Journal of Nursing & Interprofessional Leadership in Quality & Safety

Volume 2 | Issue 1 Article 2

2018

Evidence-Based Skin Champion Program Reduces Pressure Injuries in a Pediatric Hospital

Alexandra Luton MN, RN, NCNS-BC
alexandra.luton@gmail.com

Mary D. Gordon PhD, RN, CNS-BC
Texas Children's Hospital, mdgordon@texaschildrens.org

Megnon Stewart MSN, RN
Texas Children's Hospital, mmstewa1@texaschildrens.org

Ellena Steward-Scott MSN, RN
Texas Children's Hospital, emstewar@texaschildrens.org

Joellan Mullen MSN, RN, CCRN-K
Texas Children's Hospital, jbmullen@texaschildrens.org

Angela Jones MN, RN, NE-BC
Texas Children's Hospital, arjones@texaschildrens.org

See next page for additional authors

Evidence-Based Skin Champion Program Reduces Pressure Injuries in a Pediatric Hospital

Abstract
Prevention of pressure injuries (PIs) in pediatric patients is an important nurse-sensitive quality goal. The PI rate at a large urban pediatric hospital triggered a call to action by the Chief Nursing Officer to establish a Hospital Acquired PI (HAPI) Task Force which identified the Skin Champion program as a key improvement strategy. The goals of the Skin Champion program are to lower the rate of HAPIs, empower front line care providers to implement evidence-based care bundles, achieve consistency of practice, and provide resource availability at the point of care. The implementation of the Skin Champion quality improvement program achieved an 85% reduction in severe harm and "reportable" HAPI incidence, which is lower than the HAPI national average in pediatric patients (Solutions for Patient Safety, 2018), and an increase in nurse compliance with the HAPI prevention bundle. The HAPI incidence rate has remained near 0.05 per 1000 patient days.

Keywords
Pressure injuries, Prevention, Pediatric, Skin Champion Program

Cover Page Footnote
Skin Champion Acknowledgement Special thanks to the Skin Champions, who accepted ownership of their practice and spread evidence based practices at the bedside. Their actions prevent numerous pressure injuries from occurring in our pediatric population and continue as strong practices today.

Authors
Alexandra Luton MN, RN, NCNS-BC; Mary D. Gordon PhD, RN, CNS-BC; Megnon Stewart MSN, RN; Ellena Steward-Scott MSN, RN; Joellan Mullen MSN, RN, CCRN-K; Angela Jones MN, RN, NE-BC; and Joseph Hagan ScD

Introduction

Problem Description

Prevention of pressure injuries (PIs) in pediatric patients is an important nurse-sensitive quality goal because achievement of the goal depends in part on the quantity and quality of nursing care provided to the patient ("SPS Pressure injury prevention bundle elements," 2018). Preventable PIs still occur in pediatric patients and frequently cause pain and disfigurement. The national pediatric PI prevalence rates are reported to be 0% to 7.3% (Baharestani, 2007; Baldwin, 2002; Razmus, 2017; Waterlow, 1997; Willock, 2000). PI prevention is an important nursing function and incidence/prevalence rates are used to benchmark quality of nursing care across healthcare organizations. In September 2013, the PI rate at a large urban pediatric hospital increased to 0.45/1000 patient days. A call to action by the Chief Nursing Officer established a Hospital Acquired PI (HAPI) Task Force which identified the Skin Champion program as a key intervention.

Available Knowledge

Pressure injuries are a common occurrence in hospitals across the nation. Although some pressure injuries may be unavoidable, it is possible to reduce the overall level of patient harm caused by such injuries through early detection and intervention. Baharestani (2007) described pressure injury incidence rates in neonatal and pediatric intensive care units to be as high as 23% -27%. Hospitals have a financial incentive to improve care and patient outcomes now that CMS no longer reimburses hospitals for treatment of hospital-acquired pressure injuries (HAPI) (Centers for Medicare & Medicaid Services, 2008). The change in reimbursement shifts the responsibility of pressure injury prevention to health care organizations, thereby incentivizing pressure injury prevention activities. Hospitals started to prioritize and support pressure injury prevention practices and teams to improve processes and outcomes.

Review of Literature

A review of successful Skin Champion programs identified critical program components that contributed to success and sustainability. The teams responsible for design and implementation of Skin Champion programs are multidisciplinary and include many combinations of nurses and nurses' aides, wound experts, executive leadership, educators, and Advanced Practice Nurses, to name a few (Niederhauser et al., 2012). It is important to identify and include stakeholders early in the planning process so they have an opportunity to participate in program discussions (Ahroni, 2014; Visscher, 2013). A pressure injury prevention program dedicated to improving patient safety outcomes must involve middle and top leaders in the organization and align with organizational priorities. It is key that quality improvement processes be included to evaluate the continuous performance of team (Kelleher, Moorer, & Makic, 2012; Visscher, 2013; Wang, 2006).

