# Enhancing Safety in Patient Positioning: A Two-Part Exploration of Manual Handling Challenges in the UK

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## Summary

Healthcare practitioners (HCPs) have a high risk of work-related musculoskeletal disorders (WRMSDs), mostly due to care processes involving patient-manual handling. There is a research/practice gap in handling during positioning. This two-phase exploratory study assessed experts' opinions and HCP experiences of challenges in handling during positioning and optimised approaches to promote patient and occupational health safety.

Results revealed gaps in training and major positioning tasks including bed mobility, postural management, and turning into side-lying. Healthcare tasks in bed pose more physical demands and limit the usefulness of available innovations. Low-tech devices such as slide sheets are common but have limitations, including inserting them underneath a completely immobile patient, and it not aiding the patient's turning task within the safe lifting force. Promising solutions indicate that positioning systems combining mechanical and low-tech devices would improve outcomes. Research on these systems is needed to improve training and practices, fostering a safer work environment.

## Introduction

Manual patient handling is a significant cause of WRMSDs, with associated HCPs shortages and reduced quality of care [1]. This study explored manual handling challenges and optimised practice during patient positioning in long-term care.

## Methods

Subject experts (n=9) were interviewed, and the findings were used to design practice areas and challenges for manual handling questionnaire, was administered among UK-based HCPs (n=70) alongside the Nordic and musculoskeletal health tools. The University ethics approval was obtained (Ethics no: HEALTH 01051).

## Results and Discussion

Results highlighted gaps in training and major positioning tasks including patient bed mobility, postural management, and side-lying. Besides psychosocial factors, there are few innovations for handling in bed. Slide sheets pose challenges to insert underneath the patient and it does not aid the patient turning within the safe lifting threshold. Suggested optimised approaches included combining mechanical and low-tech devices as a positioning system. Also, involving the patient in their care, time to build rapport, folding technique of slide sheet insertion, in-bed sliding system, and holistic training.

Phase two confirmed a high (55.7%) prevalence of WRMSDs (Fig. 1), mostly in the lower back (42.9%). Supporting patients in side-lying was indicated to be challenging ($p=0.02$), heightened by time factors, soft mattress, slide sheet insertion/removal, non-breathable pillows, and not using wedges ($p<0.05$). HCPs with WRMSDs reported that they did not simplify tasks. HCPs with high neuro-caseload, identified poor skills in postural management, risk assessment, and lack of external training on supporting patients in side-lying and bed mobility ($p<0.05$).

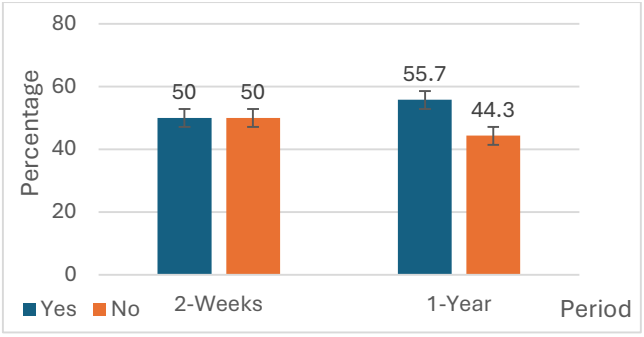


**Figure 1**: The prevalence of WRMSD due to patient handling within the last two weeks and one year (n=70).

Healthcare tasks in bed can be challenging [2] due to the frequent need for hands-on care. Marked limitations in training, and poor practice of bed mobility, side-lying, and posture care mean there are currently no safe approaches to rolling and turning a completely dependent patient [3].

## Conclusions

Low-tech devices such as wedges, slide sheet systems, hoists, firm support surfaces, and ergonomically safe techniques were indications of optimised practice. While these devices have limitations, HCPs showed low awareness of their practice, and the impact on the incidence of WRMSDs remains unknown. Improved training/practice may reduce sick leave, injury claims, and staff turnovers impacting the quality of care. Further research should validate the use of high/low-tech devices and improved training.

## Acknowledgments

This work was funded by the University Doctoral Training Centre for Industry Collaboration.

## References

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