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Feature Article

Applying the Advancing Excellence in America's Nursing Homes Circle of Success to improving and sustaining quality

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ABSTRACT

Looking forward to the Quality Assurance Performance Improvement (QAPI) program to be implemented and required in 2014, and as nursing home staff provide care for residents with increasingly complex health issues, knowledge of how to implement quality improvement (QI) is imperative. The nursing home administrator and director of nursing (DON) provide overall leadership, but it is the primary responsibility of the DON and other registered nurse staff to implement and manage the day to day QI process. This article describes potential roles of nursing leaders and key components of a QI project using a pressure ulcer case study exemplar to illustrate a quality improvement process. The authors suggest specific methods that RN leaders can employ using the Advancing Excellence Campaign Circle of Success as an organizing framework along with evidence-based resources. Nursing home leaders could use this article as a guideline for implementing any clinical quality improvement process.

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U.S. nursing homes (NHs) house approximately 2 million Americans in almost 16,000 nursing homes nationwide.¹ The complexity of care in NHs has steadily increased as they provide care for more post-acute short-stay residents (patients are referred to as residents in NHs) in addition to frail, older residents with multiple co-morbid conditions in long-term care.^{2,3} The combination of frailty, decreased function, and chronic disease burden challenges the capability of many nursing homes and quality of care has become of greater concern.⁴ In the past several years, NHs have been under intense scrutiny and pressure to improve the quality of care they provide.^{5,6} As the largest payer of nursing home services, Centers for Medicare and Medicaid Services (CMS) has identified a variety of quality problems in NHs including a high prevalence of pressure ulcers, inadequate pain management, falls, post-acute rehospitalizations and high uses of restraints.⁷ These are all areas ripe for improvement in NHs. In response to these and other quality concerns, CMS is currently in the process of evaluating the Quality Assurance Performance Improvement (QAPI) demonstration project, an Affordable Care Act initiative that is slated to be implemented in 2014. The program will require all NHs

participating in the Medicare or Medicaid programs to implement a QAPI program. QAPI is a comprehensive, structured program to assess the quality of care provided to residents and to improve outcomes. This initiative will align NHs with other health care settings—such as dialysis units, hospice, and hospitals—which have a QAPI requirement. The QAPI program is based on five elements that make up the framework, 1) Design and Scope, 2) Governance and Leadership, 3) Feedback, Data Systems, and Monitoring, 4) Performance Improvement Projects, and 5) Systematic Analysis and Systemic Action. [Table 1](#) describes the requirements of each QAPI element.

While the responsibility for NH quality lies with a multidisciplinary collection of professionals and leaders, registered nurses (RNs) certainly play an integral role in the direct care of NH residents and bear a great deal of responsibility for the quality of care.^{8,9} Studies have indicated that the presence of RNs with advanced levels of training in NHs reduce deficiencies and improve quality measures, including reductions in the prevalence of pressure ulcers.^{8,10} Nurses with higher-level training are also better equipped to identify needs, design and promote quality improvement (QI)^d processes, and implement best practices. One of the

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^d Quality Improvement (QI) will be used interchangeably with Performance Improvement (PI) for the purposes of this paper.

Table 1
Quality assurance performance improvement (QAPI) elements.

Design and Scope: Nursing homes must implement a comprehensive, ongoing program that includes all departments of the NH. It must focus on safety, quality of care, quality of life, resident choice and care transitions. The program will require that a QAPI plan should incorporate the best available evidence.
Governance and Leadership: All members of the executive leadership including boards of directors, owners, and organizational leaders will be accountable for the program. In particular, they will be responsible for creating the cultural environment and organizational climate to provide capacity for performance improvement. There will be a requirement to provide sufficient resources for the initial program and ongoing sustainability.
Feedback, Data Systems, and Monitoring: Data will come from multiple sources to include residents, family & staff. The feedback system will be required to include complaints and adverse events. Additionally, nursing homes will need to set targets and work toward national benchmarks.
Performance Improvement Projects: Each nursing home will need to prioritize potential performance improvement project topics and the number of projects will be dependent on the program. Homes will develop a QI team that use Plan–Do–Study–Act (PDSA) methodology to the QI process.
Systematic Analysis and Aystemic Action: Teams will incorporate root cause analysis as a way of understanding why problems exist or errors are made. In that process, the team will determine underlying causes of problems. In the analysis process, the team will need to employ systems thinking and come up with systems-wide interventions.

challenges of leading and implementing these improvements is the need for more research to design a set of requirements to achieve sustainability.^{11–13} Lack of sustainable QI may be due to issues related to key leaders or staff resources (e.g., attrition and turnover in leadership ranks), lack of staff knowledge of QI processes, inadequate ongoing assessment, or lack of a system-wide QI plan.^{10,11,14–16} Based on the above it seems that, although nurses are a strong potential resource for initiating, designing and implementing QI processes in NH settings, they often lack specific tools and a guiding, practice-oriented framework to optimize these efforts.

This article uses a successful case study to describe the potential roles and responsibilities of registered nurse (RN) leaders in nursing homes in implementing and sustaining a comprehensive improvement program utilizing the *Advancing Excellence in America's Nursing Homes* campaign (AEC) Circle of Success as a guiding framework along with evidence-based resources available on the AEC website.¹⁷ These resources have been developed based on a variety of evidence-based documents and processes, found in Table 2. The intervention described is model-based using a case study methodology that has not been tested, but could serve as a guideline for implementation of a QI/PI* process.