An important first step in Skin Champion program design is to find a unique and recognizable name for the group to communicate a consistent identity. The name should communicate the primary function, role or purpose of the group and solidify the identity of the team. Additional suggestions include using shirts, vests or jackets to aide in program recognition while pressure injury prevention staff are on clinical units (Ahroni, 2014).

The success of a Skin Champion program requires a strong infrastructure to support the Champion role. The program needs a house-wide policy and procedure that clarifies the evidence and best practices for pressure prevention and routines of care. Also, there is need for a continuing education program to teach skin anatomy, PI risk assessment, pressure relief interventions, interdisciplinary involvement, and products to support clinical care goals (Ahroni, 2014; Bergquist-Beringer, Derganc, & Dunton, 2009). Best

practices are bundled and used as a prevention intervention package for all staff. Ongoing clinical monitoring of bundle compliance is recommended to ensure compliance with existing prevention interventions, and to encourage behavior changes. Bundle compliance can be checked by rounding on high-risk patients and completing chart audits. Frequent sharing of compliance data with leadership and clinical staff will facilitate progress toward achieving the goal (Bergquist-Beringer et al., 2009; Kelleher et al., 2012; Niederhauser et al., 2012; Sullivan & Schoelles, 2013; Visscher, 2013).

Skin Champion roles and responsibilities should be made clear during the recruitment process (Pasek et al., 2008). Common descriptions of the role include involvement with prevalence studies, rounding, and monthly chart audits. The Champions are considered to be content experts who promote prevention interventions with their peers. They are familiar with hospital skin care resources, as well as PI prevention products and devices. Skin Champions also work as a mentor and educator to others in the unit (Bergquist-Beringer et al., 2009; Niederhauser et al., 2012; Pasek et al., 2008; Rodgers, 2014) and employ strategies to generate enthusiasm and increase awareness about the new program to ensure staff engagement, ownership and dedication. Providing real-time data in staff meetings or newsletters and giving staff/team recognition for the improvements made are a few suggestions. Celebrating each success also stimulates healthy competition among units and provides a sense of pride in their accomplishments (Bergquist-Beringer et al., 2009; Niederhauser et al., 2012).

Weick and Sutcliffe (2007) described five high-reliability principles that provide a strong conceptual framework through which hospitals can design sustainable interventions to decrease preventable harm. Employing High Reliability Science (HRS) requires a state of "collective mindfulness", in which employees across an organization pay attention to, report and work to remedy unsafe or potentially unsafe conditions before harm to a person or entity actually occurs (Weick & Sutcliffe, 2007). Achieving this type of organizational culture requires time, commitment and role modeling from employees and leaders across the organizational hierarchy. Descriptions of the high-reliability principles delineated are listed in Table 1.

Table 1. Principles of High Reliability and Associated Descriptions

High-Reliability Principle	Description
Reluctance to Simplify	Threats to safety are regarded as complex until proven otherwise. Examination of occurrences focuses on system failures rather than failures of individuals.
Preoccupation with Failure	Constant alertness to and reporting of occurrences and near-misses allows ongoing examination of persistent system weaknesses. Awareness of the possibility of an occurrence persists even when an organization has not seen such an event in quite some time. Data sharing around occurrences, near-misses and lessons learned promotes collective awareness.
Sensitivity to Operations	Detailed understanding across the organization of systems and characteristics that place patients at risk. This level of understanding requires transparency and open communication across the hierarchy. A general intolerance develops for conditions that precipitate risks to patient safety.
Deference to Expertise	Solutions are not designed or implemented without the engagement of those directly affected by the change. Change agents regard those most intimately involved with the work to be the most expert in improving system performance or preventing harm.
Commitment to Resilience	The organization is not disabled by errors or harm events, but rather uses such occurrences to learn about process failures and drive additional improvements.

Adapted from: Weick & Sutcliffe, 2007

Rationale

A large pediatric hospital sought to decrease the rate of Hospital-Acquired Pressure Injuries (HAPI) which cause harm to patients and increase healthcare costs. Hospitalized infants and children are at increased risk for HAPI due to

both inherent and iatrogenic factors. Table 2 outlines inherent and acquired risk factors for skin breakdown in hospitalized infants and children.

In an effort to achieve sustainable improvements in HAPI rate, we formed an interprofessional task force with executive support to reduce HAPI. The task force sought to employ tenets of HRS in designing and implementing solutions (Chassin, 2013).

