

National Nursing Home Improvement Collaborative—Pressure Ulcers Qualitative Results

The NNHIC change package is organized around five interrelated high-level improvement strategies. Under each of the five improvement strategies listed below are system changes tested by NNHIC teams and shared in senior leader reports or at learning sessions.

1. Develop close strategic and operational ties with other healthcare organizations and relevant community stakeholders

Nursing home interventions

- Establish blame-free peer to peer relationships with wound care staff in other healthcare facilities (hospitals, nursing homes, medical transport, home health agencies) by
 - sharing pressure ulcer related educational events
 - participating in each other's wound rounds
 - conducting shared case reviews of inter-facility pressure ulcers.
- Offer feedback to referring organizations on the number and type of pressure ulcers admitted from those organizations.
- Highlight in transfer forms resident specific pressure ulcer risk factors and current interventions when transferring nursing home residents to other healthcare facilities.
- Combine efforts to cooperate on pressure ulcers with other areas of common concerns, such as immunizations, restraints, transfer protocols.
- Utilize local QIO staff to serve as conveners and facilitators of inter-organizational efforts to coordinate and improve pressure ulcer care in a community. QIOs have working relationships with healthcare providers in acute care, outpatient clinics, and home health as well as nursing homes.
- Seek out and use community based wound expertise (such as certified wound nurses) to augment facility resources.

Comments

Given that a substantial component of pressure ulcer prevalence in nursing homes is attributable to wounds that are present upon admission, effective partnering with other community providers has the potential to greatly reduce the pressure ulcer prevalence in nursing homes. Nursing homes that relied on simply changing outgoing transfer paperwork to communicate pressure ulcer plan of care to receiving facilities reported far less engagement and cooperation from other healthcare organizations than those that met face to face with representatives from targeted organizations to develop a common approach to shared goals. QIOs were instrumental in convening and facilitating many, but not all, of the community pressure ulcer coalitions. Pressure ulcer coalitions typically focused on raising community standards for key elements of pressure ulcer care such as risk assessment, repositioning, and adequate support surfaces. In some cases, NNHIC nursing homes took the leadership role in educating other providers about best practices for pressure ulcer prevention and treatment.

2. Assure strong and persistent organizational commitment

Nursing Home Interventions

- Establishing a pressure ulcer task force run by nursing assistants empowered nursing assistants to contribute to quality improvement efforts. Nursing assistant initiative in improving systems of care was reinforced when supervisors and administrative staff honored nursing assistant input and supported the testing of system changes suggested by nursing assistants. Nursing assistants proved capable of conducting their own pressure ulcer task force meetings.
- Including non-clinical staff and departments in pressure ulcer task force not only added valuable insights and help to pressure ulcer programs, but improved staff satisfaction. Many homes were surprised at the level of interest non-clinical staff had in contributing to clinical quality improvement.
- Many teams reported that organized, scheduled, inter-disciplinary wound rounds resulted in increased staff awareness of pressure ulcers and provided excellent opportunities for education and involvement of front-line staff. Some teams rotated in different nursing assistants to each weekly wound round to give more nursing assistants an opportunity for hands-on learning.
- Establishing designated wound care expert or experts within the facility increased the consistency and effectiveness of wound assessments and treatments. Alternatively, some homes contracted with outside certified wound nurses to provide on-going consultation and training, especially for the more difficult to heal wounds.
- Many teams reported that pressure ulcer monitoring and treatment programs suffered when facility wound experts were unavailable for extended periods of time. Some teams addressed the issue by training additional nursing staff in routine wound and risk assessments, by clarifying roles for routine wound care in the absence of facility wound expert, and by compiling written protocols to be followed in the absence of designated wound care nurse.
- Publicly posting facility and unit specific trends for the collaborative measures helped to heighten awareness of quality improvement efforts and motivated friendly inter-unit competition. Some teams used contests or games based on pressure ulcer outcomes to motivate staff with tangible rewards for improved processes or outcomes.
- Several teams found a structured “root cause analysis” of facility acquired pressure ulcers greatly increased their understanding of system breakdowns and provided a rich basis for employee education.
- Many teams found ways to incorporate expanded pressure ulcer education in their new-employee orientation as well in annual skills evaluation for continuing employees, thereby systematically providing pressure ulcer education to all staff rather than relying on periodic trainings that might not reach all staff.
- Making a facility wide list of pressure ulcer risk assessment scores helped identify units and residents in greatest need of preventive resources, such as specialized support surfaces or more frequent repositioning.
- Involving resident and family councils in pressure ulcer activities helped to enlist their active support of pressure ulcer program. Teams reported that residents and

