11
Reducing Falls Toolkit

11. Reducing Falls Toolkit

Congratulations on forming your Collaborative for Quality Improvement in Long Term Care! We hope the toolkit was helpful in establishing your Collaborative and in learning about and working through the CMS Quality Assurance and Performance Improvement model (QAPI). As part of *Action Step 8. Identify Gaps & Opportunities*, your Collaborative will have created a list of opportunities for performance improvement and will have prioritized these opportunities as the beginning of *Action Step 9. Prioritize and Charter Projects (PIPs)*. This section will walk through Action Steps 9-12 for a project focused on reducing the rates of **resident falls** in nursing facilities. Recommendations are based on the experience of the 2015-2016 and 2016-2018 Regional Healthcare Quality Improvement Collaboratives, specifically the Central Indiana Nursing Home Improvement Collaborative (CINHIC), North Central Indiana Quality Improvement Collaborative (NCIQIC), Northwest Indiana Quality Improvement Collaborative (NWIQIC), Quality Improvement Collaborative of Northeast Indiana (QICNE), Southern Indiana Regional Collaborative (SIRC), Southwestern Indiana Collaborative for Performance Improvement (SWICPI), and West Central Indiana Regional Collaborative (WCIRC).

Action Step 9. Prioritize & Charter Projects (PIPs)

Once you have prioritized reducing the rates of resident falls as an opportunity to be addressed by your Collaborative, you will need to create a Collaborative Project Charter. The project charter will serve as the guiding document for the Collaborative project. Individual facilities may adjust the project charter slightly – updating the scope, project team, and materials – to reflect their individual facility and will use this as the contract between leadership and the project team. The project charter is created at the beginning of the project to clarify what is expected of the team. For a full discussion of developing a project charter, see the previous section *Utilizing QAPI as a Collaborative, Action Step 9. Prioritize and Charter Projects (PIPs).* The discussion below will focus on creating a charter for a project to address reducing rates of resident falls.

PROBLEM STATEMENT

The problem statement is the reason for action; why this project was chosen and why it should be addressed now.

Sample problem statement for reducing rates of resident falls:

- **The Collaborative rates of resident falls are higher than state benchmarks. Falls can lead to many negative outcomes, which include hospitalization and injury, leading to decreased independence and quality of life. Not only are falls associated with high morbidity and mortality, they are also very costly for facilities and health care systems.**
- **Resident falls cause unnecessary pain and suffering and increase the cost of care. Preventing falls with major injury is the highest priority to safeguard the residents from extreme suffering and avoid additional costs in terms of medical expenses and resources consumed. Frequent fallers are especially challenging, as the mitigation strategies must address multiple root causes. Residents with only 1 fall provide an excellent opportunity for more rapid fall analysis and the development of effective fall prevention strategies.**

- **Rates of falls significantly exceed the state average, which leads to poor health outcomes for residents and negatively impacts the facility's CMS quality measures.**
- **The average rate of falls including injury as reported by Collaborative Member Facilities during a period of baseline data collection is 21%, higher than desirable. Falls contribute to a number of serious problems for our residents, employees, and stakeholders.**

BACKGROUND

This is the background leading up to the need for this specific project.

Sample background for a project to reduce falls:

- **There are many factors that can lead to increased fall rates, such as shortage of staff, acute illness or underlying chronic disease, lack of proper training, and poorly fitting or slippery shoes. Literature reports that although most falls occur during normal, non-hazardous activity in community living, bulky objects, slippery floors, poor lighting, and patterns on floors or walls are the most common environmental hazards associated with falls[1]. For older persons, who are non-ambulatory falls are more likely to occur during transfers or due to ill-fitting equipment[2]. Of the many harmful impacts on the individual, falls are also an exorbitant burden on facilities and health care systems, costing more than $20.2 billion dollars a year in health care costs (hospitalizations, surgery and recovery). It is reported that this number will climb to $32.4 billion by 2020[3]. These factors also contribute towards decreased CMS quality measures, which will have an incessant trickle effect, further influencing facility five star ratings, marketing strategies, and reimbursement rates.**

