

TR ISO/CD 12296
Ergonomics – manual
handling of people in the
healthcare sector

Annex C

Aids and equipment











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Approach; task or product driven ?

- To keep it simple, the task approach seems the preferred method to make choices for the right equipment
 - Ergonomic aspects
 - With quality of care in mind
- Covering all institutional care facilities
- Differences per care sector?
- Differences between care for children or adults?
- Special paragraph for bariatric patients?

Define patient orientation: 3, 5 or 7 levels of mobility?

			7: Complete independence			
Totally non co-operative	Independent	Independent	6: Modified independence		Albert	
			5: Supervision		Barbara	
Partially co-operative	Partial assist	Dependent	4: Minimal contact assistance			
			3: Moderate assistance		Carl	
Full co-operative	Dependent	Complete dependence	2: Maximal assistance		Doris	
			1: Total assistance		Emma	
	Nelson 2006	FIM	FIM Granger1993	Knibbe 2006	Mobility Gallery Knibbe 2003	

Guide to select safe patient handling equipment per mobility level

					
Repositioning in bed			Hi-lo bed + sliding material	Hi-lo bed + sliding material	Hi-lo bed + sliding material
Lateral transfers					Sliding material or passive lift + stretcher frame
General transfers		Stand aid (occasionally)	Active lift	Passive lift	Passive lift
Hygiene care while seated		Hi-lo hygiene chair	Hi-lo hygiene chair	Hi-lo hygiene chair	
Showering in supine position					Hi-lo shower trolley
Bathing		Hi-lo bath	Hi-lo bath	Hi-lo bath	Hi-lo bath
Transfers to/from bath		Bath lift seat	Bath lift seat	Bath lift stretcher	Bath lift stretcher
Care on the bed or couch	Care time > 1 minute: Hi-lo bed or hi-lo couch				
Compression stockings on/of	If > grade 2: Special stocking aids to get stockings on/of				

Special areas?

- Physiotherapy
- Occupational Therapy
- Accident and Emergency
- Operating Theatre
- Radiology
- Emergency
- Intensive Care Unit
- Bariatric ward
- Paediatric ward
- Special (handicapped) care
- Mortuary

Do we also add the small aids such as:

- Bed ladder
- Trapeze
- Transfer boards
- Turning disc
- Stand-up chair
- Stand-up support handles
- Chair raisers
- Standing/turn device
- Handling belt
- Leg lift
- Leg support
- Handles and grips
- Raised toilet seat
- Stool
- Standing stool
- Washing without water

An Example: Height adjustable bed

- Mechanical - electrical operation
 - Avoids awkward position carer
 - Increasing independence of patient
- 2, 3 and 4 section profiling
 - Less repositioning
 - Reduced risk of shear forces
- (Anti)-Trendelenburg, Fowler position, creating a complete sitting position, moving to standing position

Height adjustable bed: continued

- Side rails (1 -2 sections)
 - Increased own activity patient during transfer
 - Reduced physical load during transfer
 - Free space for knees carer to work in a good posture with the side rail down
 - No entrapment risk for patient and carer
 - Needed force to open and close

Height adjustable bed: continued

- Pivoting trapeze
 - Options patient
 - Reduced physical load
- Lateral movement
 - Turning patient electric supported
 - Reduced physical load
- Castors – Pivoting castors – Fifth wheel - pushing/pulling forces
 - Describe advantages different systems
 - Bed mover? To reduce pushing/pulling forces

Height adjustable bed: continued

- Central brakes – brake per castor-operated on hand control
 - Safety
 - Avoiding awkward position while braking
- Free space under the bed
 - 15 cm in all heights
- Minimum – maximum height
 - Minimal for patient safety / independence
 - Maximum to avoid awkward positions carers
 - Limits of acceptable height?

Height adjustable bed: continued

- Minimum - maximum width
 - Enough space for care process
 - Avoiding static overload
 - Separately described for bariatric patient?
- Integrated scale
 - Reducing number of transfers
- Mattresses and the influence on SPH issues?

Example: Description medical bed

Aid / Equipment	Design	Activity	Benefit	Limitation
Medical bed	Electric height adjustable	Care in bed	Reduction awkward postures. Optimal independence for the mobile patients	Check lowest and highest level to avoid any limitation
	Mechanical height adjustable	Care in bed	Reduction awkward postures	In practice not adjusted frequent enough. No independency for patient

Please contact me for your input

During this conference

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Your input is highly appreciated!