Quality Assurance and Performance Improvement (QAPI) Bundle

# Nursing Homes: From Problem to Improvement

*A Six-Step Playbook to Design Effective Performance Improvement Projects (PIPs)*

A nursing home notices that falls resulting in injury have been increasing for three straight months. Residents are getting hurt, staff are concerned, leadership is asking questions, and families want answers. What should the facility do? This is exactly the kind of problem that QAPI is designed to solve and direct the organization to start a PIP.

QAPI is a structured approach required by the Centers for Medicare & Medicaid Services (CMS) to help nursing homes continuously improve resident care, safety, and quality of life.

QAPI combines two complementary activities: Quality Assurance (ensuring that standards and regulatory requirements are met) and Performance Improvement (identifying opportunities to improve care and testing solutions to see what works). Together, QA and PI create a data-driven, team-based approach to solving problems and improving care.

> ***A Note Before You Start***
> If your facility is new to QAPI, that is okay. Your first PIP does not have to be perfect. The goal is to build the habit of identifying problems, collaborating with your team, testing changes, and learning from the results. Each PIP you complete will make the next one easier and more effective.

This playbook has been developed to guide quality leaders in nursing homes through designing effective PIPs. The companion PIP Worksheet can be used to document your PIP journey.

## Benefits of a Strong QAPI Program

A strong QAPI program helps nursing homes identify and address quality concerns early, before they become larger problems. It helps reduce errors and safety risks, improve resident outcomes and satisfaction, and build a culture where staff at all levels, including certified nursing assistants (CNAs), nurses, and administrators, are engaged in improving care. CMS defines five core elements that every QAPI program must include:

1. **Design and Scope:** What does your program cover?
2. **Governance and Leadership:** Who is responsible?
3. **Feedback, Data Systems, and Monitoring:** How do you track performance?
4. **PIPs:** How do you test and implement changes?
5. **Systematic Analysis and Systemic Action**: How do you address root causes?

This playbook focuses primarily on Element Four, but a strong PIP relies on all five elements working together.

## QAPI Regulatory Requirements

CMS requires nursing homes to maintain a comprehensive QAPI program. Key regulatory requirements are reflected in several F-tags, including:

- **F865:** QAPI Program and Plan
- **F867:** QAPI Committee
- **F868:** QAPI Program Feedback, Data Systems, and Monitoring
- **F944:** QAPI Training

All nursing homes must have an active QAPI plan and regularly review nursing home regulations to stay compliant. Nursing homes should maintain documentation of QAPI activities. This documentation can demonstrate ongoing quality improvement efforts during state surveys.

> ***Regulatory Tip***
> CMS requires nursing homes to conduct at least one PIP annually that focuses on high-risk or problem-prone areas identified by the facility through data collection and analysis.

**Resources:** HSAG QAPI Plan Template; HSAG Facility Assessment Tool; CMS State Operation Manual (QAPI Regulations on pp. 783)

## Tools to Evaluate Your QAPI Program

Survey teams use Critical Element Pathways (CEPs) to evaluate whether facilities meet regulatory requirements and provide safe, high-quality care. These tools guide surveyors in reviewing areas such as QAPI, infection prevention, nutrition, pain management, and resident rights. CEPs are publicly available; therefore, your facility can use the QAPI CEP to assess its program using the same framework that surveyors use. This is a practical way to prepare for surveys and identify gaps before they become citations.

**Resources:** CMS CEP

## How to Use the HSAG PIP Playbook

A PIP is a focused effort to improve a specific problem in resident care, safety, or operations using data and structured problem-solving. It is designed to be more resource-intensive because it addresses a systems-level problem that has not been resolved through standard processes.

The following six-step process walks your team through the full improvement cycle, from choosing a problem to sustaining lasting change. Each step builds on the previous one and helps ensure your improvement work is data-driven, well-organized, and focused on meaningful outcomes for residents.

***Tips for Success***

- Start with one focused PIP.
- Test changes on one unit before expanding.
- Use data to guide decisions.
- Include staff closest to the issue.
- Keep the QAPI committee informed of progress.

For each step, you will find a plain-language description of the activity, the key goal your team should achieve before moving on, who is involved at that step, an estimated timeframe, and resources and tools to help complete the work. A simple case study is included at the end of the playbook to illustrate how all the components come together in practice.