1. Background

1.1. System level quality improvement

QI is the process of improving quality of care in all health care environments. Quality Assurance Performance Improvement (QAPI) models view the process as one that should be implemented at the system level and fully integrated into the daily work.^{18,19} Currently, all federally certified NHs are required to have a quality assurance (but not a PI) program, typically headed by the facility Medical Director with the administrator, department chairs, facility clinical consultants (pharmacist, dietician, etc.), and key nursing staff participating. There is a minimum requirement that the committee meet at least quarterly and that departments report on key quality assurance efforts.²⁰ Quality assurance is defined by Schnelle (2007) as a process used by traditional industry aimed at removing defective products

before they were sent out for public use.¹⁰ These retrospective efforts fail to evaluate work processes or factors that contributed to defective goods and, as a result, do not lead to prevention of or improvements in outcomes.¹⁰ In contrast, quality improvement focuses on systematically modifying performance through monitoring and analysis proactively to prevent poor outcomes.^{18,19,21,22} Unfortunately, this systemic process improvement process is not well integrated in many QA programs. Few NHs actually incorporate evidence-based care or clinical practice guidelines such as those promulgated by the Agency for Research and Health Care Quality and the American Medical Director's Association.^{23,24} Hence, the new QAPI requirement is an effort to address these shortfalls.

Another problem in QI is that there is difficulty in sustaining improvements.²⁵ According to Berlowitz et al,¹⁸ development of a structured organization-wide approach to understanding and improving underlying work processes is necessary to maintain and sustain QI.^{18,19} Compas et al¹⁵ conducted an exhaustive search of the published literature in English from 1997 to 2007 and found a paucity of research in existence that would specifically delineate the components necessary for QI sustainability.¹⁵ While studies suggest that the components of QI should be integrated into the everyday organizational systems to sustain improvement,²⁵ few reported doing so and little is published about the sustainment process.

It has been well documented that the need for leadership involvement in QI is essential and that without the support of the organization's leaders, QI cannot be sustained.^{10,14,16} Leadership will be further discussed in more detail in a later section. The AE Circle of Success addresses the improvement process, sustaining the improvements, and emphasizes leadership as an important process, which is a central theme of quality improvement.

1.2. The Advancing Excellence campaign and the Circle of Success

The Advancing Excellence campaign (AE) is a broad-based coalition of public and private stakeholders established in 2007 with a mission to assist NHs to improve the quality of care and quality of life of their residents.²⁶ There are Local Area Networks of Excellence (LANEs) representing each state that serve as resource

Table 2
Evidence sources in wound care field for Circle of Success.

Braden Risk Assessment Tool found at www.in.gov	How to try this video: the Braden Scale; American Journal of Nursing, Nov 2007. http://www.nursingcenter.com/Inc/journalarticle?Article_ID=751429
National Pressure Ulcer Advisory Panel: prevention	http://www.npuap.org/resources/educational-and-clinical-resources/pressure-ulcer-prevention-points/
National Pressure Ulcer Advisory Panel: staging	http://www.npuap.org/resources/educational-and-clinical-resources/pressure-ulcer-categorystaging-illustrations/
National Pressure Ulcer Advisory Panel: PUSH tool	http://www.npuap.org/resources/educational-and-clinical-resources/push-tool/
American Medical Directors Clinical Practice Guidelines	http://www.cpgnews.org/PU/index.cfm
National Pressure Ulcer Advisory Panel: treatment	http://www.npuap.org/wp-content/uploads/2012/03/Final_Quick_Treatment_for_web_2010.pdf

leaders for NHs who have joined AE. The campaign works with CMS to identify national goals for improvement and publishes the goals and free, downloadable QI resources such as the Circle of Success used in this article on their website (www.nhqualitycampaign.org).

There have been significant improvements nationally in some of the CMS quality measures since the campaign's inception.^{17,27} In particular, restraint reduction has shown the greatest improvement from a prevalence of 7.5% nationally in 2007 to 2% nationally in 2012. Pain in long-stay residents also improved from about 5.5% to 3.2% at the end of 2010. However, when the measure changed with the start of MDS 3.0 in 4th quarter 2011, the prevalence of pain increased to almost 14%, but now has come down to approximately 10.5% in 2nd quarter 2012. The significant difference in the rates from MDS 2.0 is likely attributable to the fact that MDS 3.0 is more sensitive in picking up pain than the MDS 2.0 measure. The pressure ulcer goal has had variable success in the campaign. At the end of the first phases of the campaign and before MDS 2.0 was discontinued, the prevalence of pressure ulcers decreased slightly from 13% to 12.5% nationally. With MDS 3.0 designed to focus in on new onset or unimproved high risk pressure ulcers, the national rate has dropped from about 7.5% to 6.3%. What is key is that, in all cases, NHs that participated in the campaign have shown greater improvements than those NHs that were not in the campaign. Those NHs in the campaign that set targets, did even better causing the campaign to require target setting in the second phase of the campaign.²⁸

Pressure ulcer reduction has been one of the goals for improvement since its inception and they have multiple resources available for QI purposes. Nursing homes that have quality scores below the national and/or state average on any of the quality measures can use one of these problem areas for their initial QI efforts. The model (Fig. 1) describes the QI process including

identification, assessment, modification and ongoing management of changes. The stages are briefly described in the following:

1.2.1. Explore goal

The process begins with identification of a problem, in this case, a high prevalence of pressure ulcers. Such recognition may arise from various sources such as: feedback from peers, supervisors and clients, benchmarking, the survey process, etc. Assessing the problem may begin with collecting available evidence on its existence, prevalence and gravity. Literature searches may identify potential evidence-based "best practices" or clinical practice guidelines, several of which are available on the AE website (www.nhqualitycampaign.org). Review of current practices may help map areas where a new intervention or revision of current practices can be useful.²³

1.2.2. Identify your baseline and set your target

Collecting baseline data is essential so that improvements can be identified. Because NHs typically do not have a data-driven QI program, a useful way to start the QI process is to evaluate their quality measures and quality indicators (QM/QIs) already collected by CMS. QM/QI reports provide data that facilities can easily review to determine whether there is a quality problem in their facility as reference data are provided for both state and national pressure ulcer rates for comparison.¹⁷ An example of what is contained in the QM/QI report can be seen on the NH Compare website by choosing any NH.²⁹ If NHs join the AE campaign and choose pressure ulcers as a goal, their quarterly pressure ulcer data will be available on the password protected AE website. The advantage of using the AE website is that tracking and trending run charts are provided that display the data in an easy to understand format. In the process of choosing the goal, NHs are required to set a target goal for

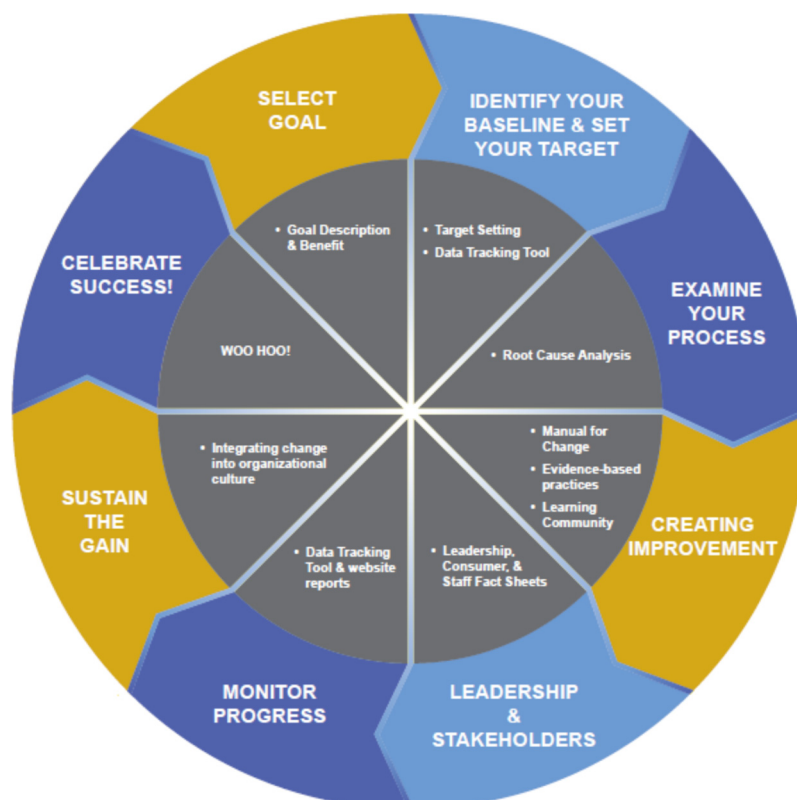


Fig. 1. Advancing Excellence framework "Circle of Success."

improvement, which has independently been shown to improve quality when compared with organizations that do not set targets.¹⁴ NHs can then track their data toward that specific goal. There is also a Data Tracking Tool that can be downloaded from the site so NHs can monitor their progress on a more frequent basis.

1.2.3. Examine your process

This stage relates to the identification of motives and factors that create the sub-standard performance resulting in the high rates of pressure ulcers. In this step, teams will conduct a root cause analysis to determine the causes that can range from poor policies and procedures to uneducated personnel.¹⁴

1.2.4. Creating improvement

This refers to the process of revising procedures, rules, practices and/or processes. This may include designing a manual or process for change based, updating a procedure, developing an intervention based on the evidence or best practices. Necessary changes including training, procedure, processes and practice have to be carefully managed and supervised. Use of a Plan-Do-Study-Act (PDSA) cycle is a process that studies have shown to be highly successful.^{12,30}

1.2.5. Leadership and stakeholders

Involving leadership and other stakeholders is an important step in ensuring success and particularly sustainment of QI efforts. Studies have shown that when leadership supports quality improvement, outcomes improve.^{18,19,31} Additionally, organizational change cannot be made without leadership support and guidance.³²

1.2.6. Monitor progress and sustain the gain

Monitoring refers to a wide range of assessment techniques aimed at documenting and evaluating processes, practices and outcomes. Monitoring may occur in a wide range of ways from electronic records to in-person assessment and evaluation. Random audits ensure that the correct processes are being done at the appropriate times. Specific feedback to the team is an important communication to help the team stay focused and to emphasize the leadership interest in the process. Monitoring has to be a part of a feedback loop collecting information, processing it, evaluating its meaning and conveying it back to the people practicing in the field to ensure change. The use of the free, downloadable Data Tracking Tool available on the website assists NHs to monitor their progress.

When long-term impact of QI project is desired, it must incorporate strategies that will sustain the achieved improvement. The difficulty of sustaining QI efforts cannot be underestimated. RN leaders are an essential part of sustaining quality by ensuring that policies and procedures are evidence based, that all staff receive adequate training on integrating quality into their daily routine, and by conducting comprehensive audits of quality processes on a regular basis.³¹ Frequency of audits can be reduced over time, but should continue indefinitely in areas of high importance such as pressure ulcers.