Table 2. Inherent and Acquired Risk Factors for Skin Breakdown in Hospitalized Infants and Children

Inherent Risk Factors	Iatrogenic or Acquired Risk Factors
Altered Structure and Function of Skin (e.g. in infants)	Suboptimal assessment of skin on admission and throughout hospitalization
Altered Nutritional State (e.g. feeding intolerance)	Suboptimal nutrition management
Incontinence	Suboptimal moisture management
Immobility or limited ability to reposition self	Suboptimal positioning and repositioning; suboptimal bed surfaces for pressure redistribution
Need for supportive medical devices	Suboptimal padding or positioning of medical devices

Adapted from: Baharestani & Ratliff, 2007

Specific Aims

The primary aim of the HAPI Reduction Task Force initiative was to decrease the number of severe-harm HAPI by 20% in targeted areas by the conclusion of each fiscal year.

Methods

Context

The project took place in a large pediatric hospital with an annual volume of 3.3 million patient encounters and over 32,000 admissions. The patient population encompasses a diverse mix of chronic and acutely ill patients. It is a Magnet® organization, recognized since 2003 for nursing excellence by the American Nurses Credentialing Center (ANCC). The contextual elements of the program include a Skin Champion team composed of caregivers who are passionate about PI prevention and strive to know more about how they can influence a decrease in the pressure injury rates. Executive leadership supports progress of the Skin Champion team and a strong multidisciplinary faculty who are content experts that partner with nursing to grow the Skin Champion team.

The program supports the continuing education of the Champions. An educational calendar is planned every six months so that content for monthly meetings included could be tailored to meet specific learning needs. A four-hour pressure injury prevention course is provided annually as a refresher for existing Champions and a requirement for new Champions. The faculty prepares slides for each Champion meeting to discuss pressure injuries that occurred during the past month and recommend interventions to prevent another similar occurrence. PI prevention bundle compliance for each unit is discussed in detail as well as identified barriers toward goal achievement and improvement strategies.

Interventions

The HAPI Reduction Task Force implemented system-based changes that would sustain regardless of personnel availability, ongoing training, or patient acuity. Interventions tied directly to High Reliability Principles and focused on first gaining understanding of patients' inherent and acquired risk factors. The organization then employed prevention measures in accordance with those required by the Solutions for Patient Safety Collaborative, subsequently auditing and reporting adherence to the "HAPI Prevention Bundle" of care practices (Figure 1), with the goal of achieving compliance to the bundle of at least 90%.

Figure 1. Solutions for Patient Safety HAPI Prevention Bundle Elements

Prevention Bundle Element - Maintenance	Care Descriptions
Standard Elements	
Skin Assessment *	• At least every 24 hours but consensus best practice - recommend every shift change (Q4H in perfusion compromised patients), Operating Room (OR) at end of cases lasting 4 hours or more and/or on arrival PACU/ICU's
Device Rotation	• Assess skin in contact with medical devices each shift or more frequently with other care, Rotate pulse-ox probe at least every 8 hours or more often if able
Patient Positioning	• Turn all immobile patients at least every 2 hours or timed with care in NICU (e.g. standardized turning schedule, clock at bedside); • Maintain HOB less than or equal 30 degrees (unless medically contraindicated) Note: Patients who are mobile and/or able to get out of bed may sit in a chair or upright in bed if physically able to do so. Patient position must still be shifted regularly to reduce pressure.
Appropriate Bed Surface	• Evaluate need for specialty bed based on Skin Risk Assessment. • Use gel pads, pillows and/or pressure reduction device to cushion bony prominences.
Moisture Management	• Barrier cream applied to create a moisture barrier for all diapered patients; • Keep skin clean and dry

Adapted from: SPS Pressure injury prevention bundle elements, 2018

Unit-based results of bundle audits were reviewed in tandem with an overall count of HAPI occurrences, and individual bundle element compliance was highlighted in investigating each HAPI to gradually reveal persistent themes. These themes were used to develop additional education for frontline staff and leaders on preventing similar future harm. Persistent themes also drove systems-based interventions to improve care. Table 3 describes interventions to reduce HAPI and their associated High-Reliability Principles.

Skin Champion Team

While each intervention fit under the umbrella of at least one High Reliability principle, one large-scale change successfully employed several principles at once. The Skin Champion team is an important extension of the HAPI Reduction Task Force. Goals of the Skin Champion program are to empower frontline care providers to implement evidence-based care bundles, achieve consistency of practice, and provide resource availability at the point of care. Skin Champions are recruited on a volunteer basis from each unit and receive focused training on HAPI prevention.

