best.
- Hold short stand-up meetings with managers and staff for each shift to identify concerns, resources, needs, etc.
- Establish the nursing home as a learning organization in which all staff identifies areas for improvements.
- Discuss processes and systems to identify areas for improvement regularly—in meetings as well as everyday interactions.
- Empower residents to get involved in identifying areas of improvement.

STEP 9: Prioritize Quality Opportunities and Charter Performance Improvement Projects (PIPs)
- Get everyone involved in setting goals: residents, staff, family members, and Board members.
- If practices are not making sense or are frustrating to staff, residents or family, do not settle for “this is just the way it has to be”—challenge and sort out what you have control over, and look for ways to address improvements.

STEP 10: Plan, Conduct and Document PIPs
- Identify and support a change agent for each improvement project—i.e., a cheerleader and/or key facilitator of change in your facility.
- Use an action plan template that defines who and when, to establish timelines and accountability.
- Seek creative ideas from multiple sources within and outside the organization in order to foster innovation.
- Create a safe environment to test changes, to try new ways to meet resident needs.
- Include “all voices” that have a stake in what is being discussed. Use methods that encourage open and honest communication, especially to get at concerns.

STEP 11: Get to the “Root” of the Problem
- Use the root cause analysis (RCA) process to look at systems rather than individuals when something breaks down.

STEP 12: Take Systemic Action
- Before initiating a change in the organization, meet with any staff and residents that will be impacted by the change in order to gain their support, buy-in and feedback.
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<tr>
<th>QAPI Five Elements</th>
<th>Goals</th>
<th>Tools</th>
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<tbody>
<tr>
<td><strong>Element 1 – Design and Scope</strong></td>
<td>Learn the basics of QAPI</td>
<td>QAPI Five Elements</td>
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<td>• Review QAPI five elements</td>
<td>QAPI at a Glance</td>
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<td>• Understand how QAPI coordinates with QAA</td>
<td>QAPI News Brief - Volume 1</td>
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<td><strong>Assess QAPI in your organization</strong></td>
<td>QAPI Self-Assessment Tool</td>
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<td>Create a structure and plan to support QAPI</td>
<td>Guide to Developing Purpose, Guiding Principles and Scope for QAPI</td>
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<td><strong>Element 2 – Governance and Leadership</strong></td>
<td>Guide for Developing a QAPI Plan</td>
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<td>Understand the QAPI business case</td>
<td>CMS Video: Nursing Home QAPI – What’s in it for you?</td>
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<td>Promote a fair and open culture where staff are comfortable</td>
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<td>identifying quality problems and opportunities</td>
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<td>• Know your current culture</td>
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<td>• Assess your individual skills, practice, attitude</td>
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<td>• Create a learning organization that drives and reinforces a</td>
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<td>process for organizational change</td>
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<td>• Distinguish between human error, at risk, and reckless</td>
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<td><strong>Element 2 – Governance and Leadership</strong></td>
<td>Create a Culture that embraces the principles of QAPI</td>
<td>QAPI at a Glance</td>
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<td>QAPI Leadership Rounding Tool</td>
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<td>Promote engagement and commitment of staff, residents and families in QAPI</td>
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<td>Examples of Performance Objectives for Job Descriptions and Performance Reviews</td>
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<td>Involve residents and families</td>
<td>QAPI at a Glance</td>
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<td>• Focus on the customer needs and expectations</td>
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<tr>
<td><strong>Element 3 – Feedback, Data Systems and Monitoring</strong></td>
<td>Use and make data meaningful</td>
<td>Measure/Indicator Development Worksheet</td>
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<td>• Identify what you need to monitor</td>
<td>Measure/Indicator Collection and Monitoring Plan</td>
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<td>• Collect, track, and monitor measures/indicators</td>
<td>Instructions to Develop a Dashboard</td>
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<td>• Set goals, benchmarks, thresholds</td>
<td>Goal Setting Worksheet</td>
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<td>• Identify gaps and opportunities</td>
<td>Prioritization Worksheet for Performance Improvement Projects</td>
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<td>• Prioritize what you will work to improve</td>
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| **Element 4 – Performance Improvement Projects** | Implement performance improvement projects  
• Focus on topics that are meaningful and address the needs of residents and staff  
• Charter PIP teams  
• Support staff in being effective PIP team members. Use tools that support effective teamwork.  
• Plan, implement, measure, monitor, and document changes, using a structured PI approach | **Worksheet to Create a PIP Charter**  
**PIP Launch Checklist: Helpful hints for project leaders, managers, and coordinators**  
**Plan-Do-Study-Act (PDSA) Cycle Template**  
**PIP Inventory**  
**Sustainability Decision Guide**  
**Brainstorming, Affinity Grouping, and Multi-Voting Tool** |
| **Element 5 – Systematic Analysis and Systemic Action** | Understand and focus on organizational processes and systems  
• Model and promote systems thinking  
• Practice RCA – get to the root of problems  
• Take action at the systems-level | **Guidance for Failure Mode and Effects Analysis (FMEA)**  
**Guidance for Root Cause Analysis (RCA)**  
**Flowcharting**  
**Five Whys**  
**Fishbone Diagram** |
| **Enhance QAPI communications** |  | **QAPI at a Glance**  
**Communications Plan Worksheet**  
**Storyboard Guide for PIPs**  
**Improvement Success Story Template** |
Element 1 – Design and Scope
Guide for Developing Purpose, Guiding Principles, and Scope for QAPI

Directions: Use this tool to establish the purpose, guiding principles and scope for QAPI in your organization. The team completing this worksheet should include senior leadership. Taking time to articulate the purpose, develop guiding principles, and define the scope will help you to understand how QAPI will be used and integrated into your organization. This information will also help your organization to develop a written QAPI plan. Use these step-by-step instructions to create a separate document that may be used as a preamble to your QAPI plan.

**STEP 1. LOCATE OR DEVELOP YOUR ORGANIZATION’S VISION STATEMENT**

A vision statement is sometimes called a picture of your organization in the future; it is your inspiration and the framework for your strategic planning. Consider involving staff in the development of your vision statement. Post it for everyone to view.

For example, the vision of the Good Samaritan Society is to create an environment where people are loved, valued and at peace.

**STEP 2. LOCATE OR DEVELOP YOUR ORGANIZATION’S MISSION STATEMENT**

A mission statement describes the purpose of your organization. The mission statement should guide the actions of the organization, spell out its overall goal, provide a path, and guide decision-making. It provides the framework or context within which the company’s strategies are formulated. As above, get caregivers involved in establishing your organization’s mission.

For example, Meadowlark Hills is each resident’s home. We are committed to enhancing quality of life by nurturing individuality and independence. We are growing a value-driven community while leading the way in honoring inherent senior rights and building strong and meaningful relationships with all whose lives we touch.

**STEP 3. DEVELOP A PURPOSE STATEMENT FOR QAPI**

A purpose statement describes how QAPI will support the overall vision and mission of the organization. If your organization does not have a vision or mission statement, the purpose statement can still be written and would state what your organization intends to accomplish through QAPI.

For example, the purpose of QAPI in our organization is to take a proactive approach to continually improving the way we care for and engage with our residents, caregivers and other partners so that we may realize our vision to [reference aspects of vision statement here]. To do this, all employees will participate in ongoing QAPI efforts which support our mission by [reference aspects of mission statement here].
STEP 4. ESTABLISH GUIDING PRINCIPLES

Guiding Principles describe the organization’s beliefs and philosophy pertaining to quality assurance and performance improvement. The principles should guide what the organization does, why it does it and how.

For example:

- Guiding Principle #1: QAPI has a prominent role in our management and Board functions, on par with monitoring reimbursement and maximizing revenue.
- Guiding Principle #2: Our organization uses quality assurance and performance improvement to make decisions and guide our day-to-day operations.
- Guiding Principle #3: The outcome of QAPI in our organization is the quality of care and the quality of life of our residents.
- Guiding Principle #4: In our organization, QAPI includes all employees, all departments and all services provided.
- Guiding Principle #5: QAPI focuses on systems and processes, rather than individuals. The emphasis is on identifying system gaps rather than on blaming individuals.
- Guiding Principle #6: Our organization makes decisions based on data, which includes the input and experience of caregivers, residents, health care practitioners, families, and other stakeholders.
- Guiding Principle #7: Our organization sets goals for performance and measures progress toward those goals.
- Guiding Principle #8: Our organization supports performance improvement by encouraging our employees to support each other as well as be accountable for their own professional performance and practice.
- Guiding Principle #9: Our organization has a culture that encourages, rather than punishes, employees who identify errors or system breakdowns.

Add any additional Guiding Principles that may be important to your nursing home. Review the five QAPI elements to ensure you identify and capture guiding principles for your organization.
STEP 5. DEFINE THE SCOPE OF QAPI IN YOUR ORGANIZATION

The Scope outlines what types of care and services are provided by the organization that impact clinical care, quality of life, resident choice, and care transitions. Be sure to incorporate the care and services delivered by all departments.

For example:

<table>
<thead>
<tr>
<th>Post-acute care</th>
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<tr>
<td>Dementia care and services</td>
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<td>Dietary</td>
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<td>Dining</td>
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Once the list of care and service area has been identified, you can determine how each will use QAPI to assess, monitor and improve performance on an ongoing basis.

STEP 6. ASSEMBLE DOCUMENT

Once you’ve completed steps 1-5, assemble the vision and mission statements, guiding principles, and scope of QAPI into a separate document that may be used as a preamble to your QAPI plan. This document will help you articulate the goals and objectives of your organization; QAPI will help you get there. Consider posting for all to see.

The next step is to develop a written QAPI plan that will meet your purpose, guiding principles and comprehensive scope described above. See “Guide for Developing a QAPI Plan.”
DIRECTIONS:

The QAPI plan will guide your organization’s performance improvement efforts. Prior to developing your plan, complete the Guide to Develop Purpose, Guiding Principles, and Scope for QAPI. Your QAPI plan is intended to assist you in achieving what you have identified as the purpose, guiding principles and scope for QAPI, therefore this information is needed before you begin working on your plan. This is a living document that you will continue to refine and revisit. Use these step-by-step instructions to create your QAPI plan. This plan should reflect input from caregivers representing all roles and disciplines within your organization.

I. QAPI Goals

Based on the Guide to Develop Purpose, Guiding Principles, and Scope for QAPI, indicate the QAPI goals that your plan will strive to meet. Goals should be specific, measurable, actionable, relevant, and have a time line for completion. (See Goal Setting Worksheet).

II. Scope

a. Describe how QAPI is integrated into all care and service areas of your organization.
b. Describe how the QAPI plan will address:
   i. Clinical care
   ii. Quality of life
   iii. Resident choice (i.e., individualized goals for care)
c. Describe how QAPI will aim for safety and high quality with all clinical interventions while emphasizing autonomy and choice in daily life for residents (or resident’s agents).
d. Describe how QAPI will utilize the best available evidence (e.g., data, national benchmarks, published best practices, clinical guidelines) to define and measure goals.

III. Guidelines for Governance and Leadership

a. Describe how QAPI is integrated into the responsibilities and accountabilities of top-level management and the Board of Directors (if applicable).
b. Describe how QAPI will be adequately resourced.
   i. Designate one or more persons to be accountable for QAPI leadership and for coordination.
   ii. Indicate the plan for developing leadership and facility-wide training on QAPI.
   iii. Describe the plan to provide caregivers time, equipment, and technical training as needed for QAPI.
   iv. Indicate how you will determine if resources are adequate for QAPI.
   v. Describe how your caregivers will become and remain proficient with process improvement tools and techniques. How will you assess their level of proficiency?
c. QAPI Leadership  
   i. While everyone in the organization is involved in QAPI, you will likely have a small group of 
   individuals who will provide the backbone or structure for QAPI in your organization. Who will 
   be part of this group? Many of these individuals may be on your current QAA committee.  
   ii. Describe how this group of people will work together, communicate, and coordinate QAPI 
   activities. This could include but is not limited to:  
      • Establishing a format and frequency for meetings  
      • Establishing a method for communication between meetings  
      • Establishing a designated way to document and track plans and discussions addressing 
        QAPI.  
   iii. Describe how the QAPI activities will be reported to the governing body; i.e., Board of 
        Directors, owner.  

IV. Feedback, Data Systems, and Monitoring  
   a. Describe the overall system that will be put in place to monitor care and services, drawing data 
      from multiple sources.  
   b. Identify the sources of data that you will monitor through QAPI  
      i. Input from caregivers, residents, families, and others  
      ii. Adverse events  
      iii. Performance indicators  
      iv. Survey findings  
      v. Complaints  
   c. Describe the process for collecting the above information.  
   d. Describe the process for analyzing the above information, including how findings will be reviewed 
      against benchmarks and/or targets established by the facility.  
   e. Describe the process to communicate the above information. What types of reports will be used? 
      One way to accomplish this is to use a dashboard or dashboards for individual performance 
      improvement projects.  
   f. Identify who will receive this information (i.e., executive leadership, QAPI leadership, resident/
      family council, and a center’s caregivers), in what format, and how frequently information will be 
      disseminated.  

V. Guidelines for Performance Improvement Projects (PIPs)  
   a. Describe the overall plan for conducting PIPs to improve care or services.  
      i. Indicate how potential topics for PIPs will be identified.  
      ii. Describe criteria for prioritizing and selecting PIPs: areas important and meaningful for the 
          specific type and scope of services unique to the facility, requires a concentrated effort on a 
          particular problem in one area of the facility or facility wide.  
      iii. Indicate how and when PIP charters will be developed.  
      iv. Describe the process for reporting the results of PIPs. Identify who will receive this information 
          (i.e., quality committee, resident/family council, and a center’s caregivers), in what format, and 
          how frequently information will be disseminated.
b. Describe how to designate PIP teams and establish and describe a process for assembling teams to work on specific PIPs.

c. Define the required characteristics for any PIP team. This may include that the team be interdisciplinary (i.e., representing each of the job roles affected by the project), that it include resident representation (as appropriate), and that a qualified team leader is selected (i.e., ability to coordinate, organize and direct all activities of the project team). Describe how PIP teams should document and report their work.

d. Describe your process for documenting PIPs, including highlights, progress, and lessons learned. For example, what project documentation templates will you use consistently and file electronically in a standardized fashion for future reference.

VI. Systematic Analysis and Systemic Action

a. Any change that is made has the potential to have broader impact than intended. If you are trying to make a change to a specific system or process, it is important to recognize any “unintended” consequences of your actions. Describe how your organization will identify these consequences which may be either positive or negative.

b. Describe the process you will use to ensure you are getting at the underlying causes of issues, rather than applying quick fixes that address symptoms only.

c. Describe how you will monitor to ensure that interventions or actions are implemented and effective in making and sustaining improvements.

VII. Communications

Outline the audiences for QAPI communications and the frequency and format of these communications.

VIII. Evaluation

a. Describe the process for assessing QAPI in your organization on an ongoing basis. [See QAPI Self-Assessment Tool.]

b. Describe the purpose of this evaluation – to help your organization to expand your skills in QAPI and increase the impact of QAPI in your organization.