## PIP Step 1: Identify the Problem

| **Goal** | **Select a high-priority problem, authorize a PIP, and choose a PIP leader** |
|---|---|
| **Who Leads** | QAPI committee (identify PIP team leader) |
| **Estimated Time** | One QAPI committee meeting (scheduled or ad hoc) |

The QAPI committee reviews quality data, including quality measures, incident reports, survey findings, resident and family grievances, leadership rounds, and infection-tracking logs, to identify areas of concern. The committee also should consider asking frontline staff what problems they most often encounter. Based on this review, the committee selects a high-risk or problem-prone issue that warrants focused improvement. Identifying a problem may occur during scheduled QAPI committee meetings (monthly meetings are recommended) or during ad hoc meetings that are convened as needed to address unexpected issues or situations.

***Tips for PIP Prioritization***

- High risk to residents
- Occurring frequently
- Affecting multiple residents, units
- Supported by data

Not every issue requires a PIP. Some issues can be addressed as straightforward “just-do-it” actions. For example, staff may just need additional training on an established process. The committee should use a structured approach to prioritize which issues to address in a formal PIP because PIPs require more staff time and resources.

A PIP typically addresses high-risk, high-volume, problem-prone areas. Common PIP topics include falls with injury, antipsychotic medication use, pressure injuries, hospital readmissions, infections, and staffing-related concerns.

**Resource(s):** CMS Prioritization Worksheet for PIPs

## PIP Step 2: Define the Project

| Goal | Establish a clear improvement plan through a completed and approved PIP charter |
|---|---|
| Who Leads | PIP leader assigned by QAPI committee |
| Who Contributes | PIP team members (create charter), QAPI committee (approve charter) |
| Estimated Time | As soon as possible, up to 5 days. Can be done concurrently with steps 3 and 4 |

The PIP leader develops a PIP charter, which is a document that clearly defines the improvement effort. The charter serves as the team's roadmap and should be reviewed and approved by the QAPI committee before work begins. Spending the time at the beginning to develop a charter will keep the team focused on the problem at hand. In addition, it will prevent them from drifting beyond the PIP's scope. Key elements of a PIP charter include:

- **Problem Statement:** Identify a clear, specific description of the issue (what is happening, and who is affected).
- **SMART Goal:** Develop a SMART Goal. A clearly defined goal transforms a general aim, such as "reduce falls," into a specific and measurable target that the team can work toward.
- **Project Timeline:** Define start and target end dates.
- **Team Members:** List names and roles of everyone involved.
- **Key Measures:** Identify the data you will track to determine whether performance is improving.

**What Is a SMART Goal?**

- **Specific:** Clearly defined
- **Measurable:** You can track progress with numbers
- **Achievable:** Realistic given your resources
- **Relevant:** Connected to resident care and your facility's priorities
- **Time-bound:** Has a deadline

Leadership support is critical to the success of PIPs. Administrators and department leaders should ensure staff have the time and resources needed to test improvements.

**Resource(s):** HSAG PIP Charter Template; HSAG SMART Goal Worksheet

## PIP Step 3: Identify Root Causes

| Goal | Identify the underlying system issues that contribute to the problem |
|---|---|
| Who Leads | PIP team leader |
| Who Contributes | PIP team, frontline staff with direct knowledge of the problem |
| Estimated Time | As soon as possible, up to 5 days. Can be done concurrently with steps 2 and 4 |

Before jumping to solutions, the PIP team needs to understand **why** the problem is happening. This step is called root cause analysis (RCA), a structured way to dig beneath surface-level symptoms and uncover the deeper system issues that allow a problem to persist. The following are common RCA tools.

- **The 5 Whys:** Start with the problem and ask "why?" repeatedly (usually about five times) until you reach an underlying cause.
- **Fishbone Diagram**: A visual tool that organizes potential causes into categories, such as people, process, environment, equipment, and policies. This helps the team brainstorm broadly rather than fixate on a single explanation.

- **Process Mapping/Flowchart:** Drawing the current steps in a process (e.g., how a fall risk assessment is completed from admission through reassessment) can reveal gaps, redundancies, or breakdowns.
- **Chart Review:** Looking at individual resident records to identify patterns, such as time of day, staffing levels, medication changes, or other common factors.

