

CHANGES IN ERGONOMIC EXPOSURES AMONG NURSING ASSISTANTS AFTER THE INTRODUCTION OF A NO-LIFT PROGRAM IN NURSING HOMES

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Objectives

Musculoskeletal disorders associated with physical work demands such as manual resident handling are a concern for nursing assistants in nursing homes. In 2004, a corporation with 217 nursing homes began implementing a No-Lift Program (NLP), introducing resident lifting equipment, procedures, and policies. We have investigated the effect on Workers' Compensation claims and on observed ergonomic exposures: postures, resident handling activities, and equipment use.

Methodology

Ergonomic exposures of Geriatric Nursing Assistants (GNAs) were documented using PATH (Postures, Activities, Tools, and Handling).¹ In four nursing homes, we collected baseline, three-month and 12-month follow-up data. PATH variables of 'trunk posture,' 'leg action,' 'resident handling type,' and 'resident handling equipment' were compared between baseline and follow-up periods, using weighted frequencies (SAS 9.1). Annual rates of Workers' Compensation claims, standardized by workforce size, were compared pre- and post-NLP.

Results

After one year, the proportion of time that GNAs were handling residents dropped from 13.8% to 9.3%. While resident handling, GNAs used lifting equipment 14.6% of the time vs 5.7% before the NLP, and neutral trunk postures were observed 8.2% more frequently. Working in moderate trunk flexion increased by 9.2%; however, this was offset by decreases in more severe trunk postures. Walking/running increased and standing decreased. Workers' Compensation claims per full time employee decreased by 14% in the state where these ergonomic exposures were assessed.

Conclusions

The increase in moderate trunk flexion and dynamic leg action, and the decrease in Workers' Compensation claims, are all plausibly attributed to increased use of lifting devices. Flexion is common when adjusting slings and attaching them to lifting devices. GNAs must walk for a short time while pushing the lift device in order to properly position a resident, whereas without lifting equipment they would typically transfer residents while standing in place.

¹ Buchholz B, Paquet V, Punnett L, Lee D, Moir S. Appl Ergon 1996;27(3):177-87.