1.2.7. Celebrate success

Celebrating success rewards the efforts of the staff and reinforces the importance of the QI improvements. This is an essential part of sustaining quality over time by rewarding the work that is done to achieve success.³³

While the AE Circle of Success model offers logical steps for performing ongoing QI and the downloadable resources provide an evidence base for pressure ulcer care, the campaign does not specify the division of responsibility among the various staff. One purpose of this article is to suggest a model for how the central roles of registered nurses might be carried out in this QI process.

1.3. Leadership and management in creating change

In general, leadership may emerge from many different areas within any organization. Formally designated managers and leaders from an organizational perspective can create the capacity for leadership to occur within the organization to create change.^{34,35} Leaders, and particularly managers, provide the capacity for QI to occur by identifying participants, protecting time for the process, supporting their work, and enacting recommendations made by the QI team. The two organizational roles (leaders and managers) should work in tandem; leaders provide the inspiration, vision and driving force for change while managers actually ensure resource support for the change to occur.^{34,36,37} Leaders who emerge from these improvement efforts are not always the designated formal leader or manager. Instead, leadership may come from frontline staff who are passionate about a specific change process and who work to ensure success at the point of care, such as a certified nursing assistant (CNA) who inspires and encourages other CNAs to improve pressure ulcer prevention efforts.

1.4. Nurse roles in quality improvement

RNs are an excellent choice to take leadership of the QI role as they are in the NH caring for residents on a daily basis and have the right level of training and skills to manage such processes. Typically, clinical NH leaders are RNs employed in roles such as Director of Nursing (DON), Assistant Director of Nursing (ADON), MDS (Minimum Data Set) Coordinator, or occasionally, the Director of Staff Development (DSD). The traditional clinical roles of these nurses are relatively well understood but their role as part of the QI team is less well defined. The advantage of the AE Circle of Success is in suggesting a logical flow of the QI process that allows one to frame the various responsibilities and division of labor among NH team members in a QI process (Table 2). Among the problems identified by CMS, pressure ulcers are recognized as a common quality issue with prevalence (total numbers of existing pressure ulcers) as high as 27.3%.^{38,39} Pressure ulcers are a high cost issue that can result in poor outcomes and considerable patient suffering.¹² Pressure ulcer incidence (the development of new pressure ulcers) reduction is an objective of all health care providers based on the Healthy People 2010 report.⁴⁰

As previously stated, QI programs are most successful when there is a knowledgeable expert to lead the program, when best practices or evidence-based guidelines are employed, when a champion is designated, and when there is organizational support for innovation and teamwork including the necessary QI elements.^{11,13,18}

While RN leaders are the most clinically knowledgeable staff in the nursing home, their level of education varies widely. RNs with specific geriatric knowledge and leadership contribute to better outcomes for NH residents.⁴¹ Research has shown that most BSN trained nurses have at least some exposure to geriatric content.⁴² However, 79 percent of RNs who work in NHs are educated at the associate degree or diploma level, where there may be less exposure (10–25% of overall adult content) to the geriatric specific content.⁴³ This suggests the lack of specific geriatric training and education, and perhaps a deficit in sufficient management and leadership training, may mean these RNs are under prepared for challenges they meet in caring for the complex needs of NH residents.^{31,32,44} Some research indicates they may not have received even basic QI training in their nursing programs, which may mean that additional training or consultation may be needed, although this is not true in all cases.⁴⁵ Beyond that, many NHs have a minimum number of RNs and in some facilities, the Director of Nursing (DON) is the only RN.^{46,47} A further challenge to QI is that

the clinical workload of nurses in the NH may leave little time for additional projects.⁴⁸ Therefore, to lead and sustain a QI project in such organizational settings requires careful consideration of what will best help the initiator to promote the project in a limited resource system. One way to accomplish this would be to hire a consultant such as an advanced practice nurse or another knowledgeable QI expert to assist in getting a QI program started.

The DON, based on position, is the designated leader responsible for the overall supervision of nursing care in the facility and also has the most influential role over the nursing staff. The DON typically is in a position to make decisions regarding the clinical processes the nurses follow, including changes in specific policies and procedures, staffing, and other factors that may affect performance and outcomes. As a registered nurse leader, the DON can provide functional management and oversight of the QI project by assigning appropriate staff to participate in QI as well as identify priority areas that need improvement. More importantly, within the formal leadership position, the DON can provide the vision to inspire the rest of the team, model the appropriate behavior, and encourage others to take leadership positions.³⁶ Additionally, the DON can work with the NH Administrator to ensure that the QI team receives the management support and resources necessary to enable success. The DON may also delegate some or all of these responsibilities to an Assistant DON in larger facilities who may be in an even better leadership position if they have greater contract with and confidence of the staff.

The Director of Staff Development (DSD) is responsible for staff education and training and may be either an RN or a Licensed Vocational Nurse (LVN), depending on the NH. For the QI team, the DSD can help to identify evidence-based practices and provide staff education about the particular QI intervention, depending on their licensure and skill set. At minimum, the DSD should be able to monitor and reinforce appropriate care processes by observing care and providing feedback. The DSD can also assist in audits. If the DSD is an LPN, they will need the guidance and collaboration of an RN or APN to find evidence-based processes and develop training appropriate for licensed staff.

