# Benefits of implementing Powered Bed & Stretcher Movers in hospitals: the East Kent Hospitals story

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Board of directors of the National Back Exchange & Trust Wide Moving and Handling Senior Co-Ordinator at East Kent Hospitals University Foundation NHS Trust. CEO of RQS Recognising Quality Solutions

# AGENDA

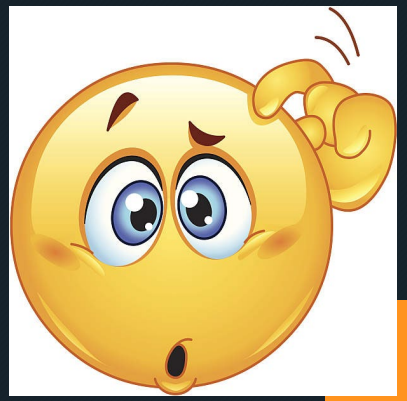
- Hello and welcome
- Presentation from Sharon
- A quick overview of the Felgains Bed & Stretcher Mover range
- Live Q&A session

# OBJECTIVES

- Musculoskeletal injuries from pushing and pulling
- The manual handling risks of manually pushing and pulling beds and stretchers.
- The impact this has on staff injury and staff turnover, and the subsequent financial and resource impacts.
- The benefits East Kent Hospitals have seen through implementing bed movers

# HEALTH AND SAFETY STATISTICS

## Key Figures for Great Britain (2021/22)



- **477,000** workers suffering from a work-related musculoskeletal disorder
- **61,713** injuries to employees reported under RIDDOR
- **36.8 million** working days lost due to work-related illness and workplace injury
- **£18.8 billion** estimated cost of injuries and ill health from current working conditions (2019/20)

# WHAT ARE MUSCULOSKELETAL DISORDERS (MSDS)?

**Manual Handling:**

- It is estimated that 1 in 3 accidents at work are caused by manual handling.

**Acute:**

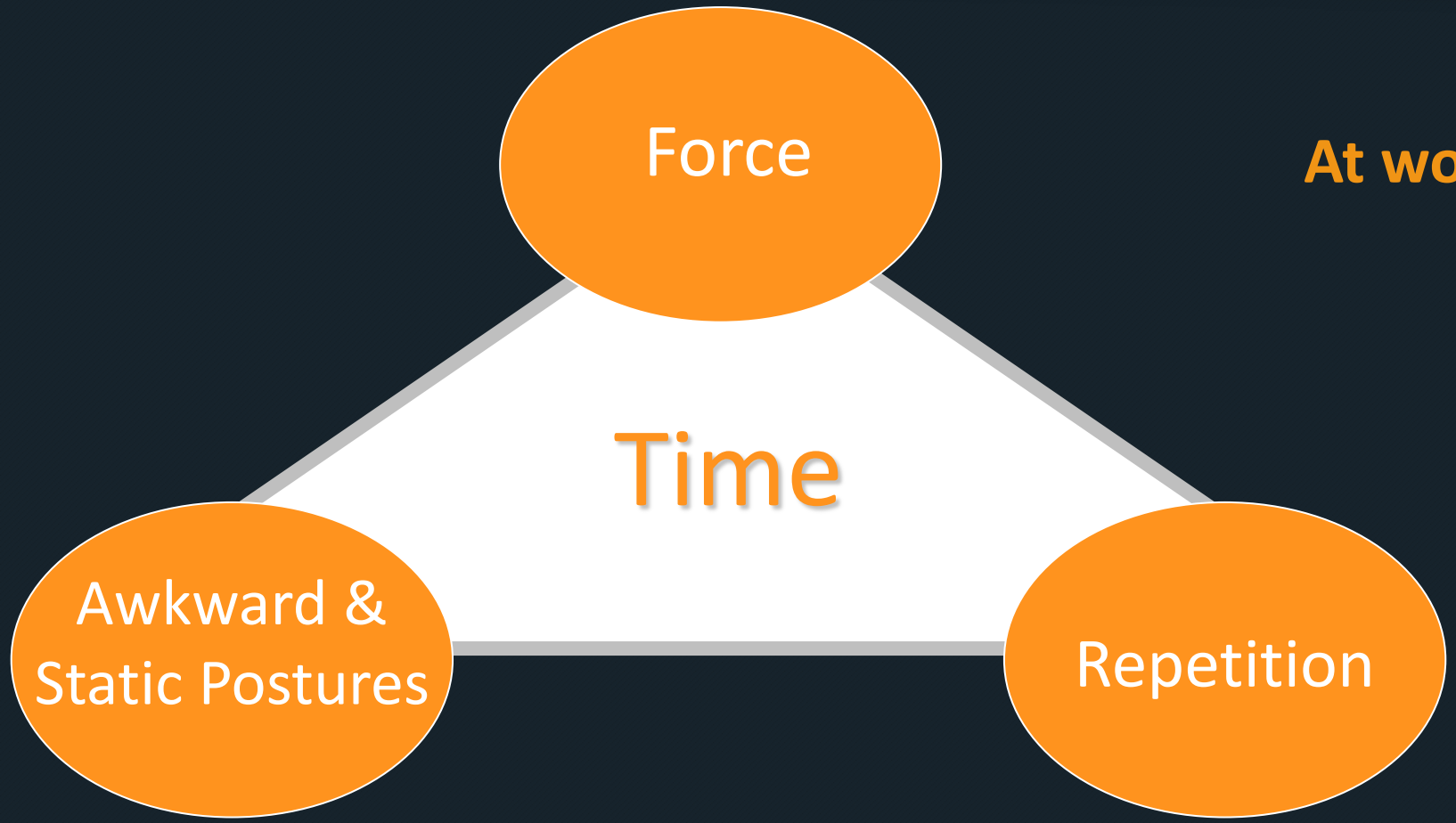
- A sudden or one-time traumatic event or incident, e.g., slip, trip, fall or car wreck