families educated in the principles of pressure ulcer prevention and treatment helped to reinforce and spread community expectations for high quality care.

Comments

Two system changes related to organizational commitment broadly impacted a majority of the NNHIC homes:

1. using data to evaluate effectiveness of pressure ulcer programs and
2. empowering staff to contribute to quality improvement efforts.

Timely feedback on outcome and process measures was reportedly critical to changing the attitude of nursing home staff regarding the feasibility and need for improvement in pressure ulcer prevention and treatment. For many NNHIC homes, figuring out how to deploy available staff or find new staff resources to collect and report measurement data was the first major challenge of the collaborative. Homes that were unable to recruit, train, and retain data collection staff were unable to achieve the level of organizational commitment required to benefit from participation in the collaborative. NNHIC teams that were successful in collecting collaborative outcome and process data were, in turn, able to use that data to justify obtaining needed pressure ulcer resources, such as improved support surfaces and additional staff positions and hours. The collaborative measurement data also helped teams appropriately target the allocation of scarce pressure ulcer resources to those units and residents that would benefit the most. Interestingly, in a survey of 28 NNHIC senior leaders (using the Baldrige Assessment Tool found on http://www.baldrige.nist.gov/Progress_Leaders.htm), only 46 % of the respondents agreed or strongly agreed that employees in their organizations knew how to analyze the quality of their work to see if changes are needed, and only 36 % of senior leaders agreed or strongly agreed that their employees used the analysis of quality to make decisions about their work. As a whole, the survey of NNHIC senior leaders showed that the entire area of measurement, analysis, and knowledge management was, in the view of the senior leaders, the weakest area of organizational performance. The survey was conducted in June and July of 2004 before the third NNHIC learning session.

A frequent theme in monthly senior leader reports, teleconferences, and team sharing at learning sessions was the tremendous energy and enthusiasm non-management staff brought to nursing home quality improvement efforts once they were assured that their input was respected and acted upon. In many NNHIC homes, the pressure ulcer task force became a self-directed high performing team of quality improvement advocates that was able to suggest and test system changes independently of senior leadership. Front-line workers who could see the fruits of their efforts in terms of improved resident outcomes reported much higher job satisfaction and increased commitment to organizational goals.

3. **Establish effective systems for assessing and monitoring residents regarding the risk, presence, and treatment of pressure ulcers**

Nursing Home Interventions

- Establishing a system for nursing assistants to document and communicate to licensed nurses the results of daily skin inspections promoted inspection and reporting

behaviors. Many teams used forms that nursing assistants could carry with them and fill out as the opportunity to inspect skin occurred during the course of daily care giving. The inspection and reporting behavior was reinforced if nurses acknowledged receiving the report and nursing assistants could see that reporting made a difference to resident care. In addition to the intrinsic rewards of contributing to improved resident care, many teams provided extrinsic rewards (such as gift certificates or other prizes) to nursing assistants who excelled in early detection of pressure ulcers or in performing daily skin inspections.

