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CLINICAL SUMMARY

EXPANDED OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION 300 LOG AS METRIC FOR BARIATRIC PATIENT HANDLING STAFF INJURIES

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BACKGROUND

The nation's obesity epidemic is contributing to healthcare worker (HCW) workplace musculoskeletal disorders (WMSDs) as HCWs manage patients of varying size in the United States of America. HCWs are at a potentially higher risk for WMSDs associated with patient handling tasks which include high force activities (overexertion), awkward postures (stooping, bending, and reaching), and repeated activities (lifting, transferring, and repositioning). Additional contributing risk factors for WMSDs are environmental considerations, patient physical characteristics, patient mental status, HCW fatigue related to patient handling volume, and recovery time between difficult tasks. The purposes of this study were to examine HCW injuries associated with handling obese patients, to describe a process for identifying injuries associated with their mobilization, and to report on the need for safer bariatric patient handling.

WMSD Risk Factors

Healthcare workers

- High force activity
- Awkward postures
- Repeated activities
- Environmental factors
- Fatigue
- Recovery time

Patients

- Physical characteristics
- Mental status

OBJECTIVES AND METHODS

This prospective comparative study observed a 761-bed, level 1 trauma center affiliated with a U.S. medical school. The goal of the study was to compare obese vs non-obese patient handling injuries as it related to the standard Occupational Safety and Health Administration (OSHA) 300 log (report of employers' injuries and illnesses) data to assist with effective injury interventions. The hospital's OSHA 300 log expansion and adoption in 2006 to the E-OSHA 300 log included a new column to count staff injuries attributed to obese patient handling. The authors analyzed the 2007 E-OSHA 300 log to identify and describe the frequency, severity, and nature of bariatric versus non-obese patient handling injuries. Data collected included:

Healthcare workers

- Bariatric or non-obese patient
- Date & time of injury
- Job title & department
- Description of injury
- Area of bodily injury
- Cause of the injury
- Number of lost/ restricted workdays

Employers use OSHA 300 log to record every work-related injury or illness that includes restricted work activity, job transfer, days off, or medical treatment beyond first aid.

Obese

BMI of over thirty (30) and associated health issues due to weight.[1]

Bariatric

Term for the medical field dealing with causes, prevention & treatment of severe obesity, defined by a BMI greater than forty (40) with obesity-related diseases such as cardiovascular disease, diabetes, and osteoarthritis.[1]

RESULTS

The analysis of the 2007 E-OSHA 300 log revealed that patients with a body mass index of greater than 35 kg/m^2 constituted less than 10% of the patient population, but 30% of staff injuries related to patient handling. Looking at the mechanism of injury, such actions as pivot transfers, patient repositioning, and turning the patient in bed caused the most staff injuries. Registered nurses (RN) and nursing assistants accounted for 80% of the injuries related to bariatric patient handling compared with other job titles. Repositioning and turning the obese patient in bed accounted for 40% of all injuries.

Though there was no specific specialty accounted for staff injuries, the medical and rehabilitation units represented half of all bariatric patient handling injuries of the seven service lines studied. The shift worked also played a significant role of injury occurrences with 70% of the injuries happening during the 7:00 AM to 7:00 PM shift vs. 15% of the injuries occurring on the night shift between 11:00 PM and 7:30 AM.

The study also found that the highest number of incidents – one third of all injuries – occurred on Wednesdays and Sundays. Thirty-seven percent (37%) of lateral transfer injuries were attributable to bariatric patient handling and turning. Repositioning the patient in bed accounted for 31% of the injuries suffered by HCWs. A greater number of restricted workdays reported injuries associated with bariatric patient handling, with 53.6 restricted workdays reported injuries for bariatric patient handling injuries versus 38.5 restricted workdays reported for non-bariatric patient handling injuries. The data also showed staff injuries associated with both bariatric and non-bariatric patient handling usually occurred when the proper equipment ignored in favor of biomechanics. These injury descriptions on the E-OSHA 300 log demonstrate that the mobilization of patients using body mechanics alone increased the risk of caregiver injury.

Factors associated with staff injuries

Bariatric patients with a BMI of 35 kg/m^2 and higher (10% of the patient population) accounted for 30% of staff injuries.

53.6 restricted workdays were reported for injuries related to bariatric patient handling vs. 38.5 restricted workdays for non-bariatric patient handling injuries.

RNs and nursing assistants accounted for 80% of injuries.

Seventy percent (70%) of injuries occur between 7:00 AM-7:00 PM, and one-third (1/3) of injuries occur on Wednesdays and Fridays.

The mechanism of injury was due to the repositioning and turning of bariatric patients (40%) and during lateral patient transfers (37%).

Injury occurred with both bariatric and non-bariatric patients when biomechanics used.

CONCLUSION

The authors proposed a tracking indicator on the OSHA 300 log together with the E-OSHA 300 log as an analytical tool for bariatric patient handling-related injuries to identify the frequency, severity, and nature of HCW injuries during mobilization of the obese patient. HCWs should use equipment and not biomechanics alone for patient lifting, turning, and repositioning. Increasing body weight and weight maldistribution of patients and HCWs mandates special and creative strategies to prevent injury and promote patient and HCW safety.

APPLICATION FOR PRACTICE

1

Use OSHA 300 logs to:

1. Identify the nature of caregiver injury during mobilization of patients
2. Identify deficiencies and develop solutions

2

Incorporate patient assessment and practice guidelines into procedure guidelines and train staff accordingly

3

When handling a patient apply clinical judgement and assess:

1. Patient size
2. Equipment fit and availability
3. Selecting the safest device

Note: This clinical summary is written by clinicians at Ansell Healthcare Products LLC. Please refer to the actual study for full text information.

Randall SB, Pories WJ, Pearson A, Drake DJ. Expanded Occupational Safety and Health Administration 300 log as metric for bariatric patient-handling staff injuries. Surg Obes Relat Dis. 2009;5(4):463-468.

Reference:

1. *Swann J. Understanding the difference between overweight, obese and bariatric. Journal of Paramedic Practice. 2013;5(8):436-441.*

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