**Chronic or Cumulative:**

- Injuries that occur over a period of time (months/years)
- & are caused by a combination of risk factors

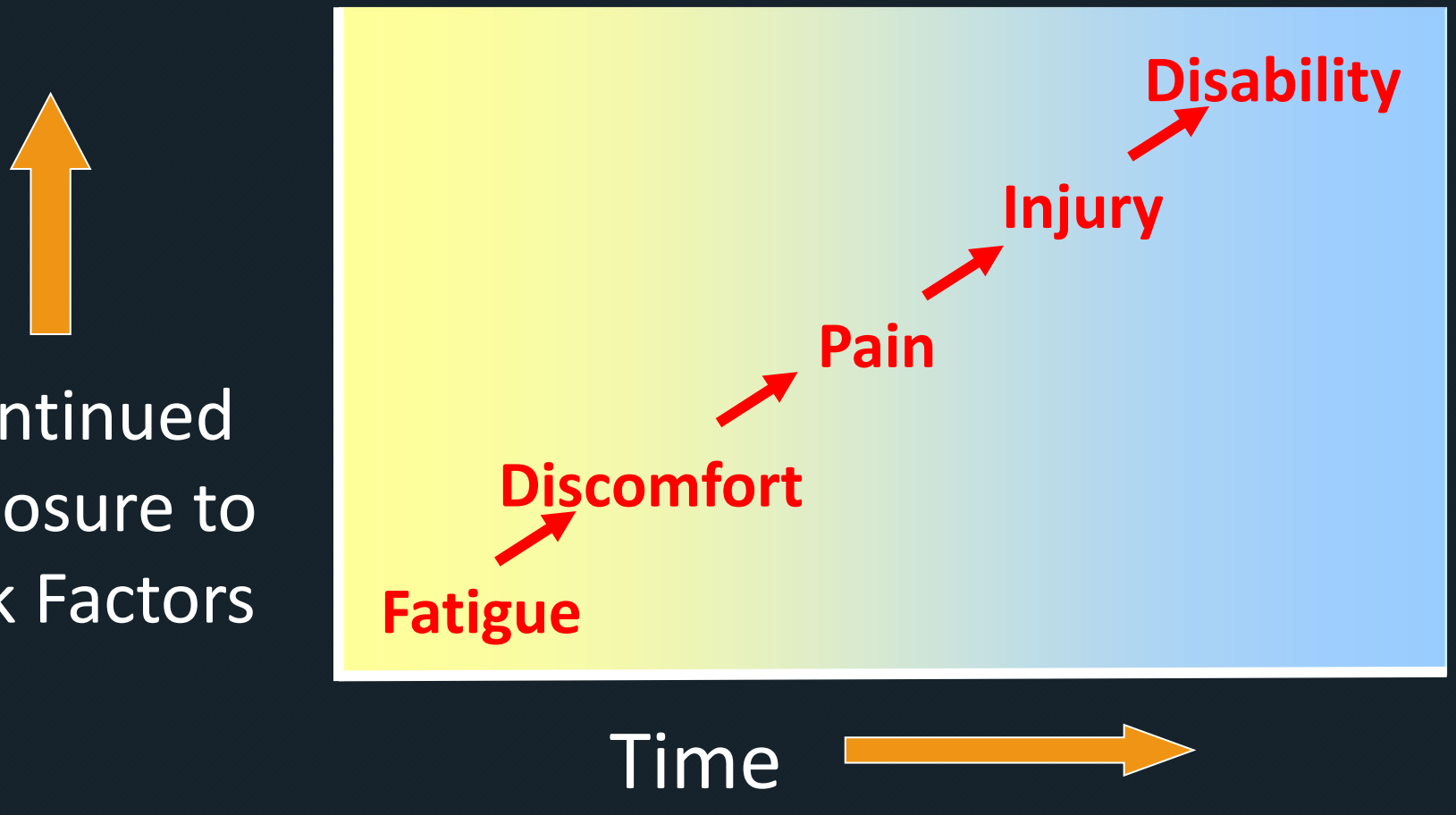
**MSDs affect ligaments, muscles, tendons, cartilage, blood vessels & nerves & spinal discs**

# PRIMARY RISK FACTORS FOR MSDS




**At