**Resource(s):** HSAG's The 5 Whys Root Cause Analysis Tool; CMS Flowchart Guide; HSAG PIP Worksheet

## PIP Step 4: Implementation Plan

| Goal | Develop a clear action plan with interventions that target the identified root causes |
|---|---|
| **Who Leads** | PIP team leader |
| **Who Contributes** | PIP team, department heads responsible for implementation |
| **Estimated Time** | As soon as possible, up to 5 days. Can be done concurrently with steps 2 and 3 |

Now that the team understands the root causes, it is time to design interventions, which are specific changes intended to address those causes. Interventions should be evidence-based and tailored to the nursing home's needs. For each intervention, define and document:

- What change will be tested.
- Who is responsible for carrying it out.
- When it will start and how long the test will run.
- How success will be measured.

> ***Tip for Success***
> Start with one or two interventions rather than trying to change everything at once. Testing fewer changes makes it easier to tell what is working.

Interventions should be directly tied to the root causes identified in Step 3. For example, if your RCA found that fall-risk reassessments were not completed after medication changes, the intervention should address that specific gap, not falls in general. Additionally, choose one outcome measure (what you want to improve) and one or two process measures (actions that should lead to improvement) to monitor the project's progress.

**Resource:** HSAG PIP Worksheet

## PIP Step 5: Test Changes Using Plan-Do-Study-Act (PDSA) Cycles

| Goal | Test and refine interventions to determine what changes lead to improvement |
|---|---|
| **Who Leads** | PIP team leader |
| **Who Contributes** | PIP team, frontline staff members implementing changes, QAPI committee |
| **Estimated Time** | 2–12 weeks (plan for multiple PDSA cycles); PIP teams meet weekly |

PDSA is the heart of the improvement process. Rather than rolling out a big change across the entire facility and hoping it works, or having to redo parts of the new process because it was not tested before roll-out, PDSA cycles let you test changes on a small scale, learn from what happens, and refine your approach before implementing facility-wide.

PDSA stands for:

- **Plan:** Define what you will test: the change, the measure, who is involved, where and when it will happen, and what you predict will happen.

- **Do:** Carry out the test on a small scale (one unit, one shift, or a handful of residents). Document what actually happened, including anything unexpected.
- **Study:** Compare results to your prediction. Did the change make things better, worse, or have no effect? Look at the data and talk with staff involved.
- **Act:** Based on what you learned, decide your next move and check one option to the right.
  – **Adopt** the change and expand to more units or shifts (if it clearly worked).
  – **Adapt** the change and test again in PDSA cycle 2 (if it partially worked but needs adjustment).
  – **Abandon** the change and try a different approach (if it did not help or made things worse).

The PIP team should meet regularly, document meetings, and provide progress updates to the QAPI committee (monthly is recommended) so leadership stays informed and can provide support or resources as needed. For example, the committee can help determine whether successful practices should be spread to other units or areas of the facility.

**Resource(s):** HSAG PIP Worksheet; HSAG PDSA Cycle; PIP Meeting Agenda and Minutes

## PIP Step 6: Monitor Results and Sustain Improvement

| **Goal** | **Sustain improvement and integrate successful practices into routine operations** |
|---|---|
| **Who Leads** | PIP team leader (monitoring), QAPI committee (closure decision) |
| **Who Contributes** | PIP team, department heads |
| **Estimated Time** | 3–6 months of sustained monitoring after the goal is met (plan for ongoing sustainability after closure) |

Once your PDSA cycles show that an intervention is working, the team shifts focus from testing to monitoring and sustaining the improvement over time.

Use tools, such as run charts (simple graphs that plot your measure results over time), quality measure reports, or incident trend analyses to see whether the improvement holds. Post the data in a place visible for staff. For example, a visible chart in the breakroom or nurses' station keeps the improvement top of mind and reinforces the team's accomplishment.

***Create a Cycle of Success***
*Quality improvement is a continuous journey. Each PIP your team completes builds stronger systems, improves resident care, and strengthens your facility's culture of safety.*

The SMART goal should be met consistently for at least three to six consecutive months before the PIP is considered for closure. This time frame helps ensure the improvement is not a temporary fix and that the changes have become part of the facility's day-to-day operations.

When sustained improvement is confirmed, the PIP team presents the final results to the QAPI committee, which will:

- Formally closes the PIP.
- Incorporates the changes into policies, procedures, or training materials to make them permanent.
- Celebrates the team's work. Recognition matters, especially for staff who made the changes happen.