Disciplines represented in the Skin Champion program include Registered Nurses, Patient Care Assistants, Respiratory Therapists, Advanced Practice Providers and Physicians. Each discipline brings forth a unique perspective on HAPI prevention and all input is considered vital to the overall effort. Monthly Skin Champion meetings focus on reviewing compliance to HAPI prevention bundle elements, HAPI occurrences and the results of HAPI investigations (known as "deep-dives"). The organization's Wound, Ostomy and Continence Nurses (WOCN) play a crucial role in Skin Champion meetings, serving as educators and mentors. WOCNs share patient stories with photos of their injuries and educate the Champions as to specific ways each injury could have been prevented. The Champions are then responsible for communicating this information to frontline staff at the unit level.

Skin Rounds

Education spreads via organizational channels including weekly Skin Rounds, in which the Champions partner with nursing leaders (typically Clinical Specialists and Clinical Nurse Specialists) and WOCNs to identify, round on and assess the sufficiency of HAPI prevention measures in patients identified as high-risk for HAPI. The model employed here for Skin Rounds is based on a previously published model (Rodgers, 2014) and involves direct engagement of HAPI prevention team members with bedside care providers. High-risk status is determined by use of the Braden or Braden Q score (Noonan, 2011); however, all infants in intensive or critical care at this facility are considered to be at high risk for HAPI due to immobility and skin immaturity.

Skin Rounds are highly effective in standardizing and evaluating care practices and opening the lines of communication between frontline providers and leaders. Skin Rounds are most effective when they are predictable in form and function (i.e., similar or same participants rounding at predictable intervals), and are conducted with an authentic and helpful spirit. It is important that frontline providers not view Skin Rounds as "policing". Skin Champions are regarded at the unit level as resources for solving real-time problems, and are called upon by colleagues and leaders to implement and educate to HAPI prevention measures for new patients or those who have experienced an abrupt change in clinical status with associated change in HAPI risk.

Table 3. Interventions to Reduce HAPI and Associated High-Reliability Principles

Intervention	Associated High Reliability Principle
"Deep Dives" into HAPI Occurrences with focus on failures of systems rather than individuals	Reluctance to Simplify
Standard approach to HAPI Investigation	
Improved selection and standardization of HAPI prevention products, including all inpatient bed surfaces	
Improved availability of HAPI prevention products at the point of care	
Recognition that standards of care may need amendment in special populations (e.g., preventing EEG-related HAPI in neonatal patients undergoing therapeutic hypothermia (Luton, 2017)	
Ongoing reporting of HAPI "deep dive" findings and bundle compliance data across organizational hierarchy	Preoccupation with Failure
Single system of HAPI notification established to improve consistency of response and investigation	
Understanding of contributors to HAPI across units, frontline care providers and leaders; transparency and reporting of concerns established as an expectation	
Employees not punished for reporting HAPI occurrences; rather, kudos and "Great Catch" awards given for coming forward to report harm	
Involvement of multiple disciplines, departments and levels of organizational hierarchy in HAPI Reduction Task Force	Sensitivity to Operations & Deference to Expertise
Overall increase in awareness of HAPI incidence and understanding of causes & prevention	
Overarching intolerance for conditions that precipitate HAPI development	
Interventions designed with those most intimately involved in the work; shared ownership of problems *and* solutions	
Ongoing focus and determination to reduce HAPI	Commitment to Resilience
Celebrations at even small HAPI-free milestones	

Professional development of Skin Champions is a priority for the HAPI Reduction Task Force and program leaders. Skin Champions are mentored in presenting the impact of their efforts in the hospital and at conferences via posters and presentations and through publication. Several Skin Champions were provided the opportunity to complete the Wound Treatment Associate® (WTA) continuing education program (Wound, Ostomy and Continence Nursing Society ®), though the course content was not specific to the pediatric population. The Skin Champions who completed the WTA program gained a deeper understanding of HAPI risk assessment, identification and management. A neonatal- and pediatric-focused HAPI prevention training program would be of great benefit to children's hospital patients and employees across the country.

Of the multiple interventions employed at this hospital to reduce HAPI, the Skin Champion program most comprehensively met the tenets of High Reliability. Table 4 describes the Skin Champion program and the associated High Reliability Principles.

Study of Interventions

As a measure of the Skin Champions' self-confidence in their new role, a self-efficacy survey was conducted six months after the program started. Self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 2). The seven-question survey asked about confidence in their ability to function in the Skin Champion role, rounding on high risk patients in their unit, and auditing charts to monitor bundle compliance. It also asked about their confidence to provide feedback to peers when they find a practice deviation, assess patients with Braden and Braden Q scales, and collaborate with their physician partners. The survey captured six domains of champion role responsibilities.