Falls contribute to a number of serious problems for our residents, employees, and stakeholders. Injuries sustained from falls contribute to increased negative health outcomes for our residents, which in turn affects employee workload. Cost implications for falls are also significant. Per a CDC Report, costs associated with falls totaled more than $50 Billion dollars in 2015. A 2012 study identified the costs associated with each individual fall with major injury at over $30,000. Thus, any potential reduction in falls would likely contribute to significant cost savings for our Facilities and their Stakeholders. Due to these negative impacts and newly available resources, members believe they have a unique opportunity to improve a significant issue.

AIM STATEMENT

The aim statement answers the question "What is the Collaborative trying to accomplish?" This should be stated as a SMART goal (specific, measurable, achievable, reasonable, and timely) and often includes the baseline metric. "We want to improve (metric) from (initial state) to (target state) by (target date)."

Sample aim statements for reducing rates of resident falls:

[1] Owen DH. Maintaining posture and avoiding tripping. Optical information for detecting and controlling orientation and locomotion. Clin Geriatr Med. 1985;1:581–99.

[2] Thapa PB, Brockman KG, Gideon P, et al. Injurious falls in nonambulatory nursing home residents: a comparative study of circumstances, incidence, and risk factors. J Am Geriatr Soc. 1996;44:273–8.

[3] Chang J, Morton S, Rubenstein L, et al. Interventions for the prevention of falls in older adults: systematic review and meta-analysis of randomized clinical trials. BMJ. 2004;328:680-7.

- **Reduce the rate of falls from 8% to below the state average (3.5%), from January 1, 2016 to May 1, 2016.**
- **Collaboratively, reduce rate of falls by from 8% to 5% from January 1, 2016 to May 1, 2016.**
- **Reduce falls by 1% by the end of September 2018; reduce repeat falls to 0; continue to reduce falls for a 2% reduction by the end of December 2018.**
- **To reduce the total number of Residents with 1 Fall by 10% and achieve a Falls with Major Injury rate < 2% by September 2018, which is out-performing both the state and national benchmarks for this metric.**

PROJECT SCOPE

The project scope outlines the specifics of the project as related to goals; what is included/excluded. This may be different for each facility as they may target different units/floors/populations within their buildings.

Sample project scope statement for reducing rates of resident falls:

- **Project will run from July to October 2017. Facilities chose to reduce rate of falls within overall facility setting.**
- **This project ran 6/1/18- 9/30/18 and included residents in the units or floors identified by each facility.**

PROJECT METRICS

Project metrics tell how you will measure project efforts to show what was achieved. This includes baseline data (initial state). Other metrics to consider are secondary metrics (welcomed side effects), consequential metrics (unwelcomed side effects) and financial (any costs incurred or saved due to the project) metrics. The secondary and consequential metrics may be different across members as they may relate to the specific intervention. Previously, Collaboratives tracked and reported metrics as an average of all participating members. This allowed for group cohesion, a shared goal, and cleaner reporting of project outcomes. It also may blur outcomes as stronger performing members may "pick up the slack" for poorer performing members. Each Collaborative should decide if they will look at these metrics averaged across all members or by individual member facility.

Sample project metrics for reducing falls:

- **Primary Metric –** This is the main indicator to be measured. It defines the project goal, measures baseline and improvement at end of project. Sample metrics for reduction in antipsychotic use:

  Metric: Rate of falls per resident

  Calculation: # of falls/# of residents

  Baseline: Rate of falls per residents prior to the start of the project

  Data Source: Facility fall logs. Facility fall logs are an accessible and existing data source across facilities.

  Additional Considerations: For the projects run 2016-2018, there was a noticeable observation effect

where rate of total falls initially increased before decreasing to below baseline levels. To monitor and assess this, the following additional metrics are suggested: # of falls WITHOUT Injury, # of falls WITH MINOR Injury, # of falls WITH MAJOR Injury (per the MDS definitions), # of residents who fell once each month, # of residents who fell more than once each month..