work and/or at home**

# THE CUMULATIVE EFFECT FROM PUSHING AND PULLING BEDS



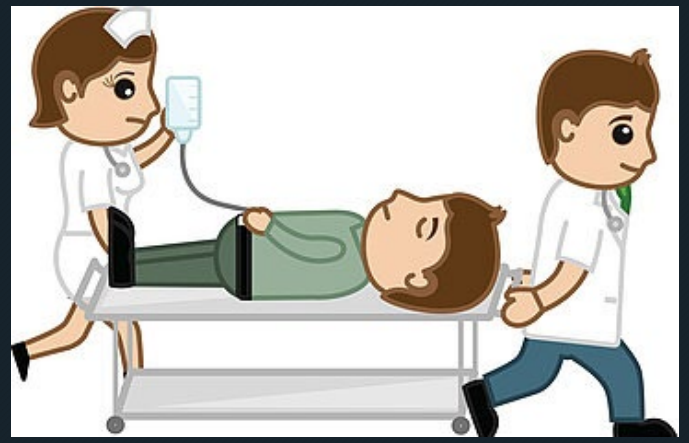
# EAST KENT HOSPITALS STORY (EKHUFT)

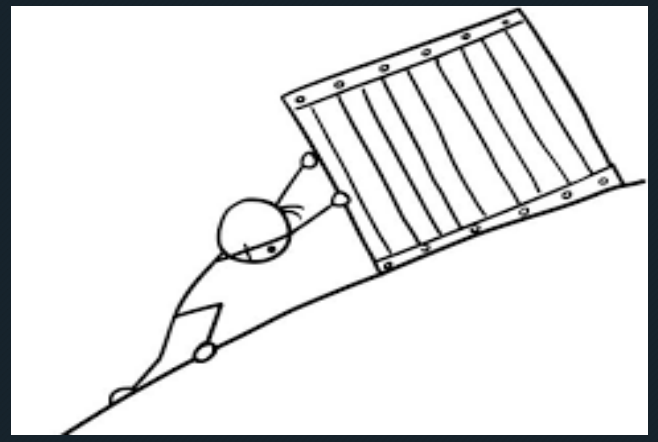
- 5 Hospital sites
- 1,400 bed spaces
- 10,500 staff
- All sites have slopes and tight corridors - Nightingale style