Table 4. The Skin Champion Program meets multiple High Reliability Principles

Skin Champion Activity	Associated High Reliability Principle
Involved in review of HAPI occurrences and development of "Deep Dive" findings	Reluctance to Simplify
Discuss results of HAPI investigations and bundle compliance audits with WOCNs and offer insight based on unique disciplinary perspective	
Real-time engagement in HAPI prevention at the unit level on a continuous basis	Preoccupation with failure
Evaluation of gaps in practice through rounding	
Reporting of concerns and ideas for improvement to HAPI Reduction Task Force before harm occurs	
Conducting Skin Rounds	Sensitivity to Operations
Engaging frontline providers in education while also receiving and escalating ideas for improving care	
Participating directly in the design and implementation of interventions to prevent HAPI	Deference to Expertise
Evaluating effectiveness and communicating ways to optimize interventions based on direct frontline successes & failures	
Serve as ongoing Champions of the importance of preventing harm from HAPI	Commitment to Resilience
Help frontline providers and leaders understand lessons learned from HAPI events to keep morale high	
Ongoing professional development a key duty of team members who wish to further the advancement of HAPI prevention at the unit, organizational and national levels	

Responses were captured on a 6-point Likert scale ranging from 'mostly agree to 'completely disagree.' The survey response rate was 56% (n=41). The Champions reported 83% confidence that they completely agree/mostly agree with all the survey items. Results showed that the Champion nurses were progressing well in their new role and confirmed to the faculty that the program was poised for success.

The Skin Champions made great progress in driving practice changes at the bedside and contributed to 58% reduction of PIs in 2015. Quality Improvement run charts are generated monthly to track PI rate per 1000 patient care days.

In 2015, sixteen Skin Champion nurses assessed 115 pediatric patients to determine the interrater reliability of the Braden and Braden Q scales (Riccioni, 2018). Complete Braden Scores obtained from two raters on 52 patients had an Intraclass Correlation Coefficient (ICC) 0.894 (95% Confidence Interval: 0.823 - 0.938), which represents "Excellent" agreement (Fleiss, 2003). Complete Braden Q Scores obtained from two raters on 63 patients had ICC 0.726 (95% Confidence Interval: 0.585 - 0.824), which represents "Fair to Good" agreement (Fleiss, 2003).

Measures

The outcome measure of the program was the incidence of severe harm HAPI per 1000 patient days, in accordance with the NDNQI and SPS definition of a HAPI that is "reportable" to the SPS

Collaborative (those classified by a WOCN as a Stage 3, Stage 4 or Unstageable HAPI). It is important to note that Deep Tissue Injuries (DTI) were considered "reportable" to SPS until January 15, 2015, at which point these injuries were deemed "reportable" only if they progressed to a Stage 3, Stage 4 or Unstageable HAPI (Safety, 2015). Our data were amended to retroactively reflect the change in definition.

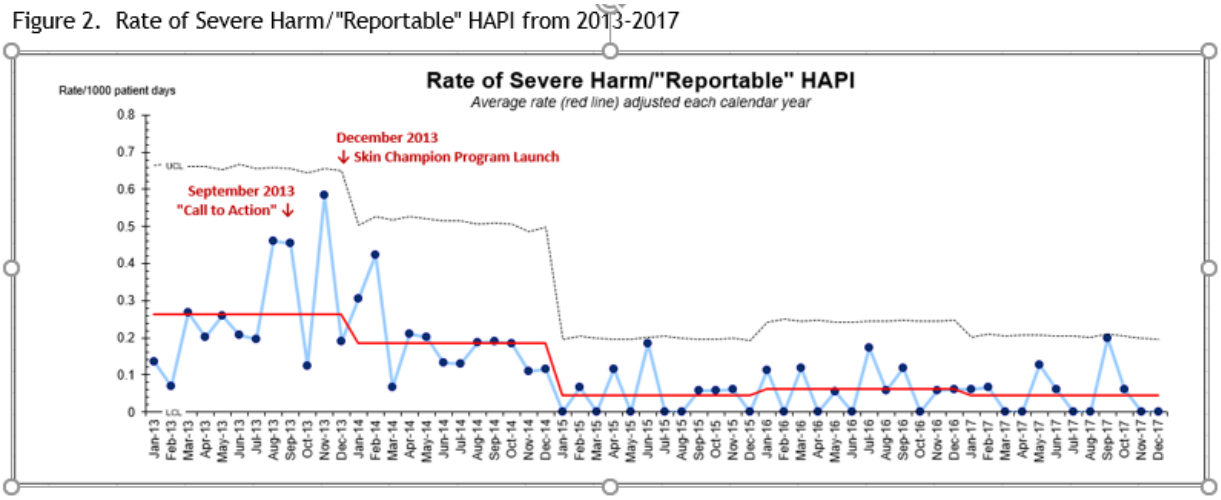
Analysis

A U-chart was used to display the reportable HAPI incidence over time. The u-chart is a statistical process control chart that displays a rate over time where the rate is quantified by the number of events of interest divided by the "area of opportunity" for the events to occur. For this project the monthly reportable HAPI rate per 1000 patient days was displayed in the U-chart.