- **Process Metric** – This metric captures, validates, and tracks how well (or if) the chosen intervention was carried out. This metric is critical in providing context for how well the intervention does or does not work. This may differ among participating facilities due to different interventions and may require multiple calculations.

- **Secondary Metric** – This metric captures, validates, and tracks welcome side effects of the project. This may vary among participating facilities due to different interventions.

  Metric: Hospitalization rate
  Calculation: Total # hospitalizations / Total # of residents
  Baseline: Hospitalization rate prior to the start of the project
  Data Source: Hospitalization logs. Hospitalization control logs are an accessible and existing data source across facilities
  Additional Considerations: Collaboratives may want to further separate this into reasons for hospitalization (emergency, observation, inpatient).

- **Consequential Metric** – This metric captures, validates, and tracks unwelcome side effects of the project. This may differ among participating facilities due to different interventions.

  Metric: Level of resident activity
  Calculation: Ratings of activity levels by staff
  Baseline: Level of activity prior to the start of the project
  Data Source: Activity logs; resident records
  Additional Considerations: One of the most frequent unwelcome side effects of efforts to decrease resident falls is a corresponding decrease in resident activity. Data sources for this metric may need to be assessed and enhance as part of collaborative activity.

  Metric: Family satisfaction scores
  Calculation: Based on scoring of family satisfaction surveys
  Baseline: Family satisfaction scores prior to the start of the project
  Data Source: Family satisfaction surveys
  Additional Considerations: Families may have concerns about the safety of their loved one - which should be addressed in a sensitive, comprehensive and ongoing manner.

- **Financial Metric** – This metric links project progress to financial outcomes.

  Metric: Savings due to prevented resident falls
  Calculation: (Expected # of resident falls for project period – actual # of resident falls in project period) X cost per resident fall[1]

[1] Stevens JA, Corso PS, Finkelstein EA, Miller TR. The costs of fatal and nonfatal falls among older adults. Injury Prevention 2006a;12:290–5: $30,000 per fall with major injury.

Baseline: Cost due to falls prior to the start of the project
Data Source: Facility fall log and current estimation of cost per fall
Additional Considerations: Costs saved can be calculated by subtracting the cost of actual falls from the cost of expected falls.

PROJECT TIMELINE

The project timeline will detail start and end points of the project and milestones along the way.

Collaboratives found that falls focused PIP required at least three months to plan and initiate and at least three to five months after initial implementation to be able to observe a positive shift in metrics. As noted above, falls rates showed an observation effect - an initial increase in the number of falls observed that began to decrease to below baseline levels after approximately three - five months.

PROJECT TEAM AND ROLES

The project team outlines who will be involved in the project and what will be their role on the team. This clarifies responsibility and accountability, and ensures all necessary people are included. For a PIP on reducing resident fall rates, it is recommended that the project team includes: administrator, director of nursing, front line staff, physical therapy, and occupational therapy, as well as liaisons from all facility departments (particularly housekeeping and maintenance) because all staff should be aware of the dangerous implications of falls, proper protocol to prevent falls, and first responding to an incident.

MATERIAL RESOURCES REQUIRED

Any materials such as equipment, software, or supplies that will be needed for the project should be included in this section. This will likely be intervention dependent and this may include:

- **Data Tracking Log (see end of section)**

BARRIERS

This includes barriers that may impede progress on the project and how to overcome them. Discussing barriers and ways to address them as a group allows members to support and collaborate with each other, increasing the likelihood of avoiding challenges and achieving success for the project.