# POOR ERGONOMIC DESIGN OF THE ENVIRONMENT OR THE EQUIPMENT BEING USED.

## EKHUFT DEMANDS

- The job may be unnecessarily more difficult if it is not correctly and ergonomically matched to the employee;
- Staff would include manually pushing patient trolley or bed  frequently over long distances or up and down slopes .





# HOSPITAL BEDS

- The average bed/stretcher weighs 150kg
- Average bed weight of patients is 78kg

This means on average staff are pushing 228kg, this in on flat surface.

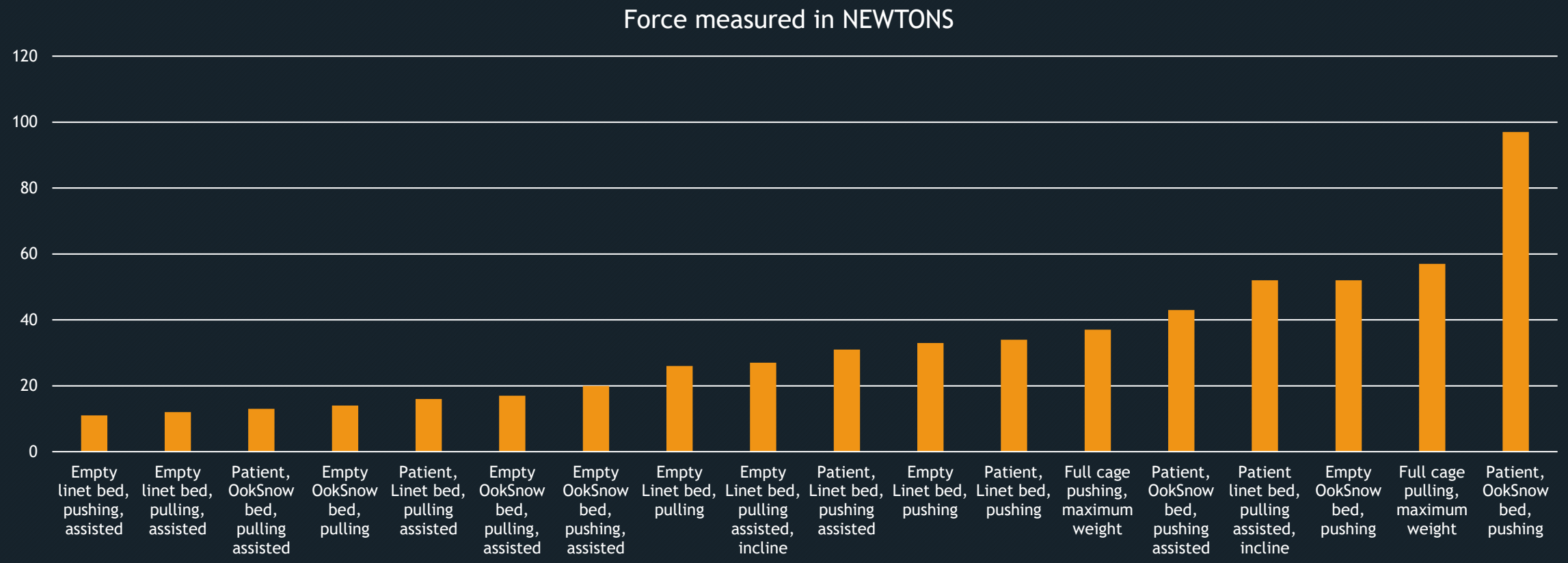
- As we have 1,400 beds, staff can be moving over a 100 beds a day.

