
Title : Ergonomic Applications for Lifting/Transferring Patients-Evidence From Intervention Studies

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Objective:

Determine long-term efficacy of a comprehensive, multi-facility ergonomic intervention, utilizing patient handling devices and participatory approach, on patient handling injuries to nursing personnel and comfort and safety of patients.

Methods:

A pre-post design (pre: 38.9 months, post: 51.2 months) was used to evaluate the efficacy of an ergonomic intervention using patient handling devices in six long-term care facilities and one chronic care hospital. Each facility formed teams consisting of worker representatives, management, and an ergonomic specialist. These teams developed comprehensive ergonomics programs using participatory approach to reduce patient handling injuries, primarily through implementation of "no-manual-lifting policies".

Results:

Compared to pre-intervention, post-intervention data showed significant reductions in: injuries (59.8% reduction), lost workdays (86.7%), modified duty days (78.8%) and workers' compensation costs (WCC) (90.6%) associated with patient handling activities ($p < 0.001$). The mean of payback periods was 15 months. Patient handling devices were rated to be less stressful on the low back ($p < 0.001$), shoulders ($p \leq 0.008$) and wrists ($p \leq 0.005$). Patients rated these devices as more comfortable ($p \leq 0.007$) and safe ($p \leq 0.010$) than manual lifting methods. The program had no effect on staffing levels.

Conclusions:

This study demonstrates that comprehensive ergonomics programs, properly utilizing patient handling devices, are effective in reducing patient handling injuries, lost workdays, modified duty days, and WCC as well as improving patient comfort and safety during patient transfers.