The MDS Coordinator is traditionally responsible to ensure that the MDS assessment process is implemented accurately and completed on time for each resident. In small facilities, a single nurse may have the responsibility for both (DSD and MDS) functions. If the team is focusing on a quality process that is measured through CMS, the MDS coordinator is a key participant to identify and monitor these data. Based on the MDS quality measures, the MDS coordinator may help the QI team to identify and prioritize potential problems. Subsequently, the MDS coordinator can help the team follow the data by running reports from the MDS program and reporting back on the specific quality measure. Each of these nurse leaders enacts an important role in the QI process. Any nurse in one of these RN roles can provide leadership in the quality improvement effort, but leadership may also come from other health care providers. Table 3 provides an overview of potential RN QI roles that would be appropriate within the AE process framework and that will be further discussed in the exemplar.

It is also critically important to understand that pressure ulcers are complex health care problems and their causes are multifactorial.^{12,19} Therefore, several experts typically participate in this care including the attending physician, wound consultants, and potentially the Medical Director.^{14,49} These experts can provide technical expertise to guide the care of patients with pressure ulcers. Table 4 contains several common problems related to pressure ulcers based on the American Medical Directors Association (AMDA) Clinical Practice Guidelines and other resources

Table 3
Nursing leader roles in QI using the Advancing Excellence Circle of Success process.

	DON role, nursing QI team leader	DSD role, staff trainer	MDS role, quality measures	APN role, QI consultant
Explore goal	Identify an important quality problem (in this case pressure ulcers) to be changed. Explore information about PUs. Select the QI team	Contribute to discussion of a quality problem	Provide data based on the MDS assessment reports to help identify a quality problem	Assist DON in identifying the team and where to find evidence-based information
Identify baseline and set target	Understand current baseline data and trends. Identify an achievable but stretch target goal	Provide information as to the status of training on this quality problem	Provide baseline data on the pressure ulcer and trends over past 6–12 months; download PU tracking tool and provide data	Assist staff to interpret their baseline data and the trends and to set an achievable but stretch target goal
Examine your process	Use probing questions to examine current PU processes. Provide leadership and guidance to other staff; help identify policies that need revision	Helps identify education needs & develops evidence-based programs for staff education & training	Identify specific audit points, assist to develop audit sheets; assist in conducting audits	Assist staff to determine cause of problem; identify a key area that needs improvement; conduct RCA; develop tools; focus effort on achievable goals
Create improvement	Ensures that nursing home policy and procedures are consistent with best practices and evidence-based care	Conducts training programs and assists monitoring of staff to manage and treat pressure ulcers	Participate in interdisciplinary management & treatment	Guide staff to ensure that pressure ulcer management and treatment are evidence based
Leadership & stakeholders	Implement & manage audit process; monitor & react to audit outcomes; revise policies & procedures as needed; ensure that audits are not superficial	Develop programs to train staff in the audit process; help conduct audits & report to DON	Facilitate audit process; conduct audits as needed	Guide staff in developing monitoring process; develop audit forms
Monitor progress & sustain the gain	Ensure that staff continue to perform at high level by conducting ongoing audits and reinforcing best practices	Establish comprehensive educational program for pressure ulcer care for staff; conduct training as needed	Ensure new non-nursing staff participate in high level of care; continue to participate & support QI process	Ensure that internal NH staff have skills needed to develop & monitor QI program
Celebrate success	Identify ways to celebrate the success of the team	Recognize the work of individual staff	Identify when the teach has reached the goal with data	Help develop ways to recognize the team

Table 4

Circle of success framework with common pressure ulcer problems and potential quality improvement audit points.

