

Introduction

Challenges with the handling and mobility of patients are acknowledged early as the nineteenth century. Current estimates of injuries related to the handling and mobility of patients account for nearly 25% of all health care workers' compensation claims, costing an average of \$15,600 per claim. Registered nurses (RNs) rank as the sixth highest occupation for musculoskeletal work-related injuries forcing them to leave the profession at a rate of 12% annually. Many attempts are described in the literature to reduce nurse injuries, including teaching proper body mechanics, technological advancements, and passing legislation to mandate an ergonomic standard. The most significant finding for reducing nurse injuries is the importance of SPHM programs.

While the literature emphasizes the value of comprehensive SPHM programs in organizations, an effective SPHM program must include understanding barriers to adherence with regard to using SPHM equipment. The literature points to availability of equipment, failure to properly assess for patient need, lack of training, patient aversion, inadequate staffing levels, poor maintenance, and storage issues as barriers to why SPHM equipment is not utilized.

In early 2016, a large, three acute care hospital system in Southern New Jersey identified the need to evaluate their current SPHM program. A steering committee was formed and the ANA SPHM Interprofessional National Standards (Figure 1) were used as the guidelines for program restructuring and policy changes. New equipment was purchased and hands-on staff training was provided between January 2017 and July 2017.

Problem Statement

An effective SPHM program is essential to an organization. Reducing nurse injury rates depends on RN adherence to a comprehensive program that utilizes the ANA SPHM Interprofessional National Standards as a framework for program development.

Purpose Statement

The purpose of this study is to evaluate the effectiveness of a SPHM program at a healthcare organization's three acute care hospitals in Southern New Jersey.

Methods

This study will describe nurse injury rates pre-SPHM program implementation and post-SPHM program implementation at a three acute care hospital system in Southern New Jersey. Data will be obtained from the employee health and safety database. Nurse injury rates from January 2016 to December 2016 (pre-SPHM program implementation) will be compared to June 2017 to June 2018 nurse injury rates (post-SPHM program implementation).

Conceptual Definitions

Nurse Injury Rate: A percentage that reflects the total number of documented nurse musculoskeletal trauma events from handling patients compared to total number of nurses employed at organization.

Barriers to SPHM Program Adherence: Any obstacle, perceived or actual, that deters an RN from following an organization's SPHM policy and program.

SPHM Program: A comprehensive set of guidelines and policies that give RNs instruction on how to safely transfer or ambulate a patient in their organization.

Sample

The sample for this study includes a convenience sample of RNs employed at three acute care hospitals in a healthcare system in Southern New Jersey.

Figure 1

8 SPHM ANA Standards

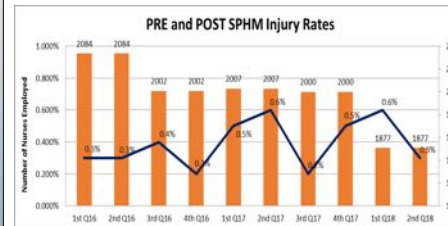
- Establish a culture of safety
- Create a sustainable program
- Incorporate ergonomic design principles
- Develop technology plan
- Educate and train healthcare workers
- Assess patients to plan care for their individual needs
- Set reasonable accommodations for employees' return to work post-injury
- Implement comprehensive evaluation system



Results

The **mean** nurse injury rate pre-SPHM program implementation (January 2016-December 2016) is 0.3%. Nurse injury rate **mean** post-SPHM program implementation (July 2017-June 2018) is 0.4%. The nurse injury rate **mean** during the implementation phase of the SPHM program (January 2017-June 2017) was 0.55%. The **mean** nurse injury rate from January 2016-June 2018 is 0.4% with a **standard deviation** of 0.15. These results demonstrate a 0.1% **increase** in nurse injury rates pre versus post SPHM program implementation.

The **mean** number of employed RNs during the pre-SPHM program implementation phase is 2,043. The **mean** number of RNs post-SPHM program implementation is 1,938. This represents a 5% reduction in employed RNs from January 2016 to June 2018.



Conclusions

In analysis of the data, nurse injury rates remained largely unchanged despite the incorporation of the ANA's SPHM standards into the organization's established program. Elements of the revised SPHM program included: a needs assessment, capital equipment purchasing, asset tagging of equipment, training and competency assessment of all staff including new hires as of January 2017, and supplemental training for injured staff.

The data demonstrates an inverse relationship between reported nurse injury rates and number of employed RNs. One possible explanation for this finding could be related to the current work being done surrounding high reliability organization training and the increased reporting of injuries--"speak-up" culture. Secondly, the reduction of the overall number of employed nurses has impacted the number of resources available to assist with patient handling and mobility.

Based on the study findings and barriers to program adherence noted in the literature, phase 2 of this study will include focus group interviews with RNs from each of the three hospitals within the study organization. Focus group questions were developed utilizing the AHRQ barrier mitigation tool and the ANA's SPHM Interprofessional National Standards. This portion of the study is currently under IRB review.



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