IX. Establishment of Plan

a. Date your plan.

b. Determine when you will revisit the plan (i.e., at least annually).

c. Determine how you will track revisions or updates to the plan.
Element 2 – Governance and Leadership
**Directions:** Leadership rounding is a process where leaders (e.g., administrator, department heads, and nurse managers) are out in the building with staff and residents, talking with them directly about care and services provided in the organization including QAPI initiatives. Rounding with staff and residents is an effective method for leaders to hear firsthand what is going well and what issues need to be addressed within the organization. It serves as an important signal of leadership’s commitment to performance improvement, and promotes a culture of QAPI in the organization. Use this to guide your rounds to monitor the progress of QAPI initiatives.

### Questions to Consider Before Rounding

1. Which leader(s) will conduct rounds?
2. How frequently will rounds take place?
3. What questions do you want to ask? What do you want to learn? (See sample questions below.)
4. What barriers/issues have already been identified that employees should be asked about in order to gather input on solutions?

### Rounding

1. Leaders conduct rounds as planned, maintaining a positive tone, building relationships with staff by taking the time to listen and respond to employees’ and residents’ needs.
2. Ask questions and document key points. See optional rounding form below.
3. When employees raise issues or ask for help, assure them you will follow up.
4. Follow up on previous issues or requests — share with staff how the issues were addressed or resolved.

### To Do After Rounding

1. Identify frequently noted issues/themes.
2. Prioritize issues (e.g., by level of urgency, threat, ability to resolve).
3. Conduct follow-up to show responsiveness to the issues raised (note: this may involve following up with employees individually, developing an organizational report that outlines the input collected and proposed solutions—potentially utilizing the priority levels developed in step #2—or including the findings as a component to be communicated during the next rounding session).
4. Consider ways to acknowledge outstanding employee/unit efforts (e.g., thank you notes or other rewards/recognition).
5. Identify training or coaching opportunities for employees/units. Plan next rounding session.
Rounding Form

PERSON CONDUCTING ROUNDS: ______________ DATE: ______ UNIT(S): ____________

BACKGROUND: (to be completed prior to rounding)

<table>
<thead>
<tr>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>___Specific PIP(s):</td>
</tr>
<tr>
<td>___Specific aspect of care (e.g., bathing, medication reconciliation)</td>
</tr>
<tr>
<td>___Specific work place or workflow issue</td>
</tr>
<tr>
<td>___Other</td>
</tr>
</tbody>
</table>

Information needed prior to rounding:
What is your organization trying to achieve?
How will improvement be recognized?
Current data or description of performance:
Improvements made to-date:

BARRIERS/ISSUES ALREADY KNOWN: (sharing these may be an opportunity to ask for staff input on solutions)

PREVIOUS BARRIERS/ISSUES THAT HAVE BEEN ADDRESSED BY LEADERSHIP: (reporting these back to staff shows responsiveness)

Questions for leaders to ask staff (include any qualitative and quantitative information obtained).

| What things are going well around this initiative or this aspect of care or service? What evidence do you see of success? | Notes: |
| What is frustrating you with the work around this initiative or this aspect of care or service? What barriers/issues do you see threatening this initiative or aspect of care or service? How should they be addressed? | Notes: |
| What additional resources/tools/equipment are needed? | Notes: |
| Are there any colleagues who deserve special recognition for their efforts on this initiative or this aspect of care or service? | Notes: |
| Are there any colleagues who could be helped through coaching/training to make this initiative or aspect of care or service more successful? | Notes: |
| What feedback, if any, have you heard from residents and families about changes taking place as part of this initiative or this aspect of care or service? | Notes: |
| What else would you like the leadership to know about this initiative or this aspect of care or service? | Notes: |

Leaders – summarize notes from conversations you had with residents or families on this topic:
Examples of Performance Objectives for Job Descriptions and Performance Reviews

Directions: All job positions in the organization should be oriented to support quality assurance and performance improvement (QAPI) efforts. Below are various examples, both for specific positions and general staff roles, which could be used in revising or developing job descriptions and performance review objectives. Many examples are provided below; do not feel you need to use all of these. Feel free to add, revise, or remove items as appropriate for your organization.

Job Role: Owner / Board Director / Member of the Governing Body

- Assume accountability for ensuring that quality assurance and performance improvement (QAPI) is defined, implemented, and given high priority in the overall management of facility operations.
- Provide overall direction on QAPI goals for the organization.
- Ensure that adequate resources are allocated for training on QAPI and for the implementation and measurement of QAPI initiatives.

Job Role: Nursing Home Administrator

- Receive direction from the owner/board of directors on QAPI goals and clearly communicate these to staff.
- Communicate regularly on the progress of QAPI work to the owner/board of directors, employees and other stakeholders.
- Establish overall QAPI objectives for the organization and assign responsibility for their fulfillment.
- Accept responsibility and oversee development of QAPI plan, including policies for ensuring that QAPI activities are given high priority in the overall management of facility operations.
- Foster an organization-wide commitment to quality assurance and performance improvement both verbally and non-verbally (i.e., via actions and attitude).
- Allocate sufficient financial, material and human resources, including training, to carry out QAPI activities.
- Ensure QAPI in the organization includes a mechanism for obtaining resident and family input to consider as potential areas for improvement.
- Create and maintain a consistent process (e.g., scheduled rounding, active participation on quality committee) to stay informed of all QAPI efforts underway including their progress and achievements.
- Provide oversight and enthusiastic support of QAPI activities.

Job Role: Director of Quality / Quality Leader / QAPI Coordinator

- Report to and receive direction from the Nursing Home Administrator on overall QAPI objectives for the organization.
- Be knowledgeable in data collection, data analysis methodology, and performance improvement methods needed to support and lead QAPI.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
● Identify opportunities for improvement through analysis of data, observation of operations and consultation with leadership, staff, residents, families, and other stakeholders.
● Organize and facilitate the quality committee and its meetings by guiding discussion around performance measures, and prioritizing and developing quality efforts.
● Identify staff training needs to support QAPI.
● Lead performance improvement projects and provide education and coaching in order to build needed skills in others to lead PIPs.
● Create processes to design and charter performance improvement projects that includes establishment of indicators of success.
● Coach staff, management, and practitioners on how to problem solve, including how to analyze causes and contributing factors.
● Identify resources and tools to support improvement efforts.
● Work with the administrator to secure resources for performance improvement work. Manage the financial, material and human resources allocated to carry out QAPI work.
● Encourage staff member involvement in QAPI.
● Coordinate with directors/managers to ensure QAPI efforts are integrated into all operations and departments, including staff responsibilities.
● Identify and manage potential barriers to the success of QAPI efforts.
● Assist teams working on QAPI efforts to identify any unintended consequences of changes that are put in place in order to avoid negative impact on overall performance.
● Communicate regularly on the progress of QAPI work to leadership and staff, including the progress of performance improvement projects.
● Design a process for and conduct an evaluation of QAPI efforts (at least annually). Facilitate a discussion within the quality committee for this annual review.

**Job Role: Department Directors (e.g., Director of Nursing, Rehab, Dietary, etc.)**

● Receive direction from the Nursing Home Administrator on overall QAPI objectives for the organization.
● Be knowledgeable in data collection, data analysis methodology, and performance improvement methods needed to support and lead performance improvement projects.
● Identify opportunities for improvement through analysis of data, observation of operations, and consultation with leadership and staff.
● Collaborate with the quality committee and senior leaders to prioritize and develop QAPI efforts.
● Lead performance improvement projects and provide education and coaching in order to build needed skills in others to lead PIPs.
● Participate in multidisciplinary QAPI activities.

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Job Role: Medical Director

- Be an active member of the organization’s quality committee and any team(s) that have specific responsibilities related to QAPI.
- Be knowledgeable in data collection, data analysis methodology, and performance improvement methods needed to support QAPI.
- Play an active role in reviewing and analyzing data in order to identify opportunities for improvement.
- Provide input into prioritization of improvement opportunities.
- Assist facility in maintaining focus on systems and processes of care.
- Coach and mentor staff as needed to avoid focus on individual behavior over systems and processes.

Job Role: General Staff

- Recognize your role as part of the QAPI efforts of your organization.
- Attend trainings to build understanding and capacity to undertake QAPI work.
- Carry out QAPI roles and responsibilities as assigned.
- Follow established policies and procedures in support of QAPI efforts.
- Look for and share with leadership ideas for improvement in the organization.
- Communicate to leadership upon witnessing a positive outcome of a QAPI project or detecting barriers preventing project success.
- Support QAPI efforts both verbally and non-verbally (i.e., via actions and attitude), including adjusting performance and practice in accordance with QAPI initiatives and findings.
Element 3 – Feedback, Data Systems and Monitoring
**Measure/Indicator Development Worksheet**

**Directions:** Use this worksheet to develop a performance measure/indicator. A new measure/indicator might be created as part of your overall QAPI monitoring or for a Performance Improvement Project. You will likely want to use existing measures when possible, but there may be times when you want to develop a new measure/indicator that is specific to your needs.

**Note: What is the difference between an indicator and a measure?** An indicator provides evidence that a certain condition exists but does not clearly identify the situation or issue in any detail. Indicators enable decision-makers to assess progress towards the achievement of intended outputs, outcomes, goals, and objectives. A measure is a stronger reflection of the underlying concept; a more developed and tested way of describing the concept that is being evaluated. However, in practice the two terms are used interchangeably.

**MEASURE/INDICATOR OVERVIEW**

**NAME OF MEASURE/INDICATOR:**
*Example: Residents with a completed skin assessment within 12 hours of admission.*

**PURPOSE OR INTENT FOR MEASURE/INDICATOR:**
*Example: The purpose of this measure is to make sure our process of completing a skin assessment within 12 hours of admission is done consistently.*

**MEASURE/INDICATOR TYPE:**

___ **Structural Measure:** Structural measures focus on the fixed characteristics of an organization, its professionals and staff. These measures distinguish between a capability or asset and the activity that may rely on that structure. In addition, structural measures are typically based on the organization or professional as the unit of assessment in the denominator. Example: The extent to which a facility use of electronic health records is implemented facility-wide. Numerator = Number of departments with EHR; Denominator = Number of all departments in facility.

___ **Process Measure:** Process measures assess the steps or activities carried out in order to deliver care or services. These measures focus on the action by professionals and staff. Consideration should be given to sample sizes for denominators, exclusion criteria, and alternative processes or work-arounds that may exist. Example: The percentage of newly admitted residents receiving admission skin assessments.

___ **Outcome Measure:** Outcome measures focus on the product (or outcome) of a process or system of care or services, which can identify different or more complex underlying causes. Example: The rate or incidence of nursing home acquired pressure ulcers.

*The measure in the example above (residents with a completed skin assessment within 12 hours of admission) is a process measure.*

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### DEFINING THE MEASURE/INDICATOR SPECIFICATIONS

| **NUMERATOR:** (i.e., when will a person or event be counted as having met the desired result – this is the top number of the fraction you will calculate) | Example: any resident with a completed skin assessment within 12 hours of admission  
Numerator: 19 |
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<tbody>
<tr>
<td><strong>DENOMINATOR:</strong> (i.e., what is the total pool of persons or events you will be counting – this is the bottom number of the fraction you will calculate)</td>
<td>Example: all residents admitted in last month. Denominator= 23</td>
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</tbody>
</table>
| **EXCLUSION CRITERIA:** (i.e., is there any reason you would exclude a particular person or event from the denominator count?) | Example: exclude those residents in the nursing home for less than 24 hours because all assessment data not available  
Denominator after exclusions: 20 |
| **RESULT CALCULATION:** (i.e., typically expressed as Numerator/Denominator x 100 = rate %) | Example: 19 / 20 X 100 = 90% |
| **INDICATOR/MEASURE GOAL:** (i.e., the numerical goal aimed for – may be based on an already-established goal for the particular indicator) | Example: Goal = 100% |
| **INDICATOR/MEASURE THRESHOLD:** (i.e., the minimum acceptable level of performance) | Example: Threshold = 95% |

### MEASURE/INDICATOR DATA COLLECTION

<table>
<thead>
<tr>
<th><strong>DATA SOURCE:</strong></th>
<th>Example: Medical records, admission skin assessment form</th>
</tr>
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<tbody>
<tr>
<td><strong>SAMPLE SIZE AND METHODOLOGY:</strong> (i.e., will you measure the total population under study or draw a sample to represent the whole? If sampling, how large will the sample size be? How will you determine the sample?)</td>
<td>Example: The total population admitted in the last month who were in the nursing home for at least 24 hours will be reviewed.</td>
</tr>
<tr>
<td><strong>FREQUENCY OF MEASUREMENT:</strong> (i.e., how frequently will the indicator result be calculated: daily, weekly, monthly, quarterly, annually?)</td>
<td>Example: Monthly</td>
</tr>
<tr>
<td><strong>DURATION:</strong> (i.e., what is the timeframe for which)</td>
<td>Example: Will collect this data for three consecutive months; then based on findings, will either develop corrective action and continue</td>
</tr>
<tr>
<td>the data will be collected: number of cases/events in the past weeks, months, quarters? This will depend on how frequently cases/events occur.)</td>
<td>monitoring monthly, or consider decreasing frequency of monitoring.</td>
</tr>
</tbody>
</table>
**Measure/Indicator Collection and Monitoring Plan**

**Directions:** For each measure/indicator that you choose to collect and monitor for QAPI, answer the following questions. The information gleaned from these questions will help you determine how best to track, display and assess or evaluate the results of the various measures you have chosen for QAPI. If you have a relatively small number of measures or indicators that you are tracking, you may wish to include all measures in one table and use this as an overview tool that could be completed by the person coordinating QAPI in your organization. Alternatively, you may choose to use this table for individual measures or groupings of measures that address similar topics.

<table>
<thead>
<tr>
<th>What are we measuring (measure/indicator)?</th>
<th>When are we measuring this (frequency)?</th>
<th>How do we measure this (where do we get our data)?</th>
<th>Who is responsible for tracking on this measure?</th>
<th>What is our performance goal or aim?</th>
<th>How will data findings be tracked and displayed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: High risk pressure ulcers</td>
<td>Quality Indicator (QI) monthly report</td>
<td>Data comes from MDS assessments</td>
<td>DON</td>
<td>&lt;6%</td>
<td>DON uses Excel run chart template to document monthly rates over time. DON also tracks and graphs the number of in house acquired versus admitted pressure ulcers, pressure ulcers by stage, and time to heal. Results are provided to QAPI committee and posted in “North” conference room.</td>
</tr>
<tr>
<td>Example: Staff satisfaction</td>
<td>Yearly – April</td>
<td>Corporate satisfaction survey</td>
<td>Administrator</td>
<td>Participation rate: 70% Overall satisfaction: xx%</td>
<td>Administrator uses bar chart to show results for individual satisfaction</td>
</tr>
</tbody>
</table>

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<th>How will data findings be tracked and displayed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Staff turnover</td>
<td>Monthly and annualized</td>
<td>Human resources department</td>
<td>Human Resources Director</td>
<td>&lt;20%</td>
<td>Would recommend as place for care: xx% Would recommend as place to work: xx%</td>
</tr>
<tr>
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<td></td>
<td>questions and key composite measures for current and previous 3 years. Results are provided to QAPI committee and posted in “North” conference room.</td>
</tr>
</tbody>
</table>

Example: Staff turnover

- Monthly and annualized
- Human resources department
- Human Resources Director
- <20%

Human Resources Director uses the Advancing Excellence in America’s Nursing Homes “Monitoring Staff Turnover Calculator.” Results reviewed at QAPI committee.
<table>
<thead>
<tr>
<th>What are we measuring (measure/indicator)?</th>
<th>When are we measuring this (frequency)?</th>
<th>How do we measure this (where do we get our data)?</th>
<th>Who is responsible for tracking on this measure?</th>
<th>What is our performance goal or aim?</th>
<th>How will data findings be tracked and displayed?</th>
</tr>
</thead>
</table>

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Directions: A dashboard can be helpful as a way to monitor the progress of QAPI in your organization, or the progress of individual projects. The complexity of a dashboard can vary based on the needs of the organization and whether or not you have an automated system to assist in pulling data into the dashboard. Your team should use this tool to guide the process of developing a dashboard. The steps below are intended to help the team members understand the value of a dashboard and the process for creating a dashboard.