# Poor Posture

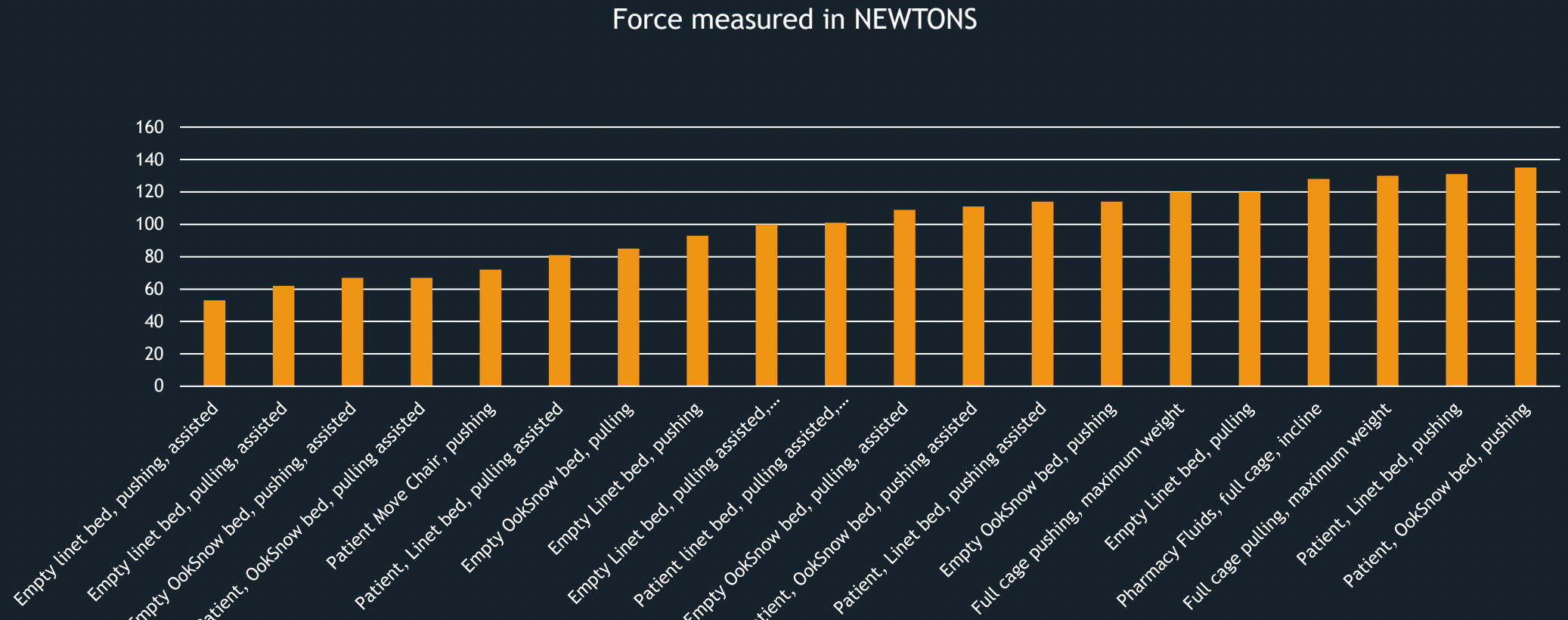
Potential Rotator cuff injury. Elbow away from the body

Arched back with added pulling forces lead to compression of the discs

# Push and Pull Readings with Continuous movement



# Start and Stop  Pushing and Pulling Readings



# RISK ASSESSMENT

- Staff should be involved in risk assessments
- Staff should also be included in the trial and selection of equipment that is purchased to reduce musculoskeletal risks.

