

**PRONE TO MUSCULOSKELETAL INJURY (MSK)  
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# What is MSK



What are musculoskeletal conditions?

Musculoskeletal (MSK) conditions affect many people and can affect your joints, bones and muscles and sometimes associated tissues such as your nerves.

It can range from minor injuries to long-term conditions.



# MSK IN NURSING



- Work-related musculoskeletal disorders (MSDs) are a serious problem among hospital personnel, and in particular the nursing staff. Of primary concern are back injuries and shoulder strains which can both be severely debilitating. The nursing profession is one of the most risky occupations for low back pain.
- Covid 19 and proning raised the risks of MSKs across the country due to repetition and weights of patients.

# BED AND PATIENTS IN ITU DURING COVID 19



- We have 3 ITU sites during Covid we had extra bed space given to ITU Patients.
- 98 Beds in total.
- Patients were block-randomised to receive either 16-hour traditional or 24-hour prolonged prone positioning followed by a supine session.
- Arterial blood gas sampling was recommended 4–6 hours after supination.
- Return to the prone position was recommended within 8 hours if the P:F ratio was  $<150$  on  $0.6 F_{I_{O_2}}$  and  $10 \text{ cm H}_2\text{O}$



“I know it’s been a rough shift,  
but look at the bright side...  
only 7 hours to go.”

# WHY IS MUSCULOSKELETAL HEALTH IMPORTANT?



- Over 20 million people in the UK, almost one third of the population, have a MSK condition such as arthritis or back pain. Symptoms can include pain, stiffness, limited movement, and disability which affect quality of life and independence
- Poor MSK health has a huge impact on people, their employers, the NHS and the wider economy. In fact, over 30 million working days are lost due to MSK conditions every year in the UK and they account for up to 30% of GP consultations in England.





# WHY IS MUSCULOSKELETAL HEALTH IMPORTANT?



- The manual handling of patients in NHS hospitals, particularly in the intensive care unit (ICU), has undergone significant advancements from the days of Kings Fund beds and pump-up hoists. The introduction of new smart equipment and beds has brought about innovative features and benefits to address various challenges.
- Despite these advancements, sickness levels and musculoskeletal injuries (MSKIs), including those arising from ***prone positioning*** patients, have reached an all-time high within the NHS. This raises concerns about the sufficiency and appropriateness of staff training. Are our staff adequately trained, and do we tailor their training to meet individual needs?

# THE LACK OF EQUIPMENT KNOWLEDGE HAS ADVERSE EFFECTS ON PATIENTS



- Inadequate rehabilitation and mobilisation of patients could be improved significantly if beds and other equipment were utilised to their full potential.
- This highlights the importance of a good understanding of the equipment available and its correct application to lead to better outcomes for those under their care.
- A concerted effort toward providing comprehensive training is crucial in fostering a safer and more effective healthcare environment within the NHS.



Raised  
shoulders

## PRIMARY RISK FACTORS FOR MSDS



Twisted  
Wrist

Stretched  
posture

Exemplary Professional Practice

# PRIMARY RISK FACTORS FOR MSDS



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## CAN WE CHANGE THE WAY WE PRONE?



- Looking at what bed we use
- Looking at active mattresses so we don't need pillows
- Overhead hoist system to lift patients
- Slide sheets
- Repositioning sheets

**Let work together to see how we can make change**



# REFERENCE LIST



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