Step 1 – Review dashboard basics:

What is a dashboard?
Like the panel of signals that allow a driver to monitor the functioning of a car, a dashboard is a system to track key performance indicators within an organization. It is meant to be designed so that it is easy to read and quick to understand, providing signals of where things are going well and where there are problems to address. It should include short term indicators – to make sure that milestones are being met, and outcome measures that reflect whether goals are being met.

Why is a dashboard important?
Regular monitoring of data is critical for effective decision-making in any organization. At the same time, the amount of data available can be overwhelming and long data reports containing all possible information are not likely to be used and may not be meaningful. A dashboard is an ideal way to prioritize the most important indicators for a particular organization and encourage regular monitoring of the results.

What does a dashboard look like?
Dashboards may be simple text documents, data spreadsheets, or sophisticated graphs developed with computer programs. Data results are reported for multiple time periods to show trends over time and include benchmarks or goals to put performance into context. An organization’s main dashboard ideally fits onto one page, showing only a select set of the most important indicators to monitor. Sub-dashboards may then be created so that users can “drill-down” to see more detailed data on a specific issue. Dashboards typically employ a system of visual alerts—such as red-yellow-green stoplight coloring, speedometers or thermometers—that help to draw viewers’ attention to data results indicating an area for concern.

Step 2 – Decide how your dashboard will be used:

What type of dashboard do we need?
Different dashboards may be useful for different audiences. For instance, a dashboard geared to a board of directors would need to monitor not only the overall quality and specific clinical or organizational quality indicators for the facility but also its financial health. Similarly a top administrator needs to have a high-level view of the performance of the organization, while an individual staffing unit may have a dashboard that concerns the area of care for which it is specifically responsible. Additionally, you may decide to create a dashboard that distinctively monitors the success of a particular QAPI activity. Ideally, any sub-dashboards created will be tied to the main organizational dashboard so that all efforts are working in sync with the overarching vision and goals of the organization.

Step 3 – Create your dashboard:

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The following is a list of steps to consider in developing a dashboard. These steps are not necessarily listed in the order in which they must take place, but represent a general path to follow in creating a dashboard panel for your organization.

- Determine what type of dashboard you are creating and its purpose. For example, this may be a main organizational dashboard for the purpose of monitoring the facility’s overall health or a project-centered dashboard to examine the results of specific improvement efforts.

- Assemble the team. Depending on which type of dashboard you are creating, the highest level of leadership taking ultimate responsibility for the indicators will need to be involved. Other key team members include those responsible for producing the results measured, those affected by the results as well as any other users of the dashboard tool. Gathering input from your quality committee will provide the best vantage point to select the most appropriate indicators as well as help to ensure buy-in and support for the process.

- Write an objective for what the dashboard should monitor. For a main organizational dashboard, this will involve reviewing the organization’s mission, vision and strategic plan to elicit the most important goals for the organization to achieve. For a project-level dashboard, the objective will relate to the outcomes the improvement efforts are trying to produce. A dashboard in this case can help to emphasize the different parts of the system that influence whether or not the outcome is achieved.

- Establish the principal measure domains to include. Based on your written objective for what the dashboard should monitor, determine all of the principal measure domains that must be included in order to adequately meet your measurement objectives. Domains could include clinical outcomes, satisfaction, quality of life, safety, finances, staffing or various other domains (see Inventory of Potential Measures and Indicators).

- Determine what indicators are available within each of the measure domains you have selected. Indicators can be drawn from your own internal data sources, from the literature regarding appropriate and expected rates of an activity or situation, from state-sponsored report cards or inspections, national campaigns such as Advancing Excellence in America’s Nursing Homes or federal initiatives such as CMS’ Nursing Home Compare.

- Select indicators. This step will involve reviewing the list of potential indicators available, gathering input from team members and other stakeholders, and looking for sources that will provide either an evidence-base for setting a specific goal level for the indicator or a benchmark goal based on the performance of other facilities.

- Set indicator goals. Upon selecting the indicators to include in your dashboard and reviewing available sources to set goals, establish the preliminary goal level you aim to achieve for each indicator. You may choose to set progressive goals over a particular period of time (e.g., goal of a 10% reduction in the first year followed by a 20% reduction in the following year.)
Define the specifications for each indicator. Establish how each indicator will be defined and measured by identifying its numerator, denominator, data source, measurement period and any exclusions allowed. This may include a listing of any data codes used in health record management systems.

Develop a data collection plan. Establish the frequency at which the indicator will be measured and the person(s) responsible for collecting the data and entering it into the dashboard. Different indicators may be collected on different time lines and data time periods should be denoted clearly on the dashboard.

Step 4 – Use your dashboard:

- Determine how the dashboard will be displayed. Determine the type of dashboard you will use to communicate findings (text document, data spreadsheet, etc).

- Establish a dissemination plan. Thinking about who the users are, determine how the dashboard will be shared with others. Will you post the dashboard on a bulletin board? Will only certain staff have password-access to an online dashboard? Will you share dashboard findings with residents and families? What about the general public?

- Develop a plan to review the dashboard and act on the findings. Establish the people responsible for regularly reviewing dashboard findings, at what frequency they will be reviewed and what protocol should be followed to initiate any follow-up action required. Make sure the quality committee and executive leadership is included in those responsible for reviewing and acting on dashboard results.

- Gather baseline data. Test the dashboard by following the data collection plan to populate the indicators with baseline data. This may involve looking back and pulling historical data to show trends to date for the indicators selected.

- Review baseline findings and make adjustments as necessary. Consult with the team to evaluate how the dashboard functions following baseline data input. Make adjustments as necessary or return to earlier steps if it is determined that different indicators are needed.

- Determine a pilot period. Based on the frequency determined for monitoring the dashboard, set a defined period to pilot the new dashboard and establish a date for formal review of the dashboards performance in meeting the originally defined monitoring objective.

Step 5 – Revisit your dashboard:

Remember that a dashboard is a living tool and, therefore, should evolve over time. Establishing regular review periods will help to prevent the dashboard from becoming stagnant and growing obsolete by considering new data sources that have since become available and identifying indicators that are no longer considered useful.
Monitor whether the data collected and shared are acted upon by leadership, the quality committee, and others as appropriate. Remember that simply tracking and trending data will not lead to meaningful change in the lives of residents.

Continue to look for new and innovative indicators to include in your dashboard. The purpose of a dashboard is to challenge your organization not only to meet its goals but to continue to improve and grow in different ways.
**Goal Setting Worksheet**

**Directions:** Goal setting is important for any measurement related to performance improvement. This worksheet is intended to help QAPI teams establish appropriate goals for individual measures and also for performance improvement projects. Goals should be clearly stated and describe what the organization or team intends to accomplish. Use this worksheet to establish a goal by following the SMART formula outlined below. Note that setting a goal does **not** involve describing what steps will be taken to achieve the goal.

<table>
<thead>
<tr>
<th>Describe the business problem to be solved:</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

**Use the SMART formula to develop a goal:**

**SPECIFIC**

Describe the goal in terms of 3 ‘W’ questions:

<table>
<thead>
<tr>
<th>What do we want to accomplish?</th>
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</thead>
<tbody>
<tr>
<td>Who will be involved/affected?</td>
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<tr>
<td>Where will it take place?</td>
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</table>

**MEASURABLE**

Describe how you will know if the goal is reached:

<table>
<thead>
<tr>
<th>What is the measure you will use?</th>
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<tbody>
<tr>
<td>What is the current data figure (i.e., count, percent, rate) for that measure?</td>
</tr>
<tr>
<td>What do you want to increase/decrease that number to?</td>
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</tbody>
</table>

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**ATTAINABLE**
Defend the rationale for setting the goal measure above:

Did you base the measure or figure you want to attain on a particular best practice/average score/benchmark?

Is the goal measure set too low that it is not challenging enough?

Does the goal measure require a stretch without being too unreasonable?

**RELEVANT**

Briefly describe how the goal will address the business problem stated above.

**TIME-BOUND**

Define the timeline for achieving the goal:

What is the target date for achieving this goal?

Write a goal statement, based on the SMART elements above. The goal should be descriptive, yet concise enough that it can be easily communicated and remembered.

*Example:* Increase the number of long-term residents with a vaccination against both influenza and pneumococcal disease documented in their medical record from 61 percent to 90 percent by December 31, 2011.

*Tip:* It’s a good idea to post the written goal somewhere visible and regularly communicate the goal during meetings in order to stay focused and remind caregivers that everyone is working toward the same aim.
**Directions:** This tool will assist in choosing which potential areas for improvement are the highest priority based on the needs of the residents and the organization. Follow this systematic assessment process below to identify potential areas for PIPs. This process will consider such factors as high-risk, high-volume, or problem-prone areas that affect health outcomes and quality of care. This tool is intended to be completed and used by the QAPI team that determines which areas to select for PIPs. Begin by listing potential areas for improvement in the left-hand column. Then score each area in the following columns based on a rating system of 1 to 5 as defined below:

1 = very low  
2 = low  
3 = medium  
4 = high  
5 = very high

Rating is subjective and is meant to be a guide and to stimulate discussion. Finally, add the scores across the row and tally in the final column. Potential improvement areas with a higher score indicate a higher priority.

<table>
<thead>
<tr>
<th>POTENTIAL AREAS FOR IMPROVEMENT</th>
<th>PREVALENCE</th>
<th>RISK</th>
<th>COST</th>
<th>RELEVANCE</th>
<th>RESPONSIVENESS</th>
<th>FEASIBILITY</th>
<th>CONTINUITY</th>
<th>TOTAL SCORE TALLY</th>
</tr>
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<tbody>
<tr>
<td>Consider areas identified through: Dashboard(s) Feedback from staff, families, residents, other Incidents, near misses, unsafe conditions Survey deficiencies</td>
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</tbody>
</table>
Additional factors to take into account:

1. What existing standards or guidelines are available to provide direction for this initiative?
2. What measures can be used to monitor progress?
3. Is the topic publicly reported on Nursing Home Compare and/or is it a goal of the Advancing Excellence in America’s Nursing Homes campaign?
4. Which type of changes primarily will be involved (i.e., system changes, environmental changes, staffing changes)?
5. Which staff will be most affected by the initiative? What training needs will this initiative present?
6. Is there an identified champion(s) for this initiative?
Element 4 – Performance Improvement Projects (PIPs)
What is a project charter? A project charter clearly establishes the goals, scope, timing, milestones, and team roles and responsibilities for an Improvement Project (PIP). The charter is typically developed by the QAPI team and then given to the team that will carry out the PIP, so that the PIP team has a clear understanding of what they are being asked to do. The charter is a valuable document because it helps a team stay focused. However, the charter does not tell the team how to complete the work; rather, it tells them what they are trying to accomplish.

Use this worksheet to define key charter components.

**PROJECT OVERVIEW**

Name of project:
*Example:* Reduction in use of position change alarms

Problem to be solved:
*Example:* Alarms going off frequently detract from a homelike environment and may give staff a false sense of security.

Background leading up to the need for this project:
*Example:* Residents and families have complained about the sound of alarms going off frequently. Staff feel pressure to do “something” when a resident falls.

[Tip: Reference specific background documents, as needed.]

The goal(s) for this project:
*Example:* Decrease the percentage of residents with position change alarms used on XX unit by 25% by XX/XX/XX.

[Tip: See Goal Setting Worksheet]

Scope—the boundary that tells where the project begins and ends.
The project scope includes:
*Example:* Use of position change alarms on XX unit.
PROJECT APPROACH

Recommended Project Time Table:

<table>
<thead>
<tr>
<th>PROJECT PHASE</th>
<th>START DATE</th>
<th>END DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiation: Project charter developed and approved</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning: Specific tasks and processes to achieve goals defined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implementation: Project carried out</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring: Project progress observed and results documented</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closing: Project brought to a close and summary report written</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Project Team and Responsibilities:

<table>
<thead>
<tr>
<th>TITLE</th>
<th>ROLE</th>
<th>PERSON ASSIGNED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Sponsor</td>
<td>Provide overall direction and oversee financing for the project</td>
<td></td>
</tr>
<tr>
<td>Project Director</td>
<td>Coordinate, organize and direct all activities of the project team</td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td>Manage day-to-day project operations, including collecting and displaying data from the project</td>
<td></td>
</tr>
<tr>
<td>Team members*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Choice of team members will likely be deferred to the project manager based on interest, involvement in the process, and availability.

Material Resources Required for the Project (e.g., equipment, software, supplies):
Barriers

<table>
<thead>
<tr>
<th>What could get in the way of success?</th>
<th>What could you do about this?</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Example:</em> A resident could fall and staff could automatically blame the lack of an alarm.</td>
<td><em>Example:</em> Educate staff on the lack of relationship between alarms and falls; collect data on removal of one alarm at a time.</td>
</tr>
<tr>
<td><em>Example:</em> Staff complaints of need for additional staff to watch everyone if alarms are removed.</td>
<td><em>Example:</em> Focus on anticipation of resident needs, and assess if additional hands-on-deck are needed during busy times on unit.</td>
</tr>
</tbody>
</table>

PROJECT APPROVAL

The signatures of the people below relay an understanding and approval of the purpose and approach to this project. By signing this document you agree to establish this document as the formal Project Charter and sanction work to begin on the project as described within.

<table>
<thead>
<tr>
<th>TITLE</th>
<th>NAME</th>
<th>SIGNATURE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Project Sponsor</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Project Director*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager*</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

*May not always have both roles.
Directions: Use this check list to ensure you have covered important steps in launching your performance improvement project. This tool is intended to be used by the person asked to lead a PIP or any project where a team has been formed. Use this check list to make sure you have everything you need in place when you start a project. Ensuring you have these steps in place can help you save time and confusion down the road.

**Project Name:**

**Project Stakeholders and Team Members**

- The team has received a project charter that has been approved by the leadership.
- The project team has been assembled and roles and responsibilities have been assigned.
- The project charter is understood and accepted by all project team members.
- The project team understands how the project fits with the overall goals of the organization.
- Each project team member understands how his/her assignment fits into the overall project.
- The project and its goals have been communicated to stakeholders outside of the project team, as needed (e.g., residents and families, staff, board of directors, owners).

**Project Resources**

- Financial support for the project has been obtained.
- A project budget has been established.
- Staff time to work on the project has been allocated.
- Material resources required for the project have been identified and secured.