# MANUAL HANDLING GENERIC RISK ASSESSMENT

| Task List Number EME 1<br>Moving Empty bed/trolley to go for repair to EME | Is an assessment needed?<br>(is there a risk of injury) Yes |
|---|---|

If 'Yes' continue. If 'No' the assessment need go no further

| | |
|---|---|
| **Location: EME Trust Wide**<br><br>**Personnel involved: EME Staff**<br><br>**Date of Assessment: 08/11/13** | **Risk rating before changes 3L x 4C = 12 E**<br>**Risk rating after changes 2L x 4C = 8 H**<br>**If a powered mover used 1L x 2C= 2L**<br>**Entered on Risk Register Yes** |
| **Operation covered by this assessment (detailed Description)** | **Diagrams, photographs, other information** |
| Moving beds/trolleys within the department can cause strain on muscles/joints especially if the incorrect brake function is selected. It can also cause digits or limb entrapment in narrow doorways<br>Whilst the steer function is very useful on straight sections of the route push or pull forces need to be applied at the foot end for tight turns. Free brakes are required for sideways manoeuvres<br><br>**There is high risk of injury if staff walk in front of moving beds/trolleys. Never walk in front with arms extended backwards to grip the foot board**<br><br>Many obstacles such as doorways, other equipment and human beings with restricted movement are present within the clinical settings and even more so in the public corridors<br>Damage is caused to expensive equipment when the power plug is not removed or power cords wrapped around profiling sections of the equipment that then crush/cut through wiring<br>*Excerpt from HSE Guidelines*<br>Another risk from pushing/pulling on a slope is | Table 2 shows the approximate increase in push forces that can be expected per 100 kg of load, on different slope angles.<br><br>**Table 2** Effect of slope angle on push force<br><br>Slope gradient (degrees) — Push force (kg) increase per 100 kg of laden trolley weight<br>1 — 2<br>3 — 5<br>5 — 9<br>7 — 12<br><br>As weight limit is above HSE guide, push beds/trolleys in straight lines and steer from the side using push/pull actions<br>**Do not walk in front of moving equipment or extend arms backwards**<br><br>Ask for help if vision is obstructed or effort exceeds personal ability. Consider a powered mover for the task.<br>Prepare patient, attachments and power supply. Clear route of obstacles and clutter prior to task open doors<br>Report, label and remove beds/trolleys that are |

Location EME Trustwide — List No: EME 1 Moving empty bed/trolley between departments