Care process	Problems increasing prevalence	Potential audit or review points
Explore goal	<ul style="list-style-type: none"> • Failure to use evidence-based processes 	<ul style="list-style-type: none"> • Review policies and procedures and compare against current evidence
Identify baseline and set target	<ul style="list-style-type: none"> • Failure to measure pressure ulcer rates • Failure to establish a target goal 	<ul style="list-style-type: none"> • Ensure that all residents are assessed and included in the measure
Examine your process	<ul style="list-style-type: none"> • Failure to complete an accurate & timely initial assessment • Failure to routinely inspect skin • Failure to identify complications related to pressure ulcers • Failure to have a strong prevention program • Classifying non-pressure ulcers as pressure ulcers (i.e., venous stasis ulcers, ulcers related to traumatic injury) • Failure to consider other issues or processes that contribute to pressure ulcers (i.e., poor surfaces, use of cloth diapers) 	<ul style="list-style-type: none"> • Risk assessments completed within 24 h and then quarterly reassessments or change of condition • CNA daily skin assessments, licensed nurse weekly skin assessments • Audit of complications of pressure ulcers looking for trends • Wounds are appropriately categorized and non-pressure ulcers are not counted as pressure ulcers • If pressure ulcers are identified, they are appropriately staged • Causes of wounds are appropriately communicated to primary care provider • Contributing factors to pressure ulcer risk or lack of healing • Compare written order with treatment plan and record • Standardized treatment regimens that follow key principles of pressure ulcer care • Care plans are comprehensive and followed by all staff • Risk factors are considered in the comprehensive care plan • Pressure reduction, decreasing friction and sheering is in the care plan and followed by staff in daily care • Visual inspection of residents randomly to ensure appropriate treatment regimens are following and treatments are in accordance with standards of care • Management and treatment are evidence based and consistent with Ftag 314 • Interdisciplinary team is involved in consulting on all Stage 3 & 4 and all non-healing pressure ulcers • Review members of QI team for inclusiveness of stakeholders
Create improvement	<ul style="list-style-type: none"> • Failure to properly implement clinical provider orders • Failure to implement the comprehensive care plan related to pressure ulcers • Implementation of the wrong interventions • Failure to appropriately address pressure reduction and to avoid friction and sheering • Failure to consistently implement the right intervention (i.e., skipping dressing changes; not changing failed treatments) 	<ul style="list-style-type: none"> • Care plans are comprehensive and followed by all staff • Risk factors are considered in the comprehensive care plan • Pressure reduction, decreasing friction and sheering is in the care plan and followed by staff in daily care • Visual inspection of residents randomly to ensure appropriate treatment regimens are following and treatments are in accordance with standards of care • Management and treatment are evidence based and consistent with Ftag 314 • Interdisciplinary team is involved in consulting on all Stage 3 & 4 and all non-healing pressure ulcers • Review members of QI team for inclusiveness of stakeholders
Leadership & stakeholders	<ul style="list-style-type: none"> • Lack of leadership support • Failure to include all stakeholders 	<ul style="list-style-type: none"> • Pressure ulcer incidence and prevalence rates are monitored regularly • Weekly reports of internal pressure ulcers are tracked and trended, reported, and analyzed regularly • Pressure ulcers are healed within expected timeframes • Onset of new pressure ulcers • Palliative pressure ulcers have appropriate documentation by physician or nurse practitioners and orders indicating palliative status • Staff training is conducted to include newly hired staff • Pressure ulcer incidence and prevalence rates are reported regularly to the Administrator, Medical Director, Attending Staff, and nursing staff • New problems are recognized early and appropriate QI steps are initiated • Identify “celebrations” and ensure they are ongoing
Monitoring progress & sustain the gain	<ul style="list-style-type: none"> • Inadequate monitoring • Failure to reassess non-healing pressure ulcers and revise interventions • Failure to maintain prevention measures • Failure to reassess risk factors 	
Celebrate success	<ul style="list-style-type: none"> • Failure of leadership to recognize improvements 	

from the AE website. Each NH must examine its own unique problem areas in order to implement a successful QI program.⁴⁹

1.5. Quality improvement exemplar

This is an exemplar of a typical U.S. nursing home and how that NH started a pressure ulcer quality improvement process. The exemplar is organized on the AE “Circle of Success”. In this paper we apply an analytical approach to a single case study to exemplify the principles described so far in theory and then suggest one method of assigning various roles to RNs. The exemplar is based on a real case example.

“Shady Acres” Nursing Home is a for-profit, 100 bed suburban facility, Medicare and Medicaid certified with a mixture of post-acute short-stay and long-term care residents. Sally, the DON was invited to the state Quality Improvement Organization presentation on the Advancing Excellence campaign and learned about the goals of the quality improvement (QI) campaign. Sally discussed this with the NH Administrator and Medical Director and they decided to join the campaign. To join the campaign had to choose three goals to work on over the year.

1.6. Explore goal

Explore various possibilities to use as a performance or quality improvement goal.¹⁰ Examine recent resident and staff complaints, survey results, quality measures, or other assessments to identify possible areas that might need improvement. Look for evidence-based resources or best practices to use as a guideline. Choose a specific goal.

Sally along with the Medical Director and Administrator consider the goals and resources available. Shady Acres was cited for poor pressure ulcer outcomes last year, so they chose pressure ulcers as one of the goals.

1.7. Identify your baseline and set your target

Identify a specific issue, in this case, pressure ulcer prevention and care as an area for potential improvement in performance and practice.²⁸ Determine your current performance as a baseline.

Sally downloaded the pressure ulcer tool from the AE website and worked with the nursing staff to collect information on

their current patients with pressure ulcers and determine they have a prevalence rate of 18.5%.

Identify authoritative information available for the topic.²³ The team downloads and reviews the resources available from the website.

As Sally lacked experience in QI, she contracted with an advanced practice nurse (APN) from the local university with both QI and pressure ulcer expertise. The APN was able to assist Sally and the DSD in finding reliable evidence-based information on pressure ulcers using the AE website including the clinical practice guidelines, risk assessment tool and NPUAP resources which they used for a series of educational programs for the staff. They formed a QI team representing all shifts and disciplines (RN, LPN, CNA, Therapy) that impacted pressure ulcer care. Consultants were invited to participate.

Using the baseline data, set a target for improvement.²⁸

The team sets a goal of reducing their pressure ulcers by 15% in 6 months.

1.8. Examine your process

Review current processes and practices and identify areas for improvement.^{23,30}

Sally and the QI team used the probing questions from the AE website (Fig. 2) and reviewed the current policies and procedures with the best practice resources. With the APN's assistance, the team revises their policies and procedures to be consistent with the evidence-based resources they had downloaded. At the first QI meeting, the APN provided basic QI education and Sally shared the overall problem of pressure ulcers in the facility.

Determine the causes of issues related to pressure ulcer prevention and care, including root causes of undesirable variations in performance and practice.¹⁴

The APN led the team through the root cause analysis (RCA) process. As part of the RCA, they complete a fishbone diagram that generated the institutional causes of sub-optimal performance presented in Fig. 3.

1.9. Create improvement

Devise an intervention that will improve the outcomes, in this case, reduced prevalence of pressure ulcers.¹⁴

The team identifies several areas that could be improved. Based on the fishbone diagram, they decide to focus on three key areas and prioritize their initial QI efforts on 1) Inconsistent risk assessment process by licensed nurses, 2) incomplete skin assessments by CNAs, and 3) lack of knowledge about high risk residents.