**Project Process**

- A detailed timeline and work plan have been created.
- Training needs have been identified and training has been conducted.
- A schedule for regular project team meetings has been set.
- Indicators/measures have been established to monitor project goals (see Goal Setting Worksheet).
- The format and frequency for documenting project status has been defined.
- The format, frequency, and audiences for communicating project status has been defined.
- A process to identify issues that come up during this project is established (e.g., unintended consequences, new opportunities for process changes, surprises).
- The location for storing all project documents, and processes for file naming conventions and version control has been established.
- The time for project kickoff has been identified and any related activity required (e.g., announcement, meeting, event) has been planned.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
**Directions:** Use this Plan-Do-Study-Act (PDSA) tool to plan and document your progress with tests of change conducted as part of chartered performance improvement projects (PIPs). While the charter will have clearly established the goals, scope, timing, milestones, and team roles and responsibilities for a project, the PIP team asked to carry out the project will need to determine how to complete the work. This tool should be completed by the project leader/manager/coordinator with review and input by the project team. Answer the first two questions below for your PIP. Then as you plan to test changes to meet your aim, answer question 3 below and plan, conduct, and document your PDSA cycles. Remember that a PIP will usually involve multiple PDSA cycles in order to achieve your aim. Use as many forms as you need to track your PDSA cycles.

### Model for Improvement: Three questions for improvement

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>1. <strong>What are we trying to accomplish (aim)?</strong></td>
<td>State your aim (review your PIP charter – and include your bold aim that will improve resident health outcomes and quality of care)</td>
</tr>
<tr>
<td>2. <strong>How will we know that change is an improvement (measures)?</strong></td>
<td>Describe the measureable outcome(s) you want to see</td>
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<tr>
<td>3. <strong>What change can we make that will result in an improvement?</strong></td>
<td>Define the processes currently in place; use process mapping or flow charting</td>
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</tbody>
</table>

**Identify opportunities for improvement that exist** (look for causes of problems that have occurred – see Guidance for Performing Root Cause Analysis with Performance Improvement Projects; or identify potential problems before they occur – see Guidance for Performing Failure Mode Effects Analysis with Performance Improvement Projects) (see root cause analysis tool):

- Points where breakdowns occur
- “Work-a-rounds” that have been developed
- Variation that occurs
- Duplicate or unnecessary steps

**Decide what you will change in the process; determine your intervention based on your analysis**

- Identify better ways to do things that address the root causes of the problem
- Learn what has worked at other organizations (copy)
- Review the best available evidence for what works (literature, studies, experts, guidelines)
- Remember that solution doesn’t have to be perfect the first time
### Plan

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>What change are you testing with the PDSA cycle(s)?</td>
<td></td>
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<tr>
<td>What do you predict will happen and why?</td>
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<tr>
<td>Who will be involved in this PDSA? (e.g., one staff member or resident, one shift?). Whenever feasible, it will be helpful to involve direct care staff.</td>
<td></td>
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<tr>
<td>Plan a small test of change.</td>
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<tr>
<td>How long will the change take to implement?</td>
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<tr>
<td>What resources will they need?</td>
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<tr>
<td>What data need to be collected?</td>
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</tbody>
</table>

**List your action steps along with person(s) responsible and time line.**

### Do

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>Carry out the test on a small scale.</td>
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<tr>
<td>Document observations, including any problems and unexpected findings.</td>
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<tr>
<td>Collect data you identified as needed during the “plan” stage.</td>
<td></td>
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</tbody>
</table>

**Describe what actually happened when you ran the test.**
<table>
<thead>
<tr>
<th>Study</th>
<th>Describe the measured results and how they compared to the predictions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study and analyze the data. Determine if the change resulted in the expected outcome. Were there implementation lessons? Summarize what was learned. Look for: unintended consequences, surprises, successes, failures.</td>
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<tr>
<td>Act</td>
<td>Describe what modifications to the plan will be made for the next cycle from what you learned.</td>
</tr>
<tr>
<td>Act</td>
<td>Based on what was learned from the test: Adapt – modify the changes and repeat PDSA cycle. Adopt – consider expanding the changes in your organization to additional residents, staff, and units. Abandon – change your approach and repeat PDSA cycle.</td>
</tr>
</tbody>
</table>
**Performance Improvement Project (PIP) Inventory**

**Directions:** Use this template for high level tracking of all PIPs occurring within your organization. This document may be particularly useful for leadership, surveyors, or others responsible for overall monitoring of the program. Consider updating the status column on a regular basis; e.g., quarterly. This may be helpful to bring to the QAPI team meetings, to review all PIPs that the organization has currently underway, to identify if the PIPs are moving along, if any have stalled, etc.

**Date(s) of Review: ____________________**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Start Date</th>
<th>Current Phase</th>
<th>Purpose</th>
<th>Change(s) Initiated</th>
<th>Indicators/Measures</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Initiation, Planning</td>
<td>What is the reason for conducting this project?</td>
<td>What actions have been put into place?</td>
<td>Which data are being tracked to show improvement?</td>
<td>What are the indicator/measure results as compared to goals or thresholds? Have any unintended consequences or barriers been identified? How are they being addressed?</td>
</tr>
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</table>
**Sustainability Decision Guide**

**Directions:** This is a resource to help leaders or teams determine if the interventions and changes they are making are sustainable. This guide will help identify why interventions may not be sustainable, and therefore need to be reconsidered. Use this guide at any point during a Performance Improvement Project (PIP), ideally when strategies have been found that appear to be successful and consideration is being given to adopting them broadly within the organization. The more questions that can be answered as “yes,” the higher the likelihood of sustainability.

### SYSTEMS

- ☐ Has the change been defined in terms of how it fits with the overall organizational mission, vision and strategic plan?
- ☐ Are there policies and procedures written in support of the change?
- ☐ Are those who need to carry out the new actions up to date with the information they need to be successful?
- ☐ Have the organization’s systems been revised to encourage the new action? How are staff members reminded to carry out the new actions? Are you monitoring that the new actions are being carried out and is staff being supported in their ability to carry out the new actions?
- ☐ Are there system barriers that prevent the new action from occurring? Are there certain identifiable parts of the system that pose a roadblock to doing things in the new way?
- ☐ Are there incentives or rewards for people who do not adopt the new action that need to be addressed or removed?
- ☐ Has the change been integrated into new employee orientation and training?

### PEOPLE

- ☐ Has strong leadership support for the change been established? Has the leadership communicated a clear and convincing message about the change and its purpose? Are multiple levels of leadership engaged (e.g., board of directors, administrator, and department managers)? Is the leadership vocal and visible in its support? How will the leadership continue to promote the change and encourage staff to stick with it over time?
- ☐ Have roles and responsibilities for carrying out new actions been clearly defined and assigned?

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
☐ Are the people responsible for carrying out the change equipped to manage it? Do staff members have the appropriate skills and knowledge to successfully undertake any new actions required? Have training needs been addressed? Is additional or differently trained staff required?

☐ Are there champions for the change who are actively modeling the desired actions? Are there informal or natural leaders among the staff who could be encouraged to act as role models? Are there members of your staff exhibiting clear resistance to the change that should be addressed?

ENVIRONMENT

☐ Is the organization ready to take on this change? What issues in the workplace culture should be addressed before the change can be expected to become permanent? Is the reason given for the change in line with the values and attitudes of the staff?

☐ Has adequate funding (if applicable) been budgeted to support the change?

☐ Have resources (equipment, materials, staff time, information) been made available? What additional resources would help to encourage the new actions to take place?

☐ Are there things that can be done to the physical environment that make it unavoidable to do things in the new way (e.g., automation of processes; removal of certain objects necessary to do things the previous way)?

MEASUREMENT

☐ Has ongoing periodic measurement and review been scheduled to ensure the new action has been adopted and is performed consistently?

☐ Are indicators/measures chosen that tie directly to the new action? Can the indicator/measure distinguish the performance of different work groups (e.g., by unit, department, shift)? Are some work units carrying out the change more successfully than others? Can lessons for success be learned from certain work units and shared with others?

☐ Can certain indicators/measures be reviewed more frequently (even daily) by staff to show incremental changes, which can serve as a reminder for the new action and provide encouragement and reinforcement?

☐ Does measurement point to any changes in procedure that should be made to help facilitate the change?
Directions: Brainstorming, Affinity Grouping, and Multi-voting are approaches for generating, categorizing, and choosing among ideas from a group of people. Using these techniques encourages every person within the group to contribute, instead of just one or two. They spark creativity in group members as they listen to the ideas of others and generate a substantial list of ideas, rather than just the few things that first come to mind. Finally, the techniques allow a group of people to choose among ideas or options thoughtfully.

The following descriptions of Brainstorming, Affinity Grouping and Multi-voting are intended to be used by QAPI teams when ideas are needed and decisions need to be made.

Brainstorming

Brainstorming is an idea-generation tool designed to produce a large number of ideas through the interaction of a group of people.

1. The session leader should clearly state the purpose of the brainstorming session and lay out the ground rules, as they are discussed below.

2. Participants call out one idea at a time, either going around the group of people in turn, which structures participation from everyone, or at random, which may favor greater creativity. Another option is to begin the brainstorming session by going in turn and after a few rounds open it up to all to call out ideas as they occur.

3. Refrain from discussing, complimenting, criticizing, or evaluating ideas as they are presented. Consider every idea to be a good one. Aim for many ideas in a short amount of time. The quantity of ideas is what matters; evaluation of the ideas and their relative merit comes later. This tool is designed to get as many ideas generated in a short period of time as possible. Discussing ideas may lead to premature judgment and slow down the process.

4. Record all ideas on a flip chart, or on self-adhesive notes so that all group members can see them.

5. Build on and expand the ideas of other group members. Encourage creative thinking.

6. When generating ideas in turn, let participants pass if an idea does not come to mind quickly or if the participant does not have something to share at that time.

7. Keep going when the ideas slowdown, reach for less obvious ideas to create as long a list as possible. Do not cut off the flow of ideas.

8. After all ideas are listed, clarify each one and eliminate exact duplicates.

9. Resist the temptation to “lump” or group ideas. Combining similar ideas will come later (see Affinity Grouping).

Examples of topics when brainstorming might be helpful in nursing homes:
- Identifying was to involve direct care staff in QAPI
- Identifying ways to address the identified root cause of a problem that has occurred or is occurring
- Identifying ways to be more welcoming to new staff or to new residents
- Identifying ways to promote more a more restful night’s sleep for residents
- Identifying ways that residents and families could be involved in QAPI

**Affinity Grouping**

Affinity Grouping is a brainstorming method in which participants organize their ideas and identify common themes.

1. Write ideas on individual cards or adhesive notes (see directions for Brainstorming).
2. Randomly place cards on a table or place notes on flip chart paper taped to the wall.
3. Without talking, each person looks for two cards or notes that seem to be related and places these together, off to one side. Others can add additional cards or notes to a group as it forms or reform existing groups. Set aside any cards or notes that become controversial.
4. Continue until all items have been grouped (or set aside). There should be fewer than 10 groupings.
5. Now discuss the groupings as a team. Generate short, descriptive sentences that describe each group and use these as title cards or notes. Avoid one- or two-word titles.
6. Items can be moved from one group to another if a consensus emerges during the discussion.
7. Consider additional brainstorming to capture new ideas using the group titles to stimulate thinking.

**Multi-voting**

Multi-voting is a structured series of votes by a team, in order to narrow down a broad set of options to a few.

1. Generate a list of items (see directions for Brainstorming).
2. Combine similar items into groups that everyone agrees on (see directions for Affinity Grouping).
3. Number each item.
4. Each person chooses one-third of the items. This voting can be done in a number of ways: a) each person submits their votes privately to the person who will tally the votes, b) each person shares their votes publicly with the group and with the person who will tally the votes, or c) each person marks their choices from the list of items that are displayed on wall charts with an “X” or colored dot – this displays the results instantly.

5. Tally votes.

6. Eliminate items with few votes. The table below will help you determine how to eliminate items:

<table>
<thead>
<tr>
<th>Group size (number of people)</th>
<th>Eliminate items with less than “x” votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 to 5</td>
<td>2</td>
</tr>
<tr>
<td>6 to 10</td>
<td>3</td>
</tr>
<tr>
<td>10 to 15</td>
<td>4</td>
</tr>
<tr>
<td>15 or more</td>
<td>5</td>
</tr>
</tbody>
</table>

If a decision is clear, stop here. Otherwise, repeat the multi-voting process with remaining items, as necessary.
Directions: Use this worksheet to plan QAPI communications for your organization or for any component of QAPI, such as performance improvement projects. A communications plan should be revisited every 6 to 12 months to ensure it is still applicable to the latest QAPI objectives and project activities. Your QAPI leader or coordinator may find it helpful to plan communications using this worksheet.

Date of Current Review: ________________  Next Review Scheduled for: ________________

Step 1: State the content of the communication (e.g., for a performance improvement plan it would be helpful to describe what the project was intended to accomplish or why it was initiated, what changes were made and a description of the results).

Step 2: Define Audiences. An effective communications plan targets messages and customizes tactics to specific audiences. In order to direct resources appropriately, you may choose to rank order audiences as primary or secondary. Internal audiences for a QAPI communications plan will likely include the board of directors/trustees, staff, residents, and their families. You may also choose to communicate about QAPI activities to external audiences, such as community partners, potential new residents, the media, or others. List your target audiences below.

Primary Audience(s): ____________________________________________________________

Secondary Audience(s): _______________________________________________________

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
Step 3: Identify Communications Channels. Consider the different communications channels available for use. Mark any potential channels you may want to use based on whether (a) your organization has had previous success with it or has the resources available to try it for the first time; (b) your staff has the adequate skills and time to appropriately execute it; and (c) funds and other resources are available to support its use.

<table>
<thead>
<tr>
<th>In-Person Channels:</th>
<th>Print Channels:</th>
</tr>
</thead>
<tbody>
<tr>
<td>🟢 Face-to-face small meetings</td>
<td>🟢 Annual report</td>
</tr>
<tr>
<td>☐ Health fairs or trade association events</td>
<td>☐ Banners</td>
</tr>
<tr>
<td>☐ Lunch and learn events</td>
<td>☐ Direct mailings</td>
</tr>
<tr>
<td>☐ Off-site meetings, retreats, or seminars</td>
<td>☐ Employee pay stub enclosures</td>
</tr>
<tr>
<td>☐ On-site meetings, retreats, or seminars</td>
<td>☐ Fact sheets</td>
</tr>
<tr>
<td>☐ Presentations or speeches</td>
<td>☐ Flyers</td>
</tr>
<tr>
<td>☐ Special events</td>
<td>☐ Newsletters</td>
</tr>
<tr>
<td>☐ Town meetings</td>
<td>☐ Posters</td>
</tr>
<tr>
<td>☐ Other: __________________</td>
<td>☐ Other: _______________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Media Channels:</th>
<th>Electronic Channels:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Letters to the editor</td>
<td>☐ Blog</td>
</tr>
<tr>
<td>☐ Paid advertising</td>
<td>☐ Computer/video kiosk</td>
</tr>
<tr>
<td>☐ Press releases</td>
<td>☐ E-mail</td>
</tr>
<tr>
<td>☐ Other: __________________</td>
<td>☐ E-newsletters</td>
</tr>
<tr>
<td></td>
<td>☐ Intranet</td>
</tr>
<tr>
<td></td>
<td>☐ Organizational website</td>
</tr>
<tr>
<td></td>
<td>☐ Social networking websites (e.g., Facebook, LinkedIn)</td>
</tr>
<tr>
<td></td>
<td>☐ Video</td>
</tr>
<tr>
<td></td>
<td>☐ Other: _______________</td>
</tr>
</tbody>
</table>

Step 4: Define Approach. Using the table found on the following page, define key aspects of the communications plan based on audience and timeframe.