| | Questions to be considered | Yes | No | Problems occurring from the task | Possible remedial action |
|---|---|---|---|---|---|
| TASK | Insufficient rest or recovery? | | √ | Risk of musculo-skeletal injury to lower back and shoulders due to movement and steering of a long load. Moving a poorly maintained bed/ trolley.<br>Chance to run lower limbs over if walking in front of moving equipment<br><br>Misaligned joints in spine, neck, shoulder and upper limbs if pulling the trolley<br><br>Obstacles to manoeuvre around especially humans<br>Adverse cambers, door edging or clutter on floors | Manual Handling of Loads training for all staff plus practical training for any powered movers<br><br>Report faulty beds/ trolleys to Estates/EME<br><br>Adjust height of equipment to enable clear vision and naturally aligned joints<br><br>Do not walk in front of moving bed/trolley. If steering round tight corners push/pull from side<br><br>Use a powered mover if available. 2 staff required if beyond an individuals physical capacity or personal height creates visual difficulties<br><br>Clear area prior to task<br>Set adequate time scales for task |
| | Holding loads away from the trunk? | √ | | | |
| | Twisting? | √ | | | |
| | Stooping? | √ | | | |
| | Reaching upwards? | | √ | | |
| | Large vertical Movement? | | √ | | |
| | Long carrying distance? | | √ | | |
| | Strenuous pulling or pushing? | √ | | | |
| | Unpredictable movement of loads? | | √ | | |
| | Repetitive handling? | | √ | | |
| | Work rate imposed by process? | √ | | | |
| | Jerking movement? | √ | | | |
| | Static supporting for more than 2-3 seconds? | | √ | | |
| LOAD | Loads are / do they | | | | |
| | Heavy? | √ | | Risk of musculo-skeletal injury to lower back and shoulders due to movement and steering of a long load. Moving a poorly maintained bed/ trolley | Powered mover or 2 staff required if beyond an individuals physical capacity or personal height creates visual difficulties<br>Report faulty equipment to EME/Estates |
| | Unwieldy? | √ | | | |
| | Unstable / unpredictable? | | √ | | |
| | Intrinsically harmful? | | √ | | |
| | Require mechanical assistance? | | √ | | |
| ENVIRONMENT | Are there | | | | |
| | Constraints on posture? | √ | | Possibility of twisting whilst moving long load in tight spaces<br><br>Obstacles/clutter or doorways<br><br>Human obstacles | Unplug power leads and secure cable to prevent entrapment in moving parts<br>Clear the area of obstacles before undertaking task. Open doors this may require a second person.<br>Keep shoulders and pelvis aligned when moving the trolley **do not reach backwards**<br>Use pushing actions from rear or side to achieve this |
| | Poor floors? | | √ | | |
| | Variations in levels? | | √ | | |
| | Hot / cold /. Humid conditions? | | √ | | |
| | Strong air movement? | | √ | | |
| | Poor lighting? | | √ | | |
| | Tripping hazard? | √ | | | |
| INDIVIDUAL | Does the job | | | | |
| | Require unusual physical capability? | | √ | May pose a risk to those who are pregnant or have a previous musculo-skeletal injury/health condition | Use powered movers<br><br>Managers' pregnancy assessment required. Avoid task if pregnant or ask for help<br><br>Work within your personal limits and report difficulties to Manager/Occupational Health |
| | Hazardous to those with medical conditions / previous injury? | √ | | | |
| | Hazardous to those who are pregnant? | √ | | | |
| | Call for special information / training? | | √ | | |

Other factors: is movement or posture hindered by clothing or Personal Protective Equipment? **No** Could activity lead to cumulative strain: **yes**

# RISK RATINGS

| | |
|---|---|
| **LOW RISK** | No immediate action. Update of the risk assessment to indicate the assessment outcome no further action |
| **MEDIUM RISK** | Some level of assistance and/or equipment is required. State the assistance needed and prompt the assessor to identify the equipment (if required). |
| **HIGH RISK** | State the equipment required for many if not all activities. |

# BUSINESS CASE FOR EQUIPMENT

- Collect all information on cost
- Collect information on how many staff are needed to move patient
- Mitigate the risk, by weighing the risk

  to staff and patient.

**Level of Risk**

Reasonably Practicable

**vs**

**Cost, time, trouble etc.**

# Occupational Health Referral

[redacted]

Occupational Health Department

[redacted]

Date Typed: 27/06/2017
Clinic Date: 27/06/2017
Date Sent: 27/06/2017

**Private & Confidential**

[redacted]

WHH

**Email:** [redacted]

Dear [redacted]

**Re:** [redacted]

I saw [redacted] for review in the Occupational Health Department at the William Harvey Hospital today. As you are aware [redacted] was off work from September 2016 with back pain after moving a bed at work. MRI scanning showed him to have a prolapsed disc plus extensive degenerative change in his spine. He was seen by an orthopaedic surgeon at Medway Maritime Hospital recently who advised against heavy lifting tasks as a long term arrangement. The orthopaedic surgeon is making some changes to [redacted] medication and is seeing him again for review on 15th August 2017. At that point they will consider offering [redacted] injection treatment if indicated.