Collaboratives encountered the following barriers in their reduction of falls PIPs:

Barrier	Ways to Address the Barrier
Obtaining accurate data from all members	· Provide a consistent tracking tool for all members from the start. · Remind members frequently about data submission deadlines. · Publicly thank members who have submitted data at each Collaborative meeting. · Set expectations and require that facilities turn in all data to be included as a project member
Facilities feeling too overwhelmed/burdened with multiple projects/requirements on top of day to day operations	· Encourage participants to focus on one or two areas of improvement for each collaborative or required certification from ISDH instead of selecting numerous different projects. · Do small tests of change. Do not try to implement multiple interventions at one time.
Measurement inconsistencies with bed placement	· Put orange duct tape at the proper height near the bed so that any staff member can come by and adjust the bed as necessary, taking some pressure off CNAs.
Staff turnover	· Use strong interventions that are process based and not reliant on memorization.
Lack of engagement/feeling like it's another task	· Managers should make accommodations for staff working night and evening shifts to attend meetings or will shift their schedule to meet when the employee is working.
Staff discouraged by initial observation effect	· Managers can discuss with staff the break down of the data that is under review and explain that more documentation of potential events is not necessarily a negative occurrence.

Action Step 10. Plan, Conduct, & Document PIPs

A **project intervention** is a strategy to improve the problem or challenge that is the subject of the PIP. Each facility should review gap analysis results to determine the best type of intervention for the stated problem. Facilities across the Collaborative can test different interventions, but should track results related to each intervention. Collaboratives should seek out evidence-based practices whenever possible. When identifying potential interventions, remember to identify assets and resources and evaluate the strength and sustainability of the intervention. For more discussion on *Action Step 10*, see the previous section *Utilizing QAPI as a Collaborative.*

RESOURCE: Data Intervention Activity Worksheet

As introduced previously, the collaborative can use the *Data-Intervention Worksheet (Appendix A12)* to facilitate the selection of an intervention(s) for the chosen PIP topic. The *Facilitation Guide (Appendix A13)* provides detailed instructions on use of the worksheet to identify interventions.

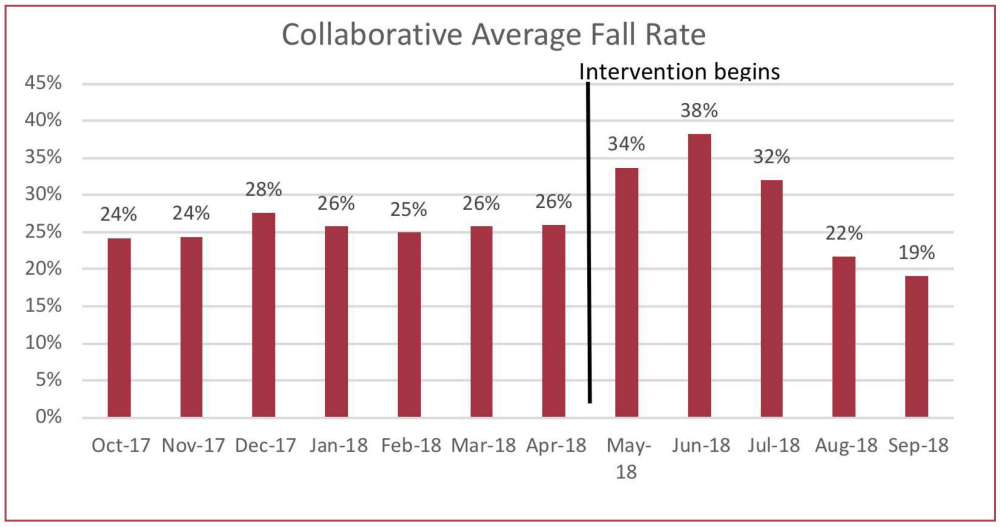
Interventions utilized in previous Collaborative PIPs related to reducing falls are detailed in the following chart.