Each table has room to define a plan for two audiences.
<table>
<thead>
<tr>
<th>Purpose</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why is it important to communicate to this audience? What is the goal of your communications? Do you have a specific need or request (i.e., do you need approval, buy-in, involvement, support)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Values</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>What does this audience most value when it comes to this topic? How will the content support these values? How will you express this in your messaging?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concerns</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is this audience’s greatest concern when it comes to this topic? How can the content alleviate these concerns or overcome them as barriers? How will you express this in your messaging?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Message</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the key message you want to deliver to this audience at this time? Remember to tie in the audience’s values and concerns. Also address the following: what successes are there at this point? What challenges need to be overcome? What is happening next?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channels</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which communication channels will you use for this audience (Step 4)? How frequently will they be used?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Messenger</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who will deliver the message to this audience? You may assign the responsibility for delivering the message through each channel to different individuals.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>[Insert Name of Audience]</th>
<th>[Insert Name of Audience]</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will you know you were successful? What output will you track (e.g., number of e-newsletters delivered and opened)? How will you monitor the effectiveness of the messages and channels used (e.g., surveys, key informant interviews, observations of changed behavior)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
Directions: A storyboard is a tool that can be used to simply and clearly communicate the story of a performance improvement project (PIP). The aim of a storyboard is to allow audiences to quickly grasp the main points of the story by providing only the most essential information and including one or more easy-to-understand charts that demonstrate the impact of the effort.

Storyboards may be presented in various formats, such as a one-two page handout, a large display poster, or even as presentation slides. The same key content should be presented in each. This guide is intended to be used by the person leading QAPI efforts in your facility, administrative leaders, or any other staff needing to communicate to an audience the results of a specific performance improvement project. An example of a storyboard is included in this guide.

Key Content to Include in your Storyboard:

1. **Problem.** One sentence on the issue or opportunity being addressed by this PIP.
2. **Aim.** One sentence on what this PIP aims to achieve.
3. **Intervention(s).** Briefly describe what change was introduced to address the problem or opportunity. If there was more than one change, use bullet points to list the multiple interventions.
4. **Measures/Indicators.** List what measure(s) or indicator(s) are being used to monitor whether the change is effective.
5. **Results.** One to two sentences on the results. Consider including a graph with notes that gives a picture of the impact of the changes over time, or stories that describe the success.
6. **Lessons Learned.** Document 1-2 key lessons that were learned through the PIP.
7. **Next Steps.** Performance improvement is a continuous process. In one to two sentences, describe the next steps (e.g., to further refine the intervention; to introduce the change in other parts of the nursing home; to take steps to standardize the change).

Depending on space limitations and the nature of your audience, you may choose to include additional information such as pictures or images that help bring the story to life; the names of the PIP team members; a description or visual of any quality improvement tools utilized; specific references from the literature that support the change approach.

Example of a storyboard starts on the next page:
Problem: Beginning in April 2011, Sunnyside began to see an increase in pressure ulcers among its high-risk residents; in June 2011, more than 10% of high-risk residents had been diagnosed with a pressure ulcer.

Aim: To reduce the occurrence of pressure ulcers in high-risk residents to less than 5% by November 2012.

Interventions:
- Redesign admissions packet to include the comprehensive pressure ulcer risk assessment form, to be completed within a resident’s first 24 hours of admission;
- Require a half day in-service training for all nursing assistants and licensed nursing staff on assessment for pressure ulcer risk and prevention;
- Utilize pressure redistribution mattresses for all residents at high-risk for pressure ulcers.
- Utilize pressure redistribution wheelchair cushions as applicable for all residents at high-risk for pressure ulcers.

Measures:
- Process measure: Number of new residents with completed pressure ulcer risk assessment with 24 hours of admission (Measure Goal: 100% of new residents by March 2012).
- Process measure: Number of residents at high risk for pressure ulcers with pressure redistribution mattresses. (Measure Goal: 100% of residents at high risk for pressure ulcers will have pressure redistribution mattresses by May 2012)
- Process measure: Number of residents at high risk for pressure ulcers and that use a wheelchair, with pressure redistribution wheelchair cushions. (Measure Goal: 100% of high risk residents using wheelchairs will have pressure redistribution cushions for their wheelchairs by May 2012)
- Outcome measure: Percent of high-risk residents with new, nursing home-acquired pressure ulcers (Measure Goal: Less than 5% by November 2012).

Results: As of April 2012, all new residents at Sunnyside received a comprehensive pressure ulcer risk assessment with 24 hours of admission. 100% of high risk residents have pressure redistribution mattresses. 100% of high risk residents that use a wheelchair have a pressure redistributing wheelchair cushion. The facility experienced a reduction in new pressure ulcers among high-risk residents over the 18-month period, from a high of 12% in August 2011 to a low of 5% in November 2012.
Lessons Learned:

- Although Sunnyside had a policy in place that each new resident should receive a pressure ulcer risk assessment, the admission packets were not set-up to help prompt staff to do so consistently with each admission.
- Nursing staff need more frequent training on pressure ulcer risk assessment and prevention.

Next Steps:

- Continue monitoring to make sure current pressure ulcer rates are maintained or improve.
- Integrate the pressure ulcer assessment tool into the facility's electronic resident records system.
- Develop a more frequent training program on pressure ulcers for nursing staff.

Contact Information:
If you have any questions about this information, please contact xxx at xxx.

Source: Adapted with permission from the Institute for Healthcare Improvement (http://www.IHI.org).

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
Directions: Use this template to tell the story of a change your nursing home made that lead to a demonstrable improvement. Use as much space as needed to respond to each question prompt below, while being mindful of keeping the story as succinct as possible.

Documenting success stories is useful for a number of reasons: (1) it provides a historical record of efforts undertaken by your organization that produced positive results; (2) it promotes taking the time to celebrate achievements; (3) it assists in pinpointing important messages to communicate to stakeholders; and (4) it can relay important lessons for others wishing to emulate your success and establish your organization as a model leader. Ideas for how to use success stories: use the information to draft an article to share with all staff, with your board of directors, residents, and families; use it to create a story board to display in your nursing home (See the CMS Storyboard Guide to Performance Improvement Projects).

Story title (aim for a concise title that incorporates both the change that took place and the positive outcome that resulted):

Organization:

Intervention focus (check all that apply):
- □ Clinical care
- □ Quality of life
- □ Resident choice
- □ Other: ____________________________

Departments involved (check all that apply):
- □ Administration
- □ Facilities Management
- □ Food Services
- □ Housekeeping
- □ Nursing/Medical care
- □ Pharmacy
- □ Rehabilitation /Therapy
- □ Security
- □ Transportation
- □ Other: ____________________________

What opportunity were you pursuing or what problem were you confronting?

What change did you decide to make?
How did you decide to make the change that you did? (i.e., what data / input did you consult, what process did you follow and what best practice evidence did you rely on to inform your decision?)

Who led the change? (i.e., who was the leader and which staff members were involved? Were there other champions who were integral in facilitating the change?)

What were the major steps you took to implement the change?

What resistance/barriers did you face while implementing the change?

How did you overcome any resistance/barriers?

In what ways did leadership support the change?

How did you monitor whether or not the change had the desired effect? (i.e., include a description of any performance indicators/measures selected, how they were chosen and what goals you set for them)

What positive outcomes can be demonstrated as a result of the change? (i.e., how do you know the change was a success? What does the data show? What other forms of evidence do you have?)
What reactions have you heard from those affected by the change? (In addition to data, anecdotal stories from people directly affected by the change may be of interest. For example, this could be staff members seeing a difference in how they do their work or residents having a new positive experience.)

What steps have you taken to ensure this change is sustained within your organization in the long-term?

What is the biggest lesson you learned through this experience?

If you could give some advice to other facilities wanting to replicate your success, what would you tell them?

Story Author: ___________________________ Title: ___________________________
Email: ___________________________ Phone: ___________________________
Element 5 – Systematic Analysis and Systemic Action
Overview: Failure Mode and Effects Analysis (FMEA) is a structured way to identify and address potential problems, or failures and their resulting effects on the system or process before an adverse event occurs. In comparison, root cause analysis (RCA) is a structured way to address problems after they occur. FMEA involves identifying and eliminating process failures for the purpose of preventing an undesirable event.

When to use FMEA: FMEA is effective in evaluating both new and existing processes and systems. For new processes, it identifies potential bottlenecks or unintended consequences prior to implementation. It is also helpful for evaluating an existing system or process to understand how proposed changes will impact the system. Once you have identified what changes need to be made to the process or system, the steps you follow are those you would use in any type of PIP.

Directions: Use this guide to walk through FMEA. FMEA is a tool that will allow nursing homes to proactively identify and reduce potential failures within an existing or a proposed process. FMEA is very similar to what most people do every day. We try to anticipate what might go wrong and do what we can to prevent this from happening or minimize the effects. For instance, before leaving your home for work, you listen to the radio or television to find out where there may be traffic jams or delays in public transportation. By knowing if there are problems on the road, you can make changes to your driving route or mode of transportation to ensure you get to work on time. By knowing what might go wrong, you can make changes that reduce or prevent something from going wrong.

Facilities accredited by the Joint Commission or in states with regulations governing completion of FMEAs should refer to those requirements to be sure all necessary steps are followed.

Below is a quick overview of the steps of FMEA.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Select a process to analyze</td>
<td>Choose a process that is known to be problematic in your facility or one that is known to be problematic in many facilities.</td>
</tr>
<tr>
<td>2. Charter and select team facilitator and team members</td>
<td>Leadership should provide a project charter to launch the team. The facilitator is appointed by leadership. Team members are people who are directly involved in the process to be analyzed.</td>
</tr>
<tr>
<td>3. Describe the process</td>
<td>Clearly define the process steps so that everyone on the team knows what is being analyzed.</td>
</tr>
<tr>
<td>4. Identify what could go wrong during each step of the process</td>
<td>Here is where the people directly involved in the process describe the problems that can or do occur.</td>
</tr>
<tr>
<td>5. Pick which problems to work on eliminating</td>
<td>The focus of improvements will be on those problems that happen quite often and/or or have a significant impact on resident safety when they do occasionally occur.</td>
</tr>
<tr>
<td>6. Design and implement changes to reduce or prevent problems</td>
<td>The team determines how best to change the process to reduce the risk of residents being harmed.</td>
</tr>
<tr>
<td>7. Measure the success of process changes</td>
<td>Like all improvement projects, the success of improvement actions is evaluated.</td>
</tr>
</tbody>
</table>

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
Step 1: Select a process to analyze

Nursing homes are complex organizations and involve processes in many areas, such as resident care, business operations, environmental services, and others. You can use FMEA to examine processes in any of these areas to proactively reduce risks to patient safety and improve quality of care and quality of life for residents.

When conducting FMEA on an existing process, consider selecting a process that is known to be problem-prone or potentially risky. For instance, do staff members consistently perform skin assessments promptly after admission? FMEA can be used to identify gaps and develop actions to make the process more efficient and safe. FMEA also helps to prepare for implementation of new processes. Are you concerned about how you will implement electronic health records? FMEA promotes systematic thinking in terms of “What challenges will we encounter? What can we do to meet these challenges?”

Ask your employees what activities or processes have not yet provided the desired result. They may tell you there is a safety concern related to monitoring cognitively impaired individuals who like to wander. You can do FMEA on your process for regularly assessing these residents and protecting those found to be vulnerable for injury or elopement.

✓ Helpful Tips:

- Be sure an identifiable process is chosen for FMEA. Instead of, “We will do FMEA on the problem of unexplained weight loss among some residents,” consider doing FMEA on the process used in your facility to prevent residents from having an unexplained weight loss. Unexplained weight loss is an outcome, not a process. A process is a series of actions or steps taken to achieve an end.

- Narrow the scope of FMEA as much as possible. For instance, when facilities try to do a project on a complex process such as medication administration the team often finds there are too many variables to take into account. The administration process can vary by unit, by type of medication, by time of day, and so on. It is best to narrow the focus. For instance, do FMEA on administration of a particular type of high-risk medication or a project on medication administration for a category of residents vulnerable to safety problems.

- To get employees to support FMEA and make necessary process changes, senior management should consult staff members about processes they believe are challenging.

- Consider using FMEA to evaluate new processes. It is a good technique for anticipating what could happen so processes can be made safer before full implementation.
Step 2: Select people for the team

Once it is decided that a Performance Improvement Project (PIP) will be conducted on a process using FMEA, leadership should begin by designating a facilitator for this team. Together they should create a charter that will help guide the team in managing the scope of the project and ensure the implemented changes reflect the FMEA findings. They should also work together in selecting staff to participate on the PIP team.

The facilitator is often someone already involved in QAPI in the facility. As managers, supervisors, and staff members gain experience in doing FMEA, more people in the facility can be trained to serve as FMEA facilitators.

The direct care staff selected to serve as team members should have day-to-day responsibilities for completing one or more steps in the process under analysis. A personal knowledge of what actually happens, not what should happen, is vital to the project success.

The number of people on a team depends on the scope of the process review. There should be at least one representative from each employee group involved in the process. For instance, if the project is aimed at the process of assessing residents for fall risk and protecting those found to be high risk, the team should include representatives from nursing (RN or LPN), direct care staff (nurse assistant or CNA), housekeeping, and physical therapy. Consider physician involvement when the process includes steps that involve physicians.

 Helpful Tips:

- Minimize the number of management or supervisory level individuals on the team. Staff members may be inhibited from speaking up during critical discussions about process problems if their direct supervisor is in the room.
- Involve direct care staff and those who have direct experience with the process being analyzed. It is important to understand the process as it is actually performed, including why staff make mistakes and develop work-a-rounds.
- Include people from all shifts on the team, when possible. The experiences of staff working during the day may be much different than what happens during the evening and night shift. A successful FMEA is highly dependent on the ability of the team members to understand how a process now functions and what occasionally goes wrong.
- It can sometimes be tempting to complete FMEA by interviewing those involved in the process, without any formal meetings of the team. While this might move the analyses along quicker, the frank discussions that occur during team meetings are more likely to lead to a successful FMEA – one that actually improves the safety of a high-risk resident care process.
Step 3: Describe the process

At the first meeting, the team clearly defines the process to be analyzed. The best way to do this is to construct a flowchart of the steps. (See the QAPI Flowchart Guide for more information on creating flowcharts.) Using sticky notes, write down the first step in the process and each subsequent step. The process description does not need to be detailed. A high-level flowchart, with just the major steps identified, is usually sufficient.