Results

Figure 2 demonstrates the average rate of severe harm/"reportable" HAPI over time. The average rate of "reportable" HAPI in 2013, prior to the launch of the Skin Champion program, was 0.26/1000 patient days, with considerable variability during the last two quarters of 2013. This occurrence rate began to reflect a more stable process starting April 2014, likely in part due to increased standardization of care practices modeled by the Champions.

Figure 2. Rate of Severe Harm/"Reportable" HAPI from 2013-2017



The average rate of "reportable" HAPI decreased in both 2014 and 2015, and then stabilized through the end of 2017 at a substantially lower rate compared to before implementation of the Skin Champions program. Figure 3 delineates the annual rate of "reportable" HAPI from 2013-2017, demonstrating an 85% decrease in rate over that time.

Sustainability

Sustainability is the sought after 'gold standard' in quality improvement initiatives, with sustained success of the Skin Champions program reflected by an average HAPI rate remaining below 0.1/1000 patient days from 2015 through 2017. In fact, during the period of January 2015 – December 2017 there were 16 months with no severe harm/"reportable" HAPI events, whereas from January 2013 to December 2014 there was at least one "reportable" HAPI every month.

Discussion

Summary and Future Direction

The implementation of the Skin Champions noted a significant reduction in severe harm/"reportable" HAPI and an increase in prevention bundle compliance. The results are attributable to systems-based changes and the commitment made by the HAPI Reduction Task Force, executive leaders, Skin Champion Faculty, and Skin Champions to have a successful program. The Skin Champion program at this facility has been instrumental in bringing prevention measures to the bedside. Champions adapt care management processes that achieve effective and safe care and mobilize their colleagues' involvement (Bergquist-Beringer et al., 2009). The program centers around ongoing education of Skin Champions on assessment, prevention, products, and treatment to manage PI.

A vital part of the program is the number of Skin Champions representing multiple disciplines

Figure 3. Average Annual Rate of Severe Harm/"Reportable" HAPI and Detailed Data Annotations

Year	Average Rate of Severe Harm HAPI per 1000 patient days	Data Annotations
2013	0.26	August 2013: Standard Operating Procedure (SOP) developed to ensure consistency of bundle compliance data collection
		September 2013: CNO Call to Action
		November 2013: Improved ease of EMR documentation (consolidated 7 flow sheets into 1 flow sheet)
		December 2013: Skin Champion Program Launched
2014	0.19	April/May 2014: Increased engagement of Skin Champions in Skin Rounds and bundle compliance data collection
		November 2014: Perioperative HAPI Prevention Protocol established
2015	0.04	April/May 2015: All pediatric bed surfaces exchanged for surfaces that diffuse pressure; neonatal bed exchange still in progress
		July 2015: "Copy Forward" functionality disabled in EMR for patient position, requiring manual entry of patient position with each assessment
2016	0.06	March 2016: Prevention Bundle Audit tool revised to reflect bedside compliance with practice versus documentation
		July 2016: Endotracheal tube re-securement standardization in cardiovascular intensive care unit with education on when to consult WOCN for evaluation of potential HAPI
		Sept 2016: Implementation of improvements to EMR with timed reminders for required documentation (Epic "Work List" functionality, Epic Systems Corporation, Verona, WI)
2017	0.05	March 2017: WOCN Prevention Program implemented in areas with patients at high risk for HAPI
		May 2017: Required RN training related to HAPI Prevention

across the organization. Each Skin Champion is a resource to their unit and bedside peers. Ongoing recruitment of Skin Champions is required to keep staff engaged and maintain the rigor of the program. Staff members are invited yearly to apply for the Skin Champion Role. Each applicant must sign and agree to a two-year term. Table 5 lists the requirements to be part of the Skin Champion program. Personal ownership of the idea, initiative, or quality improvement project is a central feature of the role (Bergquist-Beringer et al., 2009). Support of a Skin Champion's direct supervisor is essential to participation since the role requires time outside of direct patient care to attend meetings, conduct audits and participate in skin rounds. Workload, knowledge, risk assessments and interventions are key factors in the reduction of HAPI (Aydin, 2015). Skin Champions' autonomy and pride in the role and continued leadership support for resource requirements have influenced an increase in membership of 17% since 2013.

Monthly Skin Champion meetings have proven to be an integral component in spreading education and awareness of pressure injury prevention throughout the organization. Wound, Ostomy and Continence Nurses (WOCNs) and Skin Champion Faculty serve as mentors and prepare the Skin Champions to bring evidence-based practice to the bedside. One unexpected result of the program is an increase in "non-reportable" HAPI (Stage 1, Stage 2 and DTI) by over 30% during 2015-2017. This increase is attributed to early detection of HAPI through skin rounds, early recognition, and intervention of Skin Champions.