- Rewarding nursing assistants for the discovery and reporting of potential Stage I pressure ulcers was effective in increasing nursing assistant daily skin inspections.
- Including a pressure ulcer risk assessment tool in the admission (and re-admission) paperwork increased the likelihood that risk assessments were completed within one day of admission (or re-admission).
- Teams reported that using the Pressure Ulcer Scale for Healing (PUSH) helped them obtain agreement from team members, including physicians, to change treatment plan for non-healing wounds in a time frame consistent with best practice guidelines (within 2-4 weeks).
- Providing calculators to nurses made it easier for them to use the Pressure Ulcer Scale for Healing (PUSH) and increased the accuracy and reliability of the PUSH scores.
- Braden Scale scores were used to quickly identify all residents who needed enhanced pressure reducing support surfaces. Such screening resulted in identifying unmet support surface needs among high-risk residents.
- Braden Scale sub-scores were successfully used to identify actionable individual risk factors (such as poor nutritional intake) for residents who otherwise were classified as low risk for pressure ulcers.
- Braden Scale sub scores were compiled and analyzed for a facility as a whole to identify the most common risk factors and the risk factors most strongly associated with development of pressure ulcers in the facility.

Comments

Although only four teams reported tracking the process measure of daily skin inspection (an optional measure), the interest in promoting the process was wide spread. Beyond the benefits derived from early detection of skin lesions of all sorts, the process engendered cultural change in nursing homes by putting the nursing assistants at the forefront of driving resident care and changing the relationship between nursing assistants and licensed nurses from supervisee to supervisor to one of professional partnership. Facility programs to promote the discovery of Stage I pressure ulcers, especially with rewards and contests, was successful in raising awareness of pressure ulcer issues and in some cases seemed to result in decreased incidence of pressure ulcers. Although not all teams found the Pressure Ulcer Scale for Healing (PUSH) to be compatible with their existing wound assessment processes, many teams reported that the PUSH, because it provides a single numeric index of healing that can be trended and graphed over time, greatly facilitated the clinical decision of when a wound was no longer responding to a particular treatment regimen. Some teams reported that using the PUSH made them much more aggressive in seeking effective wound treatment, thereby decreasing time to healing and in some cases healing wounds that had previously been written off as un-healable. Although pressure

ulcer risk assessments such as the Braden Scale were commonly used in NNHIC teams before the collaborative, NNHIC teams reported much greater emphasis on actually using the risk assessment to drive resident care and make decisions about resource allocation.

4. Implement evidence-based processes and systems for pressure ulcer prevention

Nursing Home Interventions

- Establishing a visual cue (icon) at resident bedside helped staff to quickly indicate the types of preventive measures / equipment called for in the resident's care plan. Some teams also used icons to identify residents at high risk for pressure ulcers to help nursing assistants prioritize preventive interventions.
- Several teams reported that developing and implementing "interim" care plans for new admissions, based upon admission risk assessment, and ensured that new admissions received appropriate preventive measures in time before a comprehensive care plan could be developed.
- Using soft foam covering to protect the ears of residents who use supplemental oxygen delivered by nasal cannula help prevent pressure ulcers on ears. The foam covering is applied to the oxygen tubing with double sided tape.
- Establishing a system to physically inspect and track the state of repair for support surfaces helped to identify support surfaces in need of replacement that otherwise would have remained in use beyond their effective life span. Several teams found it useful to establish a systematic schedule for support surface replacement, noting that most support surfaces have limited life spans, even under ideal conditions.
- Teams established systems for ensuring removable support surfaces were returned to the rightful place. One team borrowed the labeling system used in retail clothing stores to securely attach identifying information to removable cushions.
- Reducing or eliminating the layers of incontinence pads used on beds improved the effectiveness of support surfaces and reduced exposure to pressure ridges caused by wrinkles. Working with nursing assistants to test alternatives to overuse of "pink pads", some teams eliminated the products from their inventories while other teams severely limited the supply of the products to prevent overuse.
- Several teams reported that disposable adult briefs worked better to wick moisture away from skin than cloth briefs. One team reported success using an "all night" disposable brief that protected resident skin from urinary incontinence without requiring staff disturb the resident's sleep for linen or brief changes. Teams also reported on the importance of carefully fitting adult briefs to avoid pressure areas or leaks caused by ill-fitting briefs.
- Improving or maintaining the nutritional intake of at-risk residents was achieved through various approaches including:
 - Involving residents in cooking meals
 - Providing finger foods that are easier to eat
 - Making dessert-like "smoothies" or "milkshakes" readily available to supplement caloric and fluid intake. Dietary supplements that were sweet and in a thickened liquid form seem to be most popular with residents.