The example below shows the steps in the process of starting Coumadin for residents not currently on this anticoagulant. The process starts with the physician ordering Coumadin for a resident and ends with ongoing monitoring of the patient’s INR (a measure of blood coagulation) and clinical status.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician initiates Coumadin therapy for a resident</td>
<td>Coumadin administration begins</td>
<td>Monitor resident’s initial response to Coumadin</td>
<td>Continue giving Coumadin and adjust dose to reach target INR</td>
</tr>
</tbody>
</table>

Starting with a clear description of the process ensures that everyone on the team understands what is being analyzed. Once the team members agree that the process is clearly and accurately described, move to step 4.

If there is confusion about the actual process steps or if people cannot agree on what the process entails, do not continue on to step 4 of the FMEA. It may be necessary to refine the scope of the FMEA. For instance, one nursing home started FMEA on the process of admitting new residents. While describing the process, team members found that admission steps varied somewhat on the weekends. They chose to concentrate their analysis on the weekend admission process because it seemed to be the most problem-prone. They agreed to later do FMEA on weekday admissions.

✓ Helpful Tips:

- If team members cannot agree on how the process currently works in their area and the process scope cannot be narrowed to obtain agreement, it usually is a signal of a very unreliable process. An unreliable process is one that is not performed consistently — people pretty much do whatever works best for them. FMEA should not be done on this process; instead, do a performance improvement project that is aimed at creating a redesigned standard streamlined process. Once that new process is designed, consider doing FMEA to reduce or eliminate mistakes that may occasionally occur.

- For a complex process with many steps, it may be better to do several FMEAs by breaking-up the process into manageable bites. By focusing on just one part of the process, the team can complete the FMEA in much shorter time. For instance, there are several major steps to the process of identifying residents at high risk for falls and preventing falls in this group of residents. The team could do FMEA just on the assessment phase of the process and another on the prevention phase.
Step 4: Identify what could go wrong during each step of the process

Here is where the knowledge and experience of team members are vital. For each process step identified in step 3, the team determines what can go wrong or what can fail (commonly called the failure modes). The people doing the work every day are in the best position to know what can (and does) go wrong.

This step is similar to a brainstorming session where people generate ideas and come up with solutions to problems. At this point, team members are generating a list of the failures that can occur at each step of the process being analyzed. Below are examples of things that could go wrong during the step of “Physician initiates Coumadin therapy for a resident.”

<table>
<thead>
<tr>
<th>Physician initiates Coumadin therapy for a resident</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What Could Go Wrong (failure modes)</strong></td>
</tr>
<tr>
<td>1. Order not entered into computer</td>
</tr>
<tr>
<td>2. Order not communicated to Pharmacy</td>
</tr>
<tr>
<td>3. Wrong dosage ordered</td>
</tr>
<tr>
<td>4. Physician unaware Coumadin is contraindicated for this resident</td>
</tr>
</tbody>
</table>

After the possible failures are identified for one step, the team moves on to identifying failures that might occur in the next step. Step 4 is complete when the team is satisfied all possible failures have been identified for each step.

**Helpful Tips:**
- Create an atmosphere where staff participating in the FMEA feel safe talking about process mistakes, or work-arounds that occur. To decrease “protectionism” where staff are reluctant to talk about mistakes made by the peer group they represent, make it clear from the beginning that everyone sometimes makes a mistake and it is not a sign of incompetence; rather most mistakes are the result of a poorly designed process.
- Do not let this brainstorming session become a finger-pointing exercise. Keep the team members focused on the goal of the FMEA – that is to identify and then reduce or eliminate failures by improving the process.
- Write the failures on sticky-notes (one per note) and line them up beneath the sticky notes you created for the process steps. When the team members are done identifying failures for each step, they will have a clear visual picture of the entire process and the failures that could occur at each step.
- Sometimes it is helpful to get additional staff input into this step. Ask team members to gather more ideas as to what can go wrong by sharing the team’s preliminary findings with others in their employee group. Bring these ideas back to the next team meeting for discussion and possible addition to the failure lists.
Step 5: Pick which problems to work on eliminating

It is common for project teams to identify several different mistakes that might occur at each step in the process under study. However, changing the process to reduce or eliminate every one of these mistakes is time-consuming, may not be feasible, and often not necessary. Some mistakes rarely happen, some are so obvious that the mistake is easily caught and corrected, and some have little impact on resident safety. In step 5 of the FMEA, the team selects which failures will be the focus of improvement actions.

Selection of the failures to work on eliminating is based primarily on two factors: how likely the failure will actually occur and how the failure will affect the resident should it occur. For each failure, the team decides:

- What could happen should this failure occur? (outcome)
- How serious would the outcome be? (severity)
- How often is this failure likely to occur? (probability)

**Determine outcomes**

Starting with the first step in the process, the team considers each failure that was identified in step 4 – answering the question, “What would happen if this failure occurs?” Sometimes what would happen is that the resident will experience some type of adverse outcome. Sometimes what would happen is that needed treatment or therapy would be delayed. For example, “What would happen if the physician’s order for Coumadin is not entered into the computer?” Team members may agree that this computer entry failure will be caught fairly quickly and corrected, so the resident most likely will not be harmed. In this situation, the outcome for this failure would be a delay in administration of Coumadin.

The team methodically goes through each failure identified during step 4 and determines what would happen if this failure occurs.

**Determine seriousness of the outcomes**

This decision can be made by the team while they are identifying the outcomes or the seriousness can be determined after all outcomes have been determined. For each outcome, the team must decide how “bad” the particular outcome would be for the resident. This is a subjective judgment made by team members based on their knowledge and experience.

Sometimes facilities use a numeric rating scale to establish the seriousness of the outcome. Below is the rating scale that could be used in nursing homes. The severity rating scale is adapted from the Healthcare Failure Mode and Effects Analysis (HFMEA) model developed by the National Center for Patient Safety of the Veterans Health Administration.
### Outcome severity rating scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Outcome Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Catastrophic</td>
<td>Resident experiences death or major permanent loss of function (sensory, motor, physiologic, or intellectual),</td>
</tr>
<tr>
<td>4</td>
<td>Major</td>
<td>Resident experiences permanent lessening of bodily function (sensory, motor, physiologic, or intellectual), disfigurement, surgical intervention required, or increased level of care for 3 or more days.</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
<td>Resident experiences an event, occurrence, or situation which could harm the resident but will not cause permanent injury or lessening of bodily function or require the delivery of additional healthcare services</td>
</tr>
<tr>
<td>2</td>
<td>Minor</td>
<td>Resident may experience a minor injury, but most likely would not be affected by the failure and it would not cause any changes in the delivery of care.</td>
</tr>
<tr>
<td>1</td>
<td>Near miss</td>
<td>Resident would not experience any injury, changes in delivery of care, or an increased level of care.</td>
</tr>
</tbody>
</table>

Numeric severity rankings are not required to be used in a FMEA. It can be just as effective (and perhaps less intimidating) to have the team rate outcomes using descriptive terms such as:

- Low (minimal resident harm)
- Moderate (short-term resident harm)
- Severe (permanent or long-term harm)
- Fatal (death)

Using a decision-making process such as nominal group technique or multi-voting, the team methodically agrees to a severity ranking for each outcome.

**Determine Probability**

The team now judges how often each failure is likely to occur.

Rating scales can help to standardize the team members’ responses. Below is the probability rating scale adapted from the Healthcare Failure Mode and Effects Analysis (HFMEA) model developed by the National Center for Patient Safety of the Veterans Health Administration.
### Failure probability rating scale

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Very high probability: failure is most inevitable</td>
<td>1 failure in 5 attempts</td>
</tr>
<tr>
<td>4</td>
<td>High: repeated failures</td>
<td>1 failure in 50 attempts</td>
</tr>
<tr>
<td>3</td>
<td>Moderate: occasional failures</td>
<td>1 failure in 500 attempts</td>
</tr>
<tr>
<td>2</td>
<td>Low: relatively few failures</td>
<td>1 failure in 5000 attempts</td>
</tr>
<tr>
<td>1</td>
<td>Remote: failure is unlikely</td>
<td>&lt;1 failures in 500,000 attempts</td>
</tr>
</tbody>
</table>

### Prioritize Failures for Improvement Action

The team goes through the process of identifying failure outcomes and outcome severity and determining failure probability so that priorities for action can be established. If at the outset the team concludes it is important to reduce or eliminate all failures, the exercises described above are not necessary as the team has already set its action priorities. It can move onto step 6 of the FMEA.

More likely the team will find some failures inconsequential – although they do happen every once in a while they do not adversely affect residents. The exercises described above can help the team make this decision.

Which failures should be chosen for action? There are no absolute rules for answering this question. Any failure that is likely to result in catastrophic or major harm to a resident is a good first choice for action. Additionally, any failure that occurs quite often and has the potential for harming a resident should be considered for action. After the team has prioritized the failures that will be the focus of improvement actions, the FMEA moves to step 6.

**Helpful Tips:**

- When defining outcomes that will occur following a failure, choose the most likely outcome not the worst case scenario. Do not forget that outcomes for some failures are delays in treatment or services which may not cause resident harm and may actually go unnoticed by the resident. If the outcome from every failure is classified as catastrophic or major then the team will need to develop improvement actions for every failure.
- It can sometimes be problematic for team members to judge how often a failure might occur. Sometimes there is a tendency to seek the “right” answer when, without any prevalence data, a correct answer is not possible. In the absence of data, ask the team members to estimate based on their experience and a sense of what happens in the facility. For instance, despite facility policies requiring confirmation of resident identity prior to giving medications, nurses admit that in practice, for a variety of reasons, they fail on occasion to do this safety check. Ask the nurses on the team to estimate how often they think this failure occurs. A more accurate estimate of failure probability might be obtained if management level personnel are not in the room.
- Setting priorities for improvement is challenging. The team leader and members should openly acknowledge and work to address barriers that can impact the priority-setting process. Watch out for:
Fears of “winners and losers.” If a team member worries that a change in their area could adversely affect them, they may try to guard their own “turf” by strongly advocating that failures in other areas must be dealt with first.

Thinking the team can “do it all” and there is no need to prioritize. If people feel uncomfortable admitting that they cannot improve all areas at once, they will resist setting priorities.

Without a clear leadership commitment to improving resident safety, team members may fear that the group’s priorities will be overturned or go nowhere.

**Step 6: Design and implement changes to reduce or prevent problems**

In this step the team evaluates each failure chosen for action for the purpose of designing and implementing process changes to reduce or prevent the failure from occurring. This step is similar to the action planning phase in any type of improvement project.

To determine how the process should be changed the root cause of each failure chosen for action must be identified. The team may need to gather additional input from other staff members to help in determining the root causes of failures. For instance, why does a physician order for Coumadin not get entered into the computer? Why is the order not communicated to the pharmacy when it does get entered into the computer? The Five Whys technique is a good way to drill-down to find the root cause of failures. The answer to the first "why" prompts another "why" and the answer to the second "why" prompts another and so on; hence the name the Five Whys.

Once the cause of each failure is clear, the team develops actions to reduce or eliminate the failure. When developing these actions consider questions such as:

- What safeguards are needed to prevent this failure from happening?
- What would have to go wrong to have a failure like this happen? How can we prevent this from going wrong?
- How could we change the way we do things to make sure that this failure never happens?
- If a failure like this happened, how could we quickly catch and correct the problem before the resident ended up being harmed?
- If the resident were harmed by this failure, how could we minimize the effect of the failure on the resident’s condition?

Aim for corrective actions with a stronger or intermediate rating, based on the hierarchy suggested by the examples below. Corrective actions which focus on designing controls into the system that do not allow errors to occur and rely less on any one person’s actions are the strongest. The feasibility and costs associated with actions must also be considered.

**Stronger Actions**

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
● Change physical surroundings
● Usability testing of devices before purchasing
● Engineering controls into system (forcing function), which force the user to complete an action
● Simplify process and remove unnecessary steps
● Standardize equipment or process
● Tangible involvement and action by leadership in support of resident safety; i.e., leaders are seen and heard making or supporting the change

Intermediate Actions
● Increase staffing/decrease in workload
● Software enhancements/modifications
● Eliminate/reduce distractions
● Checklist/cognitive aid
● Eliminate look alike and sound alike terms
● “Read back” to assure clear communication
● Enhanced documentation/communication

Weaker Actions
● Double checks
● Warnings and labels
● New procedure/memorandum/policy
● Training/in-service
● Additional study/analysis

For example, suppose Coumadin orders do not get entered into the computer because the person receiving the phone order gets busy and forgets to enter the order. The strongest action to prevent this from happening might be to use a Coumadin standing order protocol so that phone orders for this purpose are eliminated or reduced. Decreasing staff workload might reduce the number of orders that do not get entered, although unexpected situations can arise that divert people’s attention even when staffing is sufficient. How about something as simple as writing phone orders on sticky paper that can be adhered to the computer screen? This would cause the order to stay visible until someone has time to enter the order. This is an example of a warning or label (sometimes called a visual cue). It is a weak action because the sticky paper can fall off or be taken off by someone in a hurry to access the computer for another purpose. But if no other strong action is available, a weak action is better than none at all.

When designing actions, clearly state what is to be done, by whom, and when. Satisfactory implementation of the actions will be monitored later, so it is important to have clearly defined action plans.
 Helpful Tips:
   o Do not design actions to prevent failures until the team has a good understanding of what can cause the failures to occur. “Blindly” changing the process in hopes of preventing failures is likely to be unsuccessful and may actually make the process less safe if the changes increase complexity.
   o The team facilitator should encourage team members to come up with as many intermediate and strong actions as possible. It is helpful to involve supervisory and management staff in the action planning discussions. Designing intermediate and strong actions often requires an understanding of various resident care systems and the facility’s resource allocation priorities. Staff members on the team conducting the FMEA may not possess this knowledge.

Step 7: Measure the success of process changes

Concurrent with implementation of action plans, mechanisms are established to gather data that will be used to measure the success of the corrective action. The goal of a FMEA is to reduce the risk of process failures and improve resident safety. What you will measure is how often the process failures identified as high priority to fix (step 5) are still occurring after process changes (step 6) are completed. Plus you will measure the incidence of adverse events related to the process under study (for example, the number of residents on Coumadin that develop a Coumadin-related complication). Some of this data may be available through incident reporting, MDS resident assessments, state survey results, resident satisfaction surveys, and other established sources of performance data. Occasionally a new data collection effort is needed to gather information needed for the results of the FMEA.

Evaluating success of the PIP usually occurs after all process changes have been implemented and will become the responsibility of the person designated to monitor the corrective action/s. The QAA committee is responsible for overseeing all QAPI activities, which includes reviewing data on the effectiveness of all improvement projects.

Ideally, all of the following criteria should be met to conclude the PIP has been successful:
   ● Measures of effectiveness were monitored over time.
   ● The goal was attained (fewer failures, better outcomes).
   ● You are confident that the change is permanent.
FMEA PIP Template

This template can be used to document the completed FMEA including follow-up actions and measures. Revise this template as necessary to meet your needs. Review the Guidance for Failure Mode and Effects before using this template.

Process analyzed:

Team leader/facilitator: ____________________________
Date FMEA started: ____________ Date ended: ____________

Team members:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Name</th>
<th>Position</th>
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</table>

Describe your process steps (flowchart): As per the suggested guidance, you might use sticky notes on separate papers.