Implement necessary changes. Address issues of individual performance and practice that could be improved.¹⁴

The intervention is to increase the consistency of risk assessments completed by licensed nurses and skin assessments done by CNAs. The team decides to focus on prevention and specifically three processes; 1) 100% education of CNAs and licensed nurse staff on best practices for prevention, 2) licensed nurses use the Braden Tool and assess risk on all residents within 24 h of admission, and 3) communication on high risk residents across shifts. They devise a method to audit their progress.

1.10. Leadership and stakeholders

Leadership creates the environment for success and reinforces optimal practice and performance. All stakeholders, staff, residents and families, and other clinicians must be involved.³¹ They must continually promote "doing the right thing in the right way", identify and use tools and resources to help implement the steps and address related issues, and based on information and data, reinforce systems and processes that are already optimal.

The NH Administrator and Sally gather the staff together to reinforce the importance of this QI effort. A letter signed by the Medical Director, Administrator and Sally was sent to all clinical providers and consultants informing them of the QI project and inviting their participation. The Medical Director participated in two meetings for the attending practitioners and consultants. CNA champions on each shift were recognized and were instrumental in helping to achieve changes in the care provided by frontline staff. The Administrator established a competition between the nursing stations and providing several rewards for the best improvement. Progress was reported monthly to the Resident and Family councils and a billboard was put in the lobby to advertise the QI project to visitors.

1.11. Monitor progress and sustain the gain

Reevaluate performance, practices and results. The team uses the *Pressure Ulcer Tracking Tool* to track and trend their data. They monitor their progress on the AE website where they can compare their pressure ulcer scores with other NHs in the state and the country.^{10,32,49} They continue to collect data, evaluate whether changes in process and practice have helped attain desired results, adjust approaches as necessary.

Sally and the APN conducted random audits and provided feedback to the various team members on their performance. The data were presented in their monthly QA meeting and feedback from the Medical Director and other consultants was received and acted upon. For the next three months, the team worked diligently to monitor each of the three processes. Using the various tools, they measured their progress and found that they consistently improved. Nurses were communicating changes early and staff could focus on the high risk residents. Non-nursing staff (activities and social services) were engaged so that the burden did not fall entirely on the nursing staff. Morale improved in all staff and residents and families were more satisfied with the care provided.

Continue focus on the improvement processes until they are well integrated into the daily routine of the staff. This requires leaders to continue reporting procedures and feedback to the staff, educate and train all new employees, and retrain staff if improvement levels are not maintained.

The team identified several things they thought would help sustain the improvement process. Because the NH had high turnover and occasionally used agency staff, the DSD developed pressure ulcer training for new and temporary employees that had to be completed prior to taking care of residents. Pressure ulcer prevalence rates were posted in the lunch rooms and medication rooms of each station and updated weekly. Pressure ulcer updates were routinely discussed as part of the daily stand up meeting. By emphasizing the importance of pressure ulcer prevention, documenting their processes, communicating regularly, and monitoring the data, the Shady Acres staff successfully integrated pressure ulcer prevention as part of their daily care.

<p>Why is our rate of pressure ulcers high? Has there been a change in the number/kind of pressure ulcers? What is driving our high pressure ulcer rate?</p> <p>What groups are affected? Are they: Long stay or short stay? Rehabilitation residents? On the same unit? Being admitted with pressure ulcers? Developing pressure ulcers in our nursing home? Experiencing an acute change in condition? Immobile? At risk for developing pressure ulcers? Actively dying? On an intervention such as a brace or splint?</p> <p>Processes and Resources to Consider What types of assessments are we using? Are we doing monthly risk assessments? Are we doing weekly skin assessments? Are we doing daily assessments? Are we doing follow-up assessments consistently? Do we use the same assessment tool across the nursing home? Do we provide feedback to “admitting” providers about pressure ulcers? Is the assessment part of the care plan?</p> <p>What techniques and treatments are we using? Have we considered adding additional interventions? Do we share skin assessment/risk information proactively when transferring a resident out of the nursing home? Is staff providing prevention measures to high-risk residents? Are prevention interventions evidence based? Are our wound treatments evidence based? Are we involving an interdisciplinary team in the assessment and care of wounds? Do we customize the interventions we use to each individual’s needs?</p> <p>Are we evaluating what we are doing? How do we know our interventions are effective? Does the staff assess outcomes of interventions? Do we monitor wounds weekly? Do we use a standard tool to monitor and document the status of wounds? Are we evaluating the effectiveness of wound treatments? Are we assessing and treating underlying causes of wounds? Is our documentation consistent with the language of MDS and other required assessment tools?</p> <p>What education are we providing? Are staff well educated on the use of our tools? Do staff follow the procedures for risk assessment? Do staff follow the procedures for skin assessments? Are staff well educated on wound assessments? Are staff well educated in the treatment of wounds? Are we educating family and friends about pressure ulcers and what causes them and how the skin breakdown can be treated?</p>
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Fig. 2. Probing questions RN leaders use to evaluate current pressure ulcer processes.

1.12. Celebrate success

Celebrating successful improvements reinforces doing the right thing and encourages staff to continue and sustain the improvement processes.

The NH Administrator, Medical Director and DON initiated several means of celebrating their success. At the end of 6 months, the pressure ulcer prevalence rate had actually decreased 19% and Shady Acres celebrated with a facility barbecue for residents and staff and their families.