Many thanks for supporting [redacted] return to work. He returned after I last met with him on 31st January 2017, and has been performing limited duties within the [redacted]. In your email of 22nd February 2017 you informed me that the [redacted] modification. [redacted] tells me some modifications [redacted] is itself very heavy to push around. It is [redacted] as I am sure there are many on the market that would have performed a greater number of useful tasks more effectively. As I am sure you are aware under the Provision & Use of Work Equipment Regulations there is a legal responsibility on the

# MANUAL HANDLING REPORT
# MOVEMENT OF BEDS THROUGHOUT WILLIAM HARVEY HOSPITAL

| | |
|---|---|
| Ward/Department | William Harvey Hospital |
| Conducted by | Sharon Rindsland<br>Moving and Handling Senior Co-Ordinator |
| Actioned by | Sharon Rindsland<br>Moving and Handling Senior Co-Ordinator |
| Copies For | Incident reporting lead<br>Nursing and portering leads<br>Electric and Medical Engineering leads<br>Legal Team<br>Budget Directors<br>Finances leads |
| Date 21/10/2016 | 29/10/2015 |

| | CONTENT |
|---|---|
| Section 1 | Introduction to Report |
| Section 2 | General Comments |
| Section 3 | Summary of Recommendations |

# ACCIDENTS AND LEGAL CASES

- Over a  12 month period we had 7 incident reports including one RIDDOR relating to staff injury pushing and pulling beds
- Risk Reduction staff must move the bed and patient with two staff+ depending on the size of patient and the bed.
- 3 Legal cases of staff taking action against the trust , minimum pay out 12,000 per person.
- 3 Impingement injuries within  the shoulders

# AVERAGE STAFF WAGES

- An average pay scale for a porter or a Health care assistant as it would be these staff moving the beds.
- Band 2: £21,406 (£10.95 an hour)
- To move the beds you need to release at least a minimum of 2 staff: £42,812

# BALANCING THE COST OF EQUIPMENT WITH INJURY

- Time balancing cost
- Cost how many staff needed to undertake the task safely
- Benefits of Equipment up against Cost of injury

**NO RISK ASSESSMENT = NO RISK**

# FELGAINS GZ10SL BED MOVER

- SWL: 500kg
- Slimline body allows each access into lifts and tight spaces.
- You don’t need to change claws to attach to different beds.

# FELGAINS GZS BED MOVER


- SWL: 600kg
- Fits around the bed frame, so no underbed clearance is needed.

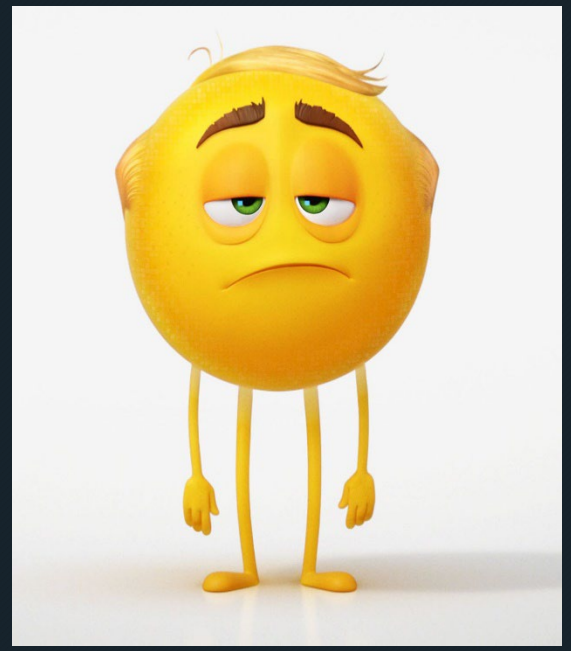
# FELGAINS GZ BARI BED MOVER


- SWL: 800kg
- For moving bariatric and heavier patients.

# PURCHASE OF BED MOVERS

## OBSTACLES

- Funding given - bed movers purchased
- Porters wanted to use two staff or push Beds on their  own.
- Competency training for bed movers completed



# PURCHASE OF BED MOVERS - SUCCESS

- We now have 40 bed movers over 3 acute trusts
- Clinical staff and porters all now complete a incident report when their bed mover is not working

# EKHUFT MANUAL HANDLING TEAM

Lee Sherwood

# A quick overview of the Felgains Bed & Stretcher Movers

# Live Q&A Session

# REFERENCE LIST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felgains

NHS
East Kent
Hospitals University
NHS Foundation Trust

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# THANKS FOR JOINING!

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