Intervention	Intervention Metrics and/or Description
Bedtime preference	Knowing the resident's preferred bedtime will reduce likelihood of falls related to self-transfers to bed.
Bed height & obstacles	Put all beds at appropriate height and use orange tape to mark height, allowing anyone to adjust as needed. Remove floor mats.
Dining schedules	Adjusting the timing of meals in the dining room in relation to passing tray so that staff can be in closer proximity to residents to monitor for potential falls.
Increase aerobic exercise in dementia care unit	Residents will participate in two aerobic exercise sessions daily. One in the morning and a second in the afternoon to facilitate better rest.
Increase variety of type and availability of activities	Increasing the variety and number of activities allowed for greater participation by the residents. Root cause analysis found that residents were less likely to fall when in a group activity.
Increase restorative therapy programming	Increasing restorative therapy programming for eligible residents can improve overall strength and function.
Improve rounding	Include check list of fall prevention items to look for, include nurse leadership in rounding, improvements made specifically during the 72 hour post admission/move-in period.
Focus on new residents immediately post admission	Increased assessment measures and enhanced room/facility orientation for new residents within 72 hours of admission (identified as high-risk fall time).
Training for and creation of a "falls champion"	Enhanced training on falls prevention for key frontline staff. Falls champions are responsible for educating peers, suggesting improvements and identifying needs in the building.
Decrease or eliminate use of alarms	Personal pull-pin and bed/chair pressure pad alarms will be discontinued between the hours of 11pm-5am nightly. Measure current number/ type of alarms in use at start of project with number of alarms being discontinued as part of the "alarm vacation." Education for families on why alarm use should be decreased.

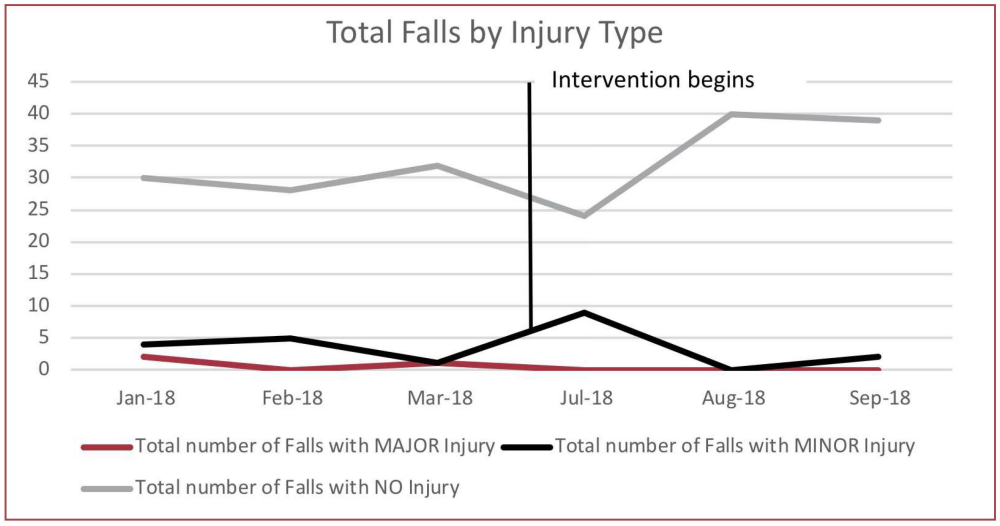
Intervention	Intervention Metrics and/or Description
Timely completion of the Falls Screen Investigation Report	Encourage staff to complete report at the time of fall. Analyzing the contributing factors as identified by an interdisciplinary team present at the time of the fall may reveal factors contributing to the fall that may go unidentified without this report.

Data display and visualization can help facilities understand the successes they have achieved and any missed opportunities. The following charts summarize fall rates across the Collaboratives pre and post intervention, by type of injury and by number of monthly falls per resident.