2. Discussion

The purpose of this paper was to describe a guiding framework and suggest one method of how RNs can provide leadership in the

QI process in a way that would meet the upcoming QAPI requirements.

Following the AE process framework, Sally had identified an important problem, found authoritative information on pressure ulcers and hired an expert QI consultant to assist the team in getting started. The case study used an advanced practice nurse consultant as a QI Leader, but certainly NHs could hire APNs to perform a variety of functions including QI. Evidence supports the employment of APNs to improve overall quality of care and outcomes.^{50,51} There are also physicians, therapists, social workers, NH administrators, and RNs who are skilled in QI and could provide QI expertise. It is clear that APNs are not the only health care professionals capable of providing QI expertise, so each NH should evaluate their existing internal and external resources. Additionally, previous research has advanced the use of learning collaborative as a way to leverage

Goal: To reduce the incidence of pressure ulcers by 15% in 6 months.

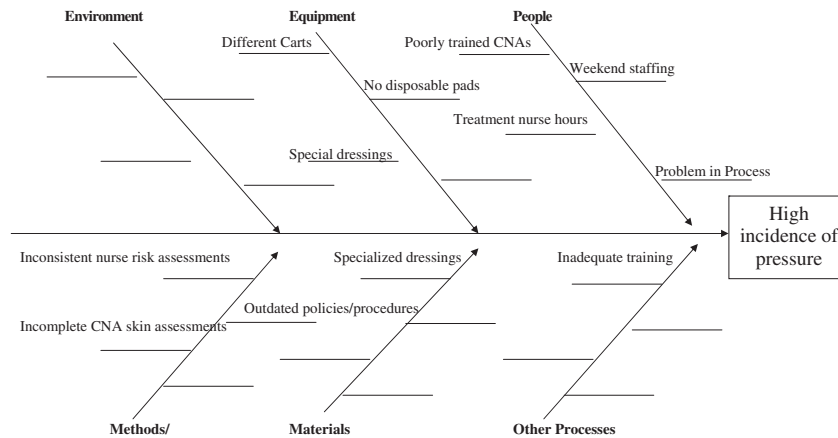


Fig. 3. Fishbone diagram.

knowledge and skills between organizations and may serve as an innovative way to develop and implement strong QI processes.^{48,52} Both the Pioneer Network and the Commonwealth Fund have promoted the use of learning collaborative as a way to improve quality (<http://www.pioneernetwork.net/Events/PastConferences/NationalLearningCollaborative/>; <http://www.commonwealthfund.org/Innovations/Tools/2005/Jun/Improving-Health-Care-Delivery-The-Learning-Collaborative-Approach.aspx>).

There are also many opportunities for education and training of the staff and it is important for NH leaders to understand there are two separate areas of knowledge essential for QAPI, 1) knowledge of the QI process itself and 2) evidence-based knowledge of the clinical problem (in this case pressure ulcers). Nurses frequently have knowledge in the clinical content area but may need to make sure their knowledge is based on current evidence. Depending on their level of education and their length of time since graduating from their nursing program, some nurses may not have exposure to specific QI process training.

The NH incorporated the entire interdisciplinary team into the process and support from the Medical Director and Administrator garnered the collaboration of the attending medical staff and professional consultants. The case exemplifies the importance of having the right expertise available and a multidisciplinary QI team that brings various aspects of care together to successfully improve outcomes. Another NH may have the internal resources without hiring an APN or may choose to use an RN or a different health care professional skilled in QI to assist with their program.

As the team approached the problem in the case study, they used evidence-based resources to update their policies and procedures, conducted a root cause analysis and developed interventions with a goal of a 15% reduction in pressure ulcer rates. Shady Acres had a registered nurse in the role of DSD who was able to search for evidence-based processes and conduct the appropriate education and training. Unfortunately, many NHs use LPNs in the role of DSD. While it is beyond the LPN scope of practice to develop RN level training, LPNs could assist with this process under the direction and guidance of an APN or another RN colleague, particularly as it relates to training of CNAs.

Having an achievable, time limited goal is also an important step. When goals are set too high and can't be achieved, participants become discouraged and it is difficult to sustain the process. Additionally, outcomes from the AE campaign have shown that target setting is an important component of improvements and should be an essential requirement of any QI project. Staff, residents

and families were involved along the way and were able to celebrate success when they achieved their goal.

3. Conclusion

This exemplar provides an overview of how NHs can initiate a QI pressure ulcer project using the AE Circle of Success framework and resources available on the website. It outlines key steps in QI and suggests RN leader responsibilities and then provides a structure and processes that can be followed based on the AE Circle of Success and evidence-based resources.

The QI concepts discussed in this paper can be applied to any QI project since the exemplar focuses on the process and roles of the RN leadership and allows for varying clinical content areas. The model offers method and structure, but unlike many other models, it also focuses on implementation, roles and responsibilities, and long-term sustainability of change. It provides a systematic framework of thinking and planning 'division of labor' and responsibilities in a way that is straight forward and application-oriented.

RN leaders provide professional leadership essential to sustaining QI efforts. APNs can play an important role as consultants or as a QI leader to provide technical guidance for the rest of the QI team. Other members of the interdisciplinary team play important roles in achieving success. Both the RN and Administrator leaders are encouraged to collaborate in the implementation of this QAPI process, not only for pressure ulcers, but for other quality areas in which poor outcomes have been identified. This process is consistent with the goals of QAPI and NHs that use this process will be in compliance with the new regulation.

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