Identify what could go wrong during each step of the process. You might use sticky-notes indicating what could go wrong for each step. Line these up beneath each process step.

For each item identified that could go wrong, rate each for the seriousness of this outcome (severity) and how often the mistake is likely to occur (probability) (per the suggested guidance and your rating scale preferences). Indicate these ratings on the sticky notes that identify what could go wrong.

Review your ratings and decide on your process failures identified as high priority for improvement actions. List the process failures you will focus on in the table below.
Describe your corrective actions for process failures identified as high priority: Before determining your corrective actions for process failures, consider whether you should conduct a systematic analysis to determine the root cause of each failure chosen for action. If necessary, use techniques such as the five whys, flowcharting, or the fishbone diagram to assist in identifying the root causes. Additional tools are available that guide the use of each of these techniques. It is helpful to keep any of these analyses with your PIP documentation for future reference. In the table below, describe each root cause for each process failure, and then enter your specific actions to reduce or eliminate the failure, your completion timeframe, and the responsible individual or group.

<table>
<thead>
<tr>
<th>Process Failure</th>
<th>Root Cause of Process Failure</th>
<th>Specific Actions to Reduce or Eliminate the Failure</th>
<th>Completion Time Frame</th>
<th>Responsible Individual/Group</th>
</tr>
</thead>
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</tbody>
</table>
### Measures of Success

<table>
<thead>
<tr>
<th>Corrective Action</th>
<th>Measure(s) of Success (How we will know if this action is successful) (Consider measures of how often the failure is still occurring after process changes and the incidence of adverse events related to the failure)</th>
<th>Reporting Schedule and Individual or Group Responsible for Reviewing Results</th>
</tr>
</thead>
<tbody>
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Signature of FMEA leader/facilitator: ____________________________ Date: __________

Overview: RCA is a structured facilitated team process to identify root causes of an event that resulted in an undesired outcome and develop corrective actions. The RCA process provides you with a way to identify breakdowns in processes and systems that contributed to the event and how to prevent future events. The purpose of an RCA is to find out what happened, why it happened, and determine what changes need to be made. It can be an early step in a PIP, helping to identify what needs to be changed to improve performance. Once you have identified what changes need to be made, the steps you will follow are those you would use in any type of PIP. Note there are a number of tools you can use to perform RCA, described below.

Directions: Use this guide to walk through a Root Cause Analysis (RCA) to investigate events in your facility (e.g., adverse event, incident, near miss, complaint). Facilities accredited by the Joint Commission or in states with regulations governing completion of RCAs should refer to those requirements to be sure all necessary steps are followed.

Below is a quick overview of the steps a PIP team might use to conduct RCA.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify the event to be investigated and gather preliminary information</td>
<td>Events and issues can come from many sources (e.g., incident report, risk management referral, resident or family complaint, health department citation). The facility should have a process for selecting events that will undergo an RCA.</td>
</tr>
<tr>
<td>2. Charter and select team facilitator and team members</td>
<td>Leadership should provide a project charter to launch the team. The facilitator is appointed by leadership. Team members are people with personal knowledge of the processes and systems involved in the event to be investigated.</td>
</tr>
<tr>
<td>3. Describe what happened</td>
<td>Collect and organize the facts surrounding the event to understand what happened.</td>
</tr>
<tr>
<td>4. Identify the contributing factors</td>
<td>The situations, circumstances or conditions that increased the likelihood of the event are identified.</td>
</tr>
<tr>
<td>5. Identify the root causes</td>
<td>A thorough analysis of contributing factors leads to identification of the underlying process and system issues (root causes) of the event.</td>
</tr>
<tr>
<td>6. Design and implement changes to eliminate the root causes</td>
<td>The team determines how best to change processes and systems to reduce the likelihood of another similar event.</td>
</tr>
<tr>
<td>7. Measure the success of changes</td>
<td>Like all improvement projects, the success of improvement actions is evaluated.</td>
</tr>
</tbody>
</table>

Steps two through six should be completed as quickly as possible. For facilities accredited by the Joint Commission, these steps must be completed within 45 days of occurrence of the event.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
# Step 1: Select the event to be investigated and gather preliminary information

Events that may be investigated using the RCA process can be identified from many sources (e.g., incident report, risk management referral, staff, resident, or family feedback, health department citation). High priority should be given to events that resulted in significant resident harm or death and other events the facility is required by regulation to investigate. Also consider doing an RCA for “near miss” or “close call” events that could have resulted in harm to the resident, but did not, either by chance or timely intervention. The latter types of events represent high risk situations that could, in the future, cause a resident to be harmed.

Once an event is selected for a Performance Improvement Project (PIP) involving RCA, someone involved in the facility QAPI program can begin gathering preliminary information, including the incident report and any documentation from the preliminary investigation, for later discussion by the team. This may include interviews with those involved including the resident or family members, collection of pertinent documentation or photographs, review of relevant policies and procedures, quarantine of defective equipment, etc. This preliminary information is also useful for deciding which individuals should be invited to serve as members of the team as described in Step 2.

**Helpful Tips:**
- Involve facility leaders in the prioritization and decision to proceed with an RCA. There will be greater cooperation in completing RCAs when the process is viewed as leadership-driven.
- Be sure to start with a problem and not the solution. It is tempting to assume we know what will fix the problem before we’ve thoroughly examined it. Assumptions are often wrong and may hinder complete analysis of the underlying causes.
- Don’t define the problem as a need for something. The problem statement should objectively state what went wrong, not why, or how. An example of an effective problem statement is, “Resident X continued to receive a medication one week after the order was given for discontinuation.” A good problem statement will facilitate a more thorough examination of the problem.
- If the event represents a liability concern or questionable practices by an employee, the leadership team can initiate a risk management review or an employee performance review to start simultaneous with, but separate, from the RCA process. The RCA process should focus on systems rather than individual performance.

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# Step 2: Select the event to be investigated and gather preliminary information

Next, leadership designates a facilitator for the PIP team, and works with the facilitator to create a charter that will help guide the team in managing the scope of the project and making changes that are ultimately linked to the root causes identified in the RCA process. Together, leadership and the facilitator select staff to participate on the PIP team.

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Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
As managers and supervisors gain experience in doing RCAs, more people in the facility can be trained to serve as team facilitators. The facilitator is responsible for assembling and managing the team, guiding the analysis, documenting findings and reporting to the appropriate persons.

The number of team members depends on the scope of the investigation. Individuals selected to serve as team members must be familiar with the processes and systems associated with the event. People who have personal knowledge of what actually happened should be included as team members or given an opportunity to contribute to the investigation through interviews.

 Helpful Tips:

- Team members should be selected for their ability to discuss and review what happened during the event in an objective and unbiased manner. In some situations, staff members personally involved in the event are the best people to serve as team members. In other situations, staff members not personally involved in the event are the best people to serve as team members with the people personally involved asked to share their experience during interviews. This may be appropriate if the people directly involved in the event are dealing with emotions and are not able to be objective. However, if this is the case, it is a good idea to provide those staff persons directly involved with counseling and support so that they are able to participate in the RCA process. Participating in the RCA process and hearing other’s objective viewpoints can help them to deal with the situation in a positive manner.
- Keep the number of management or supervisory level individuals on the team to a minimum. Staff members may be inhibited from speaking up or being completely candid during discussions about what happened if their direct supervisor is in the room. If this is not possible, the facilitator should explain the need for members to be free to discuss the process honestly, as it is actually carried out in the facility.
- Make it clear to everyone involved that the RCA process is confidential. This reassurance helps people feel safer discussing the process and system breakdowns that may have caused an inadvertent mistake.

### Step 3: Describe what happened

At the first meeting of the team, a time line of the event under review is created. The preliminary information gathered in step 1 is shared with the team and other details about the event are elicited from team members. If the people personally involved in the event are not part of the team, their comments about what happened are shared with team members. All of this information is used to create a time line of the event – the sequence of steps leading up to the harmful event.

Below is a time line for a situation involving a resident that suffered a serious injury during his transfer from a wheelchair back to his bed. This tall and larger man (300-pound) was placed in a Hoyer lift and elevated into the air above his wheelchair. As the CNAs turned the lift toward the bed it began to sink because the lift arm couldn’t handle the resident’s weight. In an attempt to complete the transfer before the patient was below the level of the bed, the CNAs swung the lift quickly toward the bed. The lift tilted dangerously to the side and the legs started to move together, narrowing the base of support. The resident dropped to the ground and the lift fell on top of him.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
Use a flipchart or sticky notes to draw a preliminary time line. Before proceeding to Step 4 of the RCA, be sure that everyone agrees that the time line represents what actually happened. Now is the time for the team to add missing steps or clarify “factual” inconsistencies about the event.

- **Helpful Tips:**
  - The time line of the event should describe just the facts – not what caused the facts to happen. For instance, the CNAs may have mistakenly used a Hoyer lift that was not strong enough to move a tall resident weighing 300 lbs. This factor may have contributed to the event, but it is not documented in the time line. Only the facts of what happened should be included in the time line, the causal factors are added in a later step.
  - Once the preliminary time line has been created, the facilitator finalizes the time line by asking the team:
    - Does the time line adequately tell the "story" of the incident? If not, the scope of the timeline may need to be extended further back in time or expanded to include what happened after the event.
    - Does each step in the time line derive directly from the step it precedes? If each step is not derived logically from the one preceding it, it usually indicates that one or more steps in the sequence have been left out. Add missing steps to the time line.
    - Is each step in the timeline pertinent to the incident under investigation? The answer may be "yes", "no," or "not sure." Include only the "yes" and "not sure" steps in the final event line.
  - In rare situations the team cannot identify a sequence of steps leading up to the harmful event. For instance, when a resident develops an intravenous (IV) catheter–related infection it may not be possible to pinpoint the exact steps preceding the infection event. The infection appears to have occurred despite staff members apparently doing all the right things (e.g., following good hygiene when inserting catheters and caring for catheterized residents). In these situations, a time line is not created – however don’t jump to this conclusion too quickly. It is harder to find all the root causes of an undesirable event if the team does not have a time line to guide their decisions.
  - Resist the temptation to skip right to step 5 of the RCA process, which is “Identify the root causes.” Team members may insist the root causes of the event are already understood and it is not necessary to go through steps 2 through 4. Jumping to conclusions about root causes increases the likelihood the team will end up with “quick-fix” solutions that do not address the underlying systems gaps, or contributing factors, and fail to prevent similar events in the future.
Step 4: Identify the contributing factors

Here is where the knowledge gained during step 3 is used by the team to dig deeper into what happened to discover why it happened.

Step 4 involves the team looking at each step of time line and asking, “What was going on at this point in time that increased the likelihood the event would occur?” These are the contributing factors – situations, circumstances or conditions that collectively increased the likelihood of an incident. By itself a contributing factor may not have caused the incident, but when they occur at the same time, the probability an incident will occur increases.

As mentioned in Step 2, it is important to get the perspective of people personally involved in the event when identifying the contributing factors at each step. These may be the only individuals aware of the actual circumstances affecting what happened. For instance, the CNA who chose the wrong type of lift might have felt pressured by her supervisor to find a lift as quickly as possible so the resident would not be kept waiting. Team members not personally involved in the event might be unaware this contributing factor existed.

Below are examples of contributing factors that might be identified for each step of the time line for the event involving a resident injury during transfer from wheelchair to bed.

**TIME LINE:**
- CNAs get Hoyer lift and position it by resident’s bed
- Resident is raised from wheelchair using the Hoyer lift
- CNAs swing resident toward bed
- Lift starts to collapse and tips to one side
- Resident drops to ground and lift falls on resident

**CONTRIBUTING FACTORS:**
- CNAs had to hurry to find a lift so resident would not be kept waiting
- No sign on lift indicating weight limit
- Resident was moved rapidly toward bed because lift arm started to slip
- Sharp movement of resident by CNAs
- Lift not strong enough to hold resident
- Facility’s one heavy duty lift was being used in another location
- CNAs unaware the lift they are using is not rated for use with very heavy residents
- CNAs not trained to respond to lift malfunctions

**EVENT**
- Resident drops to ground and lift falls on resident

 Helpful Tips:
- Consider what was happening at each step in the time line to ensure the team does not overlook some important factors. Whenever possible, use a time line as the basis for identifying contributing factors.
- Brainstorming can be an effective tool to identify contributing factors by asking, “What might have happened that would increase the likelihood the event would occur?” Consider what recommended practices might not have been followed, e.g. sterile dressing changes not done for IV-catheter sites. Consider what procedure “work-arounds” might have occurred. Consider how staffing at the time of the event might have impacted the eventual outcome.
- When identifying contributing factors be careful to avoid “hindsight bias.” Knowing the eventual outcome of a time line can influence how team members view activities leading up to the event. Remember to consider only those factors that were actually present and known to those involved at the time – not what was only realized after-the-fact.

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**Step 5: Identify the root causes**

All incidents have a direct cause. This is the occurrence or condition that directly produced the incident. In the resident incident described in Step 3, the tilting and collapsing Hoyer lift is the direct cause of the accident. However, the direct cause is not the root cause.

Root causes are underlying faulty process or system issues that lead to the harmful event. Often there are several root causes for an event.

Contributing factors are not root causes. The team needs to examine the contributing factors to find the root causes. This can be done by digging deeper – asking repeated “why” questions of the contributing factors. This is called the “five why’s” technique, which is illustrated below.

1. CNAs didn’t have the equipment needed to care for the resident
2. Needed equipment is sometimes hard to find
3. Not enough specialized equipment to care for residents with unique needs
4. The anticipated number of residents with unique needs and their equipment requirements are not known
5. The strategic planning and budgeting process does not include projections of the equipment needs of residents with unique physical and psychological needs

This questioning process is continued until all the root causes are found. It is common to find the same root cause for two or more contributing factors.

**Helpful Tips:**
- The team must determine if they’ve truly identified a root cause, versus a contributing factor which requires the team to do more digging. Ask the questions below about each potential root cause identified by the team. If the answers are NO, then the team has identified root causes and they can stop the questioning process. If the answer to any question is YES, then the team may not have identified true root causes and needs to ask more “why” questions to get to the root causes. Keep asking these until you get to root causes.
  - Would the event have occurred if this cause had not been present?
  - Will the problem recur if this cause is corrected or eliminated?
- The team should not make judgments about whether an individual did the right thing. This judgment is to be made by the manager responsible for evaluating the employee’s performance. The facilitator may need to remind team members that the RCA process is not where these judgments are to be made.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
The team facilitator should watch out for discussion “manipulation” during this stage. Some team members may try to divert attention from root causes originating in their department or direct the discussion away from root causes that will require additional resources or necessitate significant changes to how work is now being done. A successful RCA process requires frank and open discussions of the causes of the event.

A fishbone diagram can also be used to determine root causes; see the CMS QAPI website for more information on this tool.

### Step 6: Design and implement changes to eliminate the root causes

In this step the team evaluates each root cause to determine how best to reduce or prevent it from triggering another harmful event. The key is to choose actions that address each root cause. These actions will generally require creating a new process or making a change to a current process. The steps to accomplish this are the same as those used in any type of PIP. Note that at this point, you may want to reevaluate the composition of your team to make sure you have included people who are part of the process being changed. It is a good idea throughout a project to make sure you have the right people on the team and to adjust membership as needed.