- Using Braden nutritional subscale scores to trigger in-depth dietary assessments and interventions resulted in timely interventions to prevent weight loss
- Using a red napkin or some other highly visible cue such as a colored plate to identify for staff the residents at mealtime who are at risk for weight loss and therefore require additional dietary assistance.
- One team used a laminated card that was placed under residents as a way to audit if resident was repositioned in a timely manner. The time the card was placed under the resident was written on the card and the time the card was returned to the auditor (after resident was repositioned) was recorded, providing an estimate of the time between repositioning.
- One NNHIC team reported success in creating two new full time positions (using LPNs) whose primary purpose was to monitor and ensure timely repositioning of all at-risk residents on the day and evening shifts.
- One NNHIC team organized selected nursing assistants into designated “turning teams” whose sole purpose was to ensure that all residents on their assigned unit were repositioned in a timely manner on the day and evening shifts. By isolating the repositioning task and assigning it to a specialized team, the nursing home was able to assure timely repositioning for all at-risk residents without increasing the overall number of nursing assistants.
- Several teams found specially designed low-friction repositioning sheets helped with minimizing shearing injuries associated with repositioning.

Comments

Providing appropriate support surfaces for residents was in some ways the easiest system change for NNHIC teams to implement; ensuring that appropriate support surfaces remained in good repair and with the assigned resident over time was more difficult. Although monthly audits of bed support surfaces was a required measure, only 14 teams consistently reported tracking this process through the collaborative. However, even teams that did not collect monthly tracking data on bed support surfaces reported that replacing worn out or inadequate support surfaces became a priority for their facility as a result of participation in the NNHIC. Although there was a widespread interest among NNHIC teams in improving incontinence care, the most significant interventions were those that reduced the adverse side effects associated with ill-fitting adult briefs and overuse of incontinence pads on beds. Most NNHIC teams were interested in and experimented with various interventions to reduce weight loss among residents, although very few teams actually tracked the prevalence of at-risk residents with weight loss (an optional measure). The nutritional intervention most popular among NNHIC homes (and perhaps residents) was use of fortified milkshakes that were designed to be delicious and readily available at all times. The use of special dinning room markers such as red napkins to indicate residents at risk for weight loss also spread widely among NNHIC teams.

Periodic repositioning residents to decrease tissue load is a cornerstone of pressure ulcer prevention. Several teams attempted to change systems to better ensure consistent repositioning, but a majority of teams indicated that tracking and monitoring this process

was one of the most vexing issues they faced. It is worth noting that, while great enthusiasm was expressed regarding the use of “turning teams” and “positioning monitors”, those teams that emphasized these interventions did not show an over all improvement in the incidence or prevalence of pressure ulcers over the course of the collaborative.

5. Implement evidence-based wound care processes and systems

Nursing Home Interventions

- Using simplified wound care formulary increased staff proficiency with the selected wound care products.
- A number of NNHIC teams reported greater use of wound care specialists as consultants for wounds that were difficult to heal.
- Several teams reported success in using Anodyne therapy (infrared light) to improve wound healing.

Comments

NNHIC teams reported far less experimentation in the area of pressure ulcer wound treatment than in any other area of the change package. In part, this may be due to the fact that what is effective treatment for pressure ulcers is far better established than what is effective to ensure consistent high quality pressure ulcer prevention and treatment over time in a nursing home. Systemic changes in nursing homes, such as creating interdisciplinary wound rounds and using the Pressure Ulcer Scale for Healing, did impact individual wound care decisions in NNHIC homes, but in almost all cases, the basic principles of pressure ulcer treatment were well known and accepted in NNHIC homes before introduction of the NNHIC change package. However, it is worth noting that even by the end of the collaborative, a third of long-term wounds (those of a month or more in duration) failed to show evidence of healing in the previous month. This means that by the end of the collaborative, on average, a third of these wounds was either not receiving effective treatment or their healing was not correctly assessed and documented.