

# PASSIVE EXOSKELETONS IN HEALTHCARE: INDUSTRY GUIDANCE

Interreg



Co-funded by  
the European Union

North-West Europe

MSD-CARE

## WHY HEALTHCARE MATTERS

**Relevance:** MSDs are a leading cause of nurse sick leave. With staff shortages, prevention is critical.

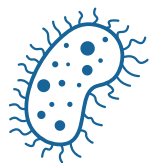
**Market potential:** Easy spillover into related sectors (carers, elderly care, etc.).

**Gender-proof your product:** In healthcare, most strenuous tasks are done by women – design with this in mind.

The **MSD-CARE** project ran focus group interviews with nurses in Germany, Ireland, and the Netherlands to explore passive exoskeletons.

Nurses responded positively, saying exoskeletons helped protect them during strenuous daily tasks. They also agreed that adaptations are needed before these devices can be widely used in healthcare.

## Recommendations from the MSD-CARE project



### Hygiene is essential

- Design for easy cleaning and disinfection.
- Use materials that withstand frequent cleaning.



### Adapt to patients

- Appearance matters: avoid intimidating designs for children or people with cognitive impairments.
- Avoid straps that could be pulled or cause discomfort.



### Practicality in the workplace

- Minimise removable parts (to prevent loss during cleaning).
- Ensure simple, quick donning and doffing.
- Consider compact storage in crowded wards.



### Uniform compatibility

- Avoid bulk that restricts movement in crowded wards.
- Keep access to uniform pockets.



### Prioritise by department

- Prioritise slower-paced units (e.g., stroke wards before emergency care).
- Tailor to unit needs: surgery (static postures) vs. elderly care (frequent lifting, rapid movements).



### Fit & design

- Adapt to diverse body shapes and sizes.
- Incorporate female-specific adjustments (e.g., no breast straps).