Table 5. Requirements for Participation in the Skin Champion Program

Requirements for Participation in the Skin Champion Program
1. Participate in professional development activities to build knowledge and skills. a. Attend and actively participate in 80% of monthly skin champion meetings.
2. Participate in weekly skin rounds with CNS/CS or WOCN. a. Assist in follow up of high-risk patients identified during rounds. b. Assist bedside nurses with identifying available products for high-risk patients. c. Monitor practice through completion of HAPI prevention bundle audits.
3. Serve as a role model and resource for unit staff. a. Provide skin care education through in-services and bedside rounding. b. Function as skin health and skin champion when on shift c. Share skin champion updates and unit/hospital data at the unit level d. Reinforce positive skin care behaviors demonstrated by staff and family members
4. Collaborate with unit CNS/CS and unit educator to identify educational needs and opportunities for improvement. a. Assist in coordinating new product trials b. Assist WOCN in formulating plans of care on the unit c. Participate in a quality review of every pressure ulcer event
5. Participate in unit-based and hospital-wide skin relate quality initiatives. a. Assist with quarterly data collection and skin prevalence surveys b. Assist in chart audits evaluating the accuracy of skin documentation c. Assist in pressure ulcer prevention audits on high-risk patients

During monthly meetings, Skin Champions discuss the prevention bundle compliance of each unit. This is an opportunity to applaud units who have met the goal of 90% compliance and to offer support and education to units falling below the goal. Celebrating team successes is a form of recognition and appreciation for invested work (Creehan, 2015). The Skin Champions have been instrumental in improving bedside care, being a resource to peers and implementing evidence-based HAPI prevention bundle elements throughout the organization.

Interpretation and Lessons Learned

With education being a vital component of developing Skin Champions, the faculty sought out a training course from the Wound Ostomy and Continence Nurse Society (WOCN®). The Wound Treatment Associate® (WTA) continuing education program is designed to prepare a non-WOC certified nurse to provide optimal care for patients with acute and chronic wounds under the direction of a WOC specialty nurse (Wound Ostomy and Continence Nurse Society, 2018). Each Skin Champion was to complete the course, comprised of online didactic and a clinical skills laboratory. Ultimately, we determined that the course lacked information about the pediatric population. While knowledge was gained, the HAPI Reduction Task Force was unable to clearly identify how the Skin Champion role would change for those who had completed the WTA program. The WTA program was ultimately discontinued from the Skin Champion program plan.

Additional lessons have been learned about maintaining competency and engagement of the senior Skin Champions. With success of the program, a majority of the Skin Champions continue involvement beyond the initial two-year commitment. To keep them engaged, two additional components were added to the monthly meetings; a "product of the month" item and unit-based "deep-dive" into a HAPI occurrence. Each month a vendor or a WOCN presents a product related to skin and wound care. A unit-based Clinical Specialist or Clinical Nurse Specialist presents the findings of a deep-dive investigation into any severe-harm/"reportable" HAPI that occurred on the unit, with a focus on missed opportunities for prevention. Both additions empower the Skin Champions to proactively engage in product review and research and take preventive measures back to the bedside.

Limitations

We noted a lack of supplemental educational resources focused on pediatric patients. Thus, the content experts at the hospital developed a HAPI Prevention Course for Pediatric Patients. It requires financial support, time and personnel to successfully execute on an annual basis.

Conclusion

Since the implementation of the Skin Champion program in 2013, the HAPI rate has decreased by 85%. The rate has remained near 0.05/1000 patient days, which is lower than the HAPI national average in pediatric patients (Solutions for Patient Safety, 2018). The program is sustainable because the Skin Champion team remains strong with active participation from several disciplines, and much of the team's success can be attributed to leadership support at the organizational level as well as at the unit level. Support is provided as protected time for meetings and education, financial support for educational endeavors, as well as physical presence and interaction with the Champion team members while on the unit and in meetings. The Champion model is useful for other hospital acquired condition reduction initiatives. The facility's central line associated bloodstream infections (CLABSI) and peripheral intravenous infiltration and extravasations (PIVIE) Champion groups have demonstrated similar successful outcomes.

References

Ahroni, J. (2014). Developing a wound and skin care program. *Journal of Wound Ostomy & Continence Nursing 41*(6), 549-555.

Aydin, C., Donaldson, N., Stotts, N. A., Fridman, M., & Brown, D. S. . (2015). Modeling hospital-acquired pressure ulcer prevalence on medical-surgical units: Nurse workload, expertise, and clinical processes of care. *Health Services Research 50*, 19-24.

Baharestani, M., & Ratliff, C. R. (2007). Pressure ulers in neonates and children: An NPUAP white paper. *Advances in Skin & Wound Care 20*(4), 208-220.