**Resource(s):** HSAG PIP Worksheet; HSAG Run Chart Tool

## Case Study: Falls With Major Injury PIP

To illustrate the six-step PIP, consider Maplewood Care Center, a 100-bed facility addressing an increase in falls with major injury among long-stay residents.

### Step 1: Identify the Problem

During a routine dashboard review, Maplewood's QAPI committee identified an increase in falls with major injury from zero per month (0.0%) to five per month (5.0%) over one quarter, exceeding the state benchmark of 2.1%. Due to the severity (hospitalizations), scope (two units), and a related recent survey deficiency, the committee authorized a PIP.

### Step 2: Define the Project

The director of nursing (DON) was assigned to lead the PIP and developed a SMART goal: reduce falls with major injury from 5.0% to at or below the state benchmark of 2.1% within six months. The interdisciplinary PIP team included the DON, a unit nurse, a CNA, and a member of the resident council. The QAPI committee approved the charter through an ad hoc review due to urgency.

### Step 3: Identify Root Causes

The team reviewed 15 recent fall incidents and identified a pattern: falls occurred more frequently during dinner hours. Using the 5 Whys, the team determined the root cause was not just staffing levels, but a lack of structured supervision during a high-risk transition period. Staff were focused on meal assistance, with no clear responsibility or standardized process for monitoring residents returning to their rooms.

### Step 4: Create Implementation Plan

The team implemented a targeted intervention: adjusting staffing schedules to increase dinner-hour coverage by introducing 10:00 a.m. to 6:30 p.m. shifts for some aides and assigning a CNA to monitor hallways from 5:30 p.m. to 6:30 p.m. The outcome measure was falls with major injury; the process measure was adherence to supervision assignments. The team predicted that increased, role-specific supervision during the post-dinner transition would reduce falls.

### Step 5: Test Changes Using PDSA Cycles

The intervention was piloted on Unit B. In the first cycle, staffing changes were implemented, but staff communicated that unclear roles led to inconsistent supervision. Two falls occurred during the two-week pilot period on Unit B. The PIP team decided to adapt the intervention.

In the second cycle, the team clarified responsibilities through printed assignment sheets and brief pre-meal huddles, with increased leadership presence during mealtimes. This included department heads' assignments with specific roles (e.g., pass meal trays to independent diners to free CNA staff to assist dependent residents more timely). Additionally, staff adherence to responsibilities improved and no falls occurred over the following two weeks.

The team decided to adopt the intervention and expand it facility-wide with continued monitoring.

### Step 6: Monitor Results and Sustain Improvement

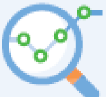
Over the following four months, Maplewood reduced falls with major injury from a baseline of 5.0% to consistently at or below the state benchmark of 2.1%, sustaining performance through the monitoring period. At the six-month mark, the PIP team presented its results to the QAPI committee. The committee formally closed the PIP, adopted the revised staffing and supervision practices as standard practice, and recognized the team's efforts at an all-staff meeting. Results were shared with the resident council, who had participated in the PIP from the outset.

## PIP Quick Start Guide

# PIP Quick Start Guide

*For Nursing Home QAPI Teams*

### 1 Identify the Problem



QAPI committee selects a priority issue.

***Goal: Authorize PIP***

### 2 Define the Project

Create a PIP charter and SMART goal.

***Goal: Develop a clear project plan***

### 3 Identify Root Causes

Analyze why the problem is happening.

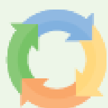
***Goal: Find the cause***

### 4 Create Implementation Plan

Develop actions to address root causes.

***Goal: Use targeted solutions***

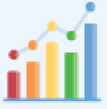
### 5 Test and Adjust (PDSA)



Test changes in small cycles.

***Goal: Improve with data***

### 6 Monitor and Sustain



Track performance to ensure improvements last.

***Goal: Achieve long-term success***

**Quick Tips for Success**

Start with one small project • Use data to guide decisions • Keep QAPI committee informed

PIP = Performance Improvement Project; QAPI = Quality Assurance and Performance Improvement; SMART = Specific, Measurable, Achievable, Relevant, Time-bound; PDSA = Plan-Do-Study-Act

This material was prepared by Health Services Advisory (HSAG), a Quality Innovation Network-Quality Improvement Organization, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS). Views expressed in this material do not necessarily reflect the official views or policy of CMS or HHS, and any reference to a specific product or entity herein does not constitute endorsement of that product or entity by CMS or HHS. Publication No. QN-13SOW-XC-04082026-01

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