At least one corrective action should be developed to reduce or eliminate each root cause. Some action plans will be short-term solutions to fix a contributing factor, e.g. purchase an additional Hoyer lift rated for use by residents weighing over 250 lbs. But short-term solutions rarely fix root causes. For instance, in the example event the team also needs to recommend that a formal evaluation of future specialized equipment needs for residents be regularly incorporated into the facility strategic planning and budgeting process.

When developing corrective actions consider questions such as:

- What safeguards are needed to prevent this root cause from happening again?
- What contributing factors might trigger this root cause to reoccur? How can we prevent this from happening?
- How could we change the way we do things to make sure that this root cause never happens?
- If an event like this happened again, how could we stop the accident trajectory (quickly catch and correct the problem) before a resident was harmed?
- If a resident were harmed by this root cause, how could we minimize the effect of the failure on the resident?

Aim for corrective actions with a stronger or intermediate rating, based on the categories of actions below. Corrective actions that change the system and do not allow the errors to occur are the strongest.

**Stronger Actions**

- Change physical surroundings
- Usability testing of devices before purchasing
- Engineering controls into system (forcing functions which force the user to complete an action)
- Simplify process and remove unnecessary steps
- Standardize equipment or process
- Tangible involvement and action by leadership in support of resident safety; i.e., leaders are seen and heard making or supporting the change

**Intermediate Actions**
- Increase staffing/decrease in workload
- Software enhancements/modifications
- Eliminate/reduce distractions
- Checklist/cognitive aid
- Eliminate look alike and sound alike terms
- “Read back” to assure clear communication
- Enhanced documentation/communication

**Weaker Actions**
- Double checks
- Warnings and labels
- New procedure/memorandum/policy
- Training
- Additional study/analysis

For example, suppose staff members cannot locate the equipment to use when lifting larger residents, because the specialty equipment is not kept in the same location. The strongest action to prevent another accident would be to keep all equipment designed for special needs residents in just one storage area (change physical surroundings). Staff members will no longer need to differentiate “usual” equipment from “specialized” equipment. If this action is not feasible, consider placing a sign on the lift equipment – ”DO NOT USE FOR RESIDENTS OVER 250 LBS.” This is an example of a warning or label (sometimes called a visual cue). It is a weak action because staff members might overlook the warning, but if no other stronger action is available, a weak action is better than none at all.

When designing corrective actions, clearly state what is to be done, by whom, and when. Satisfactory implementation of the corrective actions will be monitored so it is important to have clearly defined plans.

✔ Helpful Tips:
  o The team leader should encourage team members to come up with as many intermediate and strong actions as possible. It is helpful to involve supervisory and management staff in the action planning discussions. Designing intermediate and strong actions often requires an understanding of various resident care systems and the facility’s resource allocation priorities. Staff members on the team may not possess this knowledge.
  o Because the feasibility and costs associated with corrective actions must also be considered it is helpful to include facility management in the corrective action discussions, if they are not already members of the team.
  o If a particular action cannot be accomplished due to current constraints (e.g. lack of resources), the team should look for other ways of changing the process to prevent a similar event from occurring in the future. Doing nothing should not be an option.
Step 7: Measure the success of changes

Concurrent with implementation of action plans, mechanisms are established to gather data that will be used to measure the success of the corrective action. The RCA should reduce the risk of future harmful events by minimizing or eliminating the root causes. What you measure should provide answers to three questions:

1. Did the recommended corrective actions actually get done? (e.g., Did the warning signs get put on the Hoyer lifts? Did a formal equipment evaluation step get added to the annual budgeting process?)
2. Are people complying with the recommended changes (e.g., How often is the wrong type of Hoyer lift used for residents weighing over a predetermined weight? Is staff provided an opportunity to participate in an equipment needs assessment during the budgeting process?)
3. Have the changes made a difference? (Has another resident been harmed by equipment unsuited for their physical condition?)

Evaluating the success of the PIP usually occurs after the team has been disbanded, and will become the responsibility of the person designated to monitor the corrective action/s. The QAA committee is responsible for overseeing all QAPI activities, which includes reviewing data on the effectiveness of all improvement projects. Ideally, all of the following criteria should be met to conclude a PIP has been successful:

- Measures of success were monitored over time.
- The goal was attained (process changes were made and sustained, no recurrent events).
- You are confident that the change is permanent.
RCA PIP Template

This template can be used to document the completed RCA PIP process, including follow-up actions and measures. Revise it as necessary to meet your needs.

Team Facilitator: Date RCA Started: __________________________ Date Ended: __________________________

Team Members:

<table>
<thead>
<tr>
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Brief Narrative Description of Event (include time line if available):
Root Causes and Contributing Factors
Conduct your systematic analyses to determine your contributing factors and root causes. Use techniques such as the five whys, flowcharting, or the fishbone diagram to assist in identifying the root causes. Additional tools are available that guide the use of each of these techniques. It is helpful to keep any of these analyses with your PIP documentation for future reference. Describe each root cause as identified by the team. Enter these in the table below.

Corrective Action Plans
For each root cause identified, enter the corrective action plans intended to prevent the root cause from causing another harmful event. There can be more than one action plan for each root cause. Some action plans may be short-term interventions which can be accomplished quickly and some action plans require more long-term implementation steps. For each action plan designate the individual or group responsible for completing the action and the time frame for completion.

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Corrective Action</th>
<th>Responsible Individual/Group</th>
<th>Completion Deadline</th>
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### Measures of Success

| Corrective Action | Measures of Success  
| (How we will know if this action is successful) | Reporting Schedule and 
| | Individual or Group 
| | Responsible for Reviewing 
| | Results |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

Signature of RCA team leader____________________________________________________________ Date

Flowchart Guide

Overview: Performance Improvement Project (PIP) teams frequently must study an existing or new process in order to better understand each step and identify where improvements can be made. A flowchart is a tool that allows you to break any process down into individual events or activities and shows the logical relationships between them. Flowcharting is often used by PIP teams when conducting root cause analysis (RCA) and/or failure mode effects analysis (FMEA) (See Guidance for Performing RCA with PIPs, and/or Guidance for Performing FMEA with PIPs).

A flowchart:

- Facilitates the team’s common understanding of the steps in a process
- Highlights decision points and decision outcomes
- Helps a team understand whether a process occurs in one or multiple ways
- Promotes system-thinking about how the work is made up of interacting steps
- Provides visualization of complexity, rework, and problem areas; this insight can suggest where simplification, elimination of unnecessary steps, and standardization may be possible
- Enables comparison of the way the process actually occurs with the planned or ideal flow

How do you develop a flowchart?

Flowcharts are diagrams that use shapes to show the types and flow of steps in a process. The shapes represent different types of steps or actions.

- Beginning and end of a process
- A task or activity performed in the process
- A decision point (yes/no)
To draw the flow chart, brainstorm the steps in the process, and list them in the order they occur. Ask questions such as "What really happens next in the process?" and "Does a decision need to be made before the next step?"

Work through your whole process, showing actions and decisions in the order they occur, linking these together using arrows to show the flow of the process. Decisions are represented as diamonds and reflect a condition that impacts the process (e.g., if yes, then...; if no, then...). At each decision diamond, draw an arrow for each decision outcome. Typically there are two decision outcomes such as, yes/no or true/false. Continue charting the process as it would be performed as a result of the decision.

If you find that your process occurs in multiple ways; i.e., different people or units do things differently, you may want to flow chart the process in each of the different ways it occurs. This can help you to understand what, when, and why variation is occurring, and informs any process improvement changes you plan.

Finally, review your flowchart. Work through each step asking your team if you have correctly represented the sequence of actions and decisions involved in the process. And then (if you're looking to improve the process) look at the steps identified and think about whether work is duplicated, whether other steps should be involved, where gaps or breakdowns occur, where you can make improvements in your process.

**Tips:**

- When developing a flowchart, include people with personal knowledge of the process being discussed.
- Many teams find it easy to flowchart on large poster size sheets, using sticky notes for process steps, or on white boards. This allows you to move steps around and add steps as you define the process.
Overview: Root cause analysis is a structured team process that assists in identifying underlying factors or causes of an event, such as an adverse event or near-miss. Understanding the contributing factors or causes of a system failure can help develop actions that sustain corrections.

The Five Whys is a simple problem-solving technique that helps to get to the root of a problem quickly. The Five Whys strategy involves looking at any problem and drilling down by asking: "Why?" or "What caused this problem?" While you want clear and concise answers, you want to avoid answers that are too simple and overlook important details. Typically, the answer to the first "why" should prompt another "why" and the answer to the second "why" will prompt another and so on; hence the name Five Whys. This technique can help you to quickly determine the root cause of a problem. It's simple, and easy to learn and apply.

Directions: The team conducting this root cause analysis does the following:

- Develops the problem statement. (See Step 1 of Guidance for RCA for additional information on problem statements.) Be clear and specific.
- The team facilitator asks why the problem happened and records the team response. To determine if the response is the root cause of the problem, the facilitator asks the team to consider “If the most recent response were corrected, is it likely the problem would recur?” If the answer is yes, it is likely this is a contributing factor, not a root cause.
- If the answer provided is a contributing factor to the problem, the team keeps asking “Why?” until there is agreement from the team that the root cause has been identified.
- It often takes three to five whys, but it can take more than five! So keep going until the team agrees the root cause has been identified.

Tips:

- Include people with personal knowledge of the processes and systems involved in the problem being discussed.
- Note that the Five Whys technique may not always help you to identify the root cause. Another technique you might consider is the fishbone diagram. The fishbone diagram forces you to think broadly across various categories that could be causing or contributing to the problem (See How to Use the Fishbone Tool for Root Cause Analysis tool).
<table>
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<tr>
<th><strong>Problem statement</strong></th>
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| **Root Cause(s)**     | 1.                                           |
|                       | 2.                                           |
|                       | 3.                                           |

To validate root causes, ask the following: If you removed this root cause, would this event or problem have been prevented?

**Example:**
Here is an everyday example of using the Five Whys to determine a root cause:
Problem statement – your car gets a flat tire on your way to work.

1. Why did you get a flat tire?
   - You ran over nails in your garage
2. Why were there nails on the garage floor?
   - The box of nails on the shelf was wet; the box fell apart and nails fell from the box onto the floor.*
3. Why was the box of nails wet?
   - There was a leak in the roof and it rained hard last night. (Root cause=leak in the roof)

*IF YOU STOPPED HERE AND “SOLVED” THE PROBLEM BY SWEEPING UP THE NAILS, YOU WOULD HAVE MISSED THE ROOT CAUSE OF THE PROBLEM.
How to Use the Fishbone Tool for Root Cause Analysis

Overview: Root cause analysis is a structured team process that assists in identifying underlying factors or causes of an adverse event or near-miss. Understanding the contributing factors or causes of a system failure can help develop actions that sustain the correction.

A cause and effect diagram, often called a “fishbone” diagram, can help in brainstorming to identify possible causes of a problem and in sorting ideas into useful categories. A fishbone diagram is a visual way to look at cause and effect. It is a more structured approach than some other tools available for brainstorming causes of a problem (e.g., the Five Whys tool). The problem or effect is displayed at the head or mouth of the fish. Possible contributing causes are listed on the smaller “bones” under various cause categories. A fishbone diagram can be helpful in identifying possible causes for a problem that might not otherwise be considered by directing the team to look at the categories and think of alternative causes. Include team members who have personal knowledge of the processes and systems involved in the problem or event to be investigated.

Directions:
The team using the fishbone diagram tool should carry out the steps listed below.

- Agree on the problem statement (also referred to as the effect). This is written at the mouth of the “fish.” Be as clear and specific as you can about the problem. Beware of defining the problem in terms of a solution (e.g., we need more of something).
- Agree on the major categories of causes of the problem (written as branches from the main arrow). Major categories often include: equipment or supply factors, environmental factors, rules/policy/procedure factors, and people/staff factors.
- Brainstorm all the possible causes of the problem. Ask “Why does this happen?” As each idea is given, the facilitator writes the causal factor as a branch from the appropriate category (places it on the fishbone diagram). Causes can be written in several places if they relate to several categories.
- Again asks “Why does this happen?” about each cause. Write sub-causes branching off the cause branches.
- Continues to ask “Why?” and generate deeper levels of causes and continue organizing them under related causes or categories. This will help you to identify and then address root causes to prevent future problems.

Tips:

- Use the fishbone diagram tool to keep the team focused on the causes of the problem, rather than the symptoms.
- Consider drawing your fish on a flip chart or large dry erase board.
- Make sure to leave enough space between the major categories on the diagram so that you can add minor detailed causes later.
- When you are brainstorming causes, consider having team members write each cause on sticky notes, going around the group asking each person for one cause. Continue going through the rounds, getting more causes, until all ideas are exhausted.

Disclaimer: Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
● Encourage each person to participate in the brainstorming activity and to voice their own opinions.

● Note that the “five-whys” technique is often used in conjunction with the fishbone diagram – keep asking why until you get to the root cause.

● To help identify the root causes from all the ideas generated, consider a multi-voting technique such as having each team member identify the top three root causes. Ask each team member to place three tally marks or colored sticky dots on the fishbone next to what they believe are the root causes that could potentially be addressed.

**Examples:**

Here is an example of the start of a fishbone diagram that shows sample categories to consider, along with some sample causes.

Here is an example of a completed fishbone diagram, showing information entered for each of the four categories agreed upon by this team. Note, as each category is explored, teams may not always identify problems in each of the categories.

Facts gathered during preliminary investigation:

● Time of fall: change of shift from days to evenings

● Location of fall: resident’s bathroom

● Witnesses: resident and aide

● Background: the plan of care stipulated that the resident was to be transferred with two staff members, or with one staff member using a sit-to-stand lift.

● Information from interviews: the resident was anxious and needing to use the bathroom urgently. The aide was helping the resident transfer from her wheelchair to the toilet, without using a lift, and the resident fell, sustaining an injury. The aide stated she did not use the lift because the battery was being recharged, and there was no extra battery available. The aide stated she understood that the resident could be transferred with assist of one.

**Disclaimer:** Use of this tool is not mandated by CMS, nor does its completion ensure regulatory compliance.
With this information, the team proceeded to use the fishbone diagram to better understand the causes of the event.

The value of using the fishbone diagram is to dig deeper, to go beyond the initial incident report, to better understand what in the organization’s systems and processes are causing the problem, so they can be addressed.

In this example, the root causes of the fall are:

- There is no process in place to ensure that every lift in the building always has a working battery. (One battery for the lift on this unit is no longer working, and the other battery was being recharged.)
- There is no process in place to ensure timely communication of new care information to the aides. (New transfer information had not yet been conveyed to the aide. The aide’s “care card” still indicated transfer with assist of one for this resident.)

The root causes of the event are the underlying process and system problems that allowed the contributing factors to culminate in a harmful event. As this example illustrates, there can be more than one root cause. Once you have identified root causes and contributing factors, you will then need to address each root cause and contributing factor as appropriate. For additional guidance on following up on your fishbone diagram findings, see the Guidance for Performing RCA with Performance Improvement Projects tool.