Baldwin, K. (2002). Incidence and prevalence of pressure ulcers in children. *Advances in Skin & Wound Care 15*(3), 121-124.

Bandura, A. (1994).Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998).

Bergquist-Beringer, S., Derganc, K., & Dunton, N. (2009). Embracing the use of skin care champions. *Nursing Management, December*, 19-23.

Chassin, M.,& Loeb, J. M. (2013). High reliability health care: Getting there from here. *The Milbank Quarterly, 91*(3), 459-490.

Creehan, S. (2015). Building nursing unit staff champion programs to improve clinical outcomes. *Nurse Leader 13*(4), 31-35.

Fleiss, J. L., Levin, B., & Paik, M.C. (2003). *Statistical Methods for Rates and Proportions (3rd ed.)*. Hoboken, NJ: John Wiley & Sons.

Kelleher, A., Moorer, A., & Makic, M. (2012). Hospital-acquired pressure ulcer prevalence in a surgical intensive care unit. *Journal of Wound Ostomy & Continence Nursing 39*(2), 152-157.

Luton, A., Hernandez, J., Patterson, C, Neilsen-Farrell, J, Thompson, A,& Kaiser, J. (2017). Preventing pressure injuries for neonates undergoing therapeutic hypothermia for hypoxic ischemic encephalopathy: An interprofessional quality improvement project. *Advances in Neonatal Care 17*(4), 237-244.

Niederhauser, A., Lukas, C., Parker, V., Ayello, E., Zulkowski, K., & Berlowitz, D. (2012). Comprehensive programs for preventing pressure ulcers: A review of the literature. *Advances in Skin and Wound Care 25*(4), 167-188.

Noonan, C., Quigley, S, & Curley, M. A. Q. (2011). Using the braden q scale to predict pressure ulcer risk in pediatric patients. *Journal of Pediatric Nursing 26*(6), 566-575.

Pasek, T. A., Geyser, A., Sidoni, M., Harris, P., Warner, J., Spence, A., . . . Weicheck, S. (2008). Skin care team in the pediatric intensive care unit: A model for excellence. *Critical Care Nurse 28*(2), 125-135.

Razmus, I., & Bergquist-Beringer, S. (2017). Pressure injury prevalence and the rate of hospital-acquired pressure injury among pediatric patients in acute care. *Journal of Wound Ostomy & Continence Nursing 44*(2), 110-117.

Riccioni, N., Berlanga, R, Hagan, J, Schier, R, & Gordon, M. (2019). Interrater reliability of the Braden and Braden Q by skin champion nurses. *Journal of Pediatric Nursing 44*, 9-15.

Rodgers, E., Nist, M.; Gardikes-Gingery, R., Shepherd, E., Ruth, B., & Keller, L. (2014). Skin rounds: A standardized approach to pressure injury detection and reporting in the neonatal intensive care unit. *Journal of Obstetric, Gynecologic & Neonatal Nursing 43 (Supp 1)*, S29-30.

Safety, O. C. S. H. S. F. P. (2015). Operational Definition Measurement Pressure Ulcers. Retrieved from http://www.solutionsforpatientsafety.org/wp-content/uploads/sps-operating-definitions.pdf

SPS Pressure injury prevention bundle elements. (2018). *Solutions for Patient Safety*. Retrieved from http://www.solutionsforpatientsafety.org/wp-content/uploads/SPS-Prevention-Bundles.pdf

Sullivan, N., & Schoelles, K. (2013). Preventing in-facility pressure ulcers as a patient safety strategy. *Annals of Internal Medicine 158*(5), Supplement.

Visscher, M., King, A., Nie, A., Schaffer, P., Taylor, T., Pruitt, D., … Keswani, S. (2013). A quality improvement collaborative project to reduce pressure ulcers in PICUs. *Pediatrics 131*(6), e1950-e1960.

Wang, M., Hyun, J.K., Harrison, M., Shortell, S.M., & Fraser, I. (2006). Redesigning health systems for quality: Lessons from emerging practices. *Joint Commision Journal on Quality and Patient Safety 32*(11), 599-611.

Waterlow, J. (1997). Pressure sore risk assessment in children. *Paediatric Nursing 9*(6), 21-24.

Weick, K., & Sutcliffe, K. (2007). *Preventing Pressure Injuries for Neonates Undergoing Therapeutic Hypothermia for Hypoxic Ischemic Encephalopathy: An Interprofessional Quality Improvement Project* (Vol. 2nd edition). San Francisco: John Wiley &Sons, Inc.

Willock, J., Hughes, J, Tickel, S, Rossiter, G, Johnson, C, & Pye, H. (2000). Pressure sores in children: The acute hospital perspective. *Journal of Tissue Viability 10*(2), 59-62.