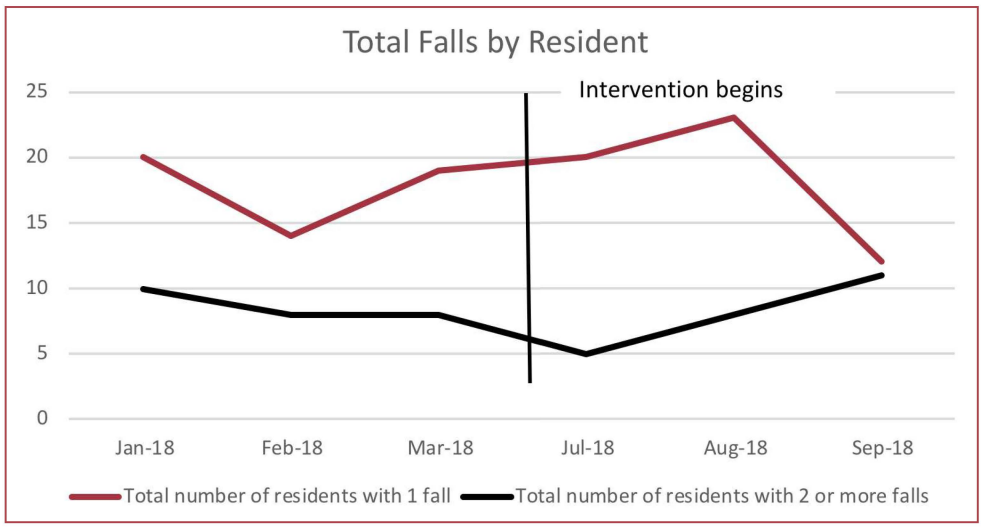
AVERAGE FALL RATE



TOTAL FALLS BY INJURY TYPE



TOTAL FALLS BY RESIDENT



Action Step 11. Identify the Root Cause of Problems (RCA)

Once a problem has been identified, a variety of tools can be used to identify the root cause(s) that should be addressed with an intervention(s). CMS provides a *Guide to Root Cause Analysis* (see *Appendix B* for full website) within the QAPI program.

Collaboratives will want to approach root cause analysis from both the Collaborative and individual facility level. Root cause analysis is based on data to ensure the intervention addresses the core issue and may vary among Collaborative members, depending on the issue. Several Collaboratives had success in implementing the same intervention across all members to address a common root cause. In Collaboratives where members chose their intervention individually, small groups were formed by grouping common root causes/ interventions. This allowed members to discuss common barriers and ways to overcome the barriers with each other in either situation. For more discussion on *Action Step 11*, see the previous section *Utilizing QAPI as a Collaborative.*

IMPORTANT NOTE: The most frequently encountered barrier to a Collaborative's success was overcoming biases and preconceived ideas about the root cause of a problem. It is critical that a true focused and data-based root cause analysis be completed for each PIP. Although Collaborative members may discuss the "how-to" of root cause analysis and brainstorm possible root causes of a particular challenge, the actual root cause must be validated by PIP data.

BEWARE: LISTEN TO YOUR DATA!

We observed that Collaboratives often prematurely identified ASSUMED root causes for problems prior to a detailed analysis of the data. Once data analysis was conducted, other root causes frequently emerged and the assumptions were shown to be incorrect.

Action Step 12. Take Systemic Action

Systemic change lives beyond the timeline of the PIP. Once the planned timeline is complete, the facility should consider how successful interventions should be continued, reinforced, and expanded, if applicable. If the initial intervention(s) were implemented in a specific unit or floor, successful interventions should be expanded to additional areas of the facility or of the corporate enterprise. The facility should also consider which interventions were not successful. If initial interventions did not produce desired results, Collaboratives and facilities should reassess the root cause, strength of the intervention chosen, and if the intervention was implemented as planned. Facilities should continue to monitor ongoing practice and continually identify new ways to improve outcomes and quality of care. This process of planning, intervening, measuring, and implementing fully is known as the Plan | Do | Study | Act model. Collaboratives may want to continue data reporting and monitoring after the time of focus on any given PIP to ensure the process change is stable and any decreases in quality are quickly identified and addressed.

Additional Resources

FALLS TRACKING LOG

FACILITY

Area or population of focus:

(ex. Whole facility, Long term or Short term residents, memory care unit, etc.)

	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18
Census										
Total number of Falls with NO Injury										
Total number of Falls with MINOR Injury										
Total number of Falls with MAJOR Injury										
Total number of Falls (sum of above)										
Fall Rate (# of Falls/# of residents)										
Total number of residents with 1 fall										
Total number of residents with 2 or more falls										
Total number of Residents with fall (sum of above)										