

# ESSENZA

# LINET

Turn To The Essence Of Care



The Acuity Adaptable Hospital Bed



# GLOBAL NURSES' SHORTAGE

Holding patients' hand through difficult times and caring with passion and devotion is the essence of nurses' care.

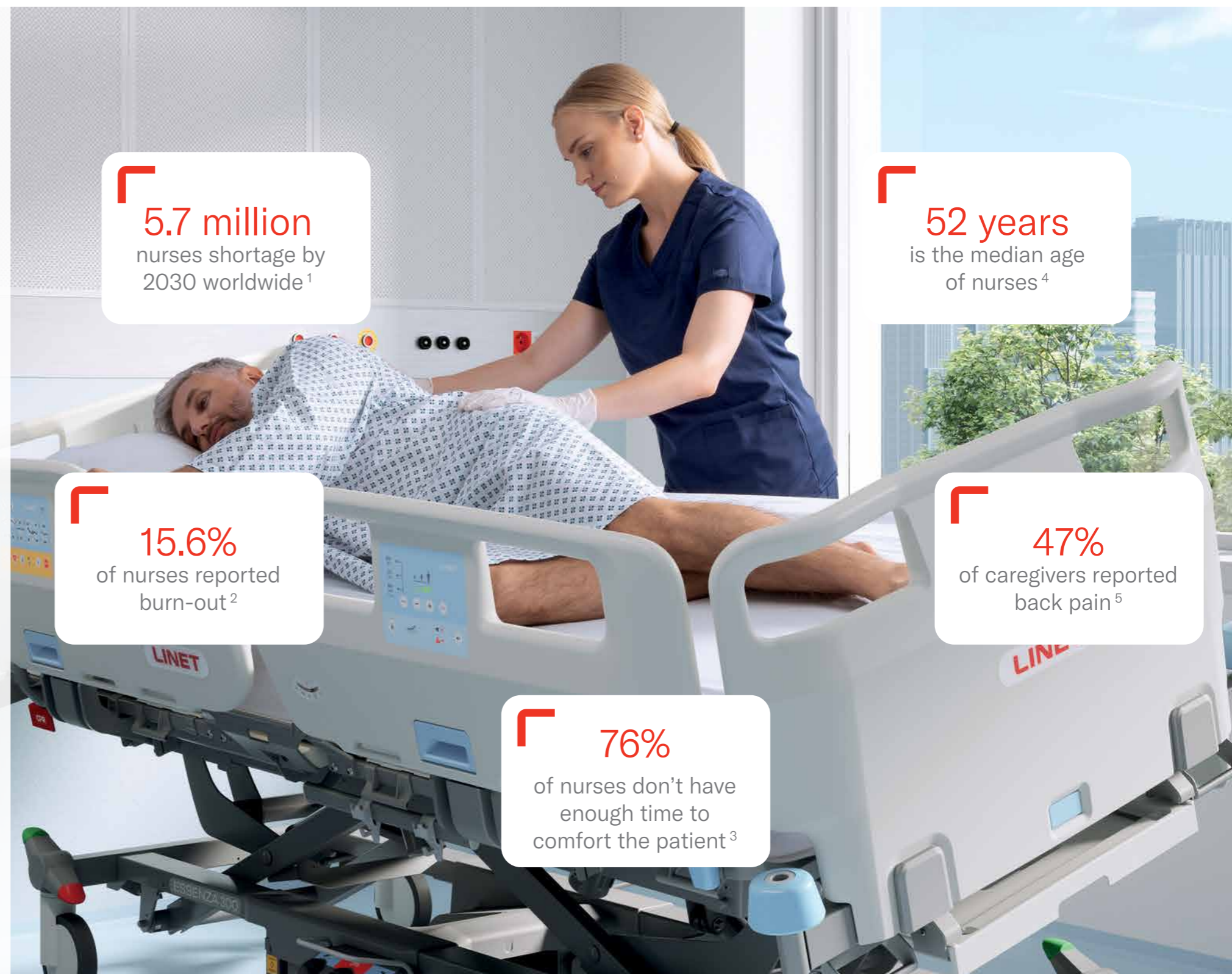
With enough nursing time for patients, patient falls could be avoided, hospital-acquired pressure injuries could be prevented, and the chance for recovery would be higher. However, there is a major shortage of nurses as the population is aging, and the fall-out due to work-related musculoskeletal disorders (MSD's) is continuously present.

The job of a nurse is draining both physically and mentally and the time they have is increasingly taken by additional administrative tasks. Recent global events have only made the situation worse.

This leads to a never-ending cycle of understaffing and, consequently, to an even more fragile healthcare system.

We need to break this vicious downward spiral. We need to give nurses their time, safety and passion back, so that they can

## Turn To The Essence Of Care



5.7 million  
nurses shortage by  
2030 worldwide<sup>1</sup>

52 years  
is the median age  
of nurses<sup>4</sup>

15.6%  
of nurses reported  
burn-out<sup>2</sup>

47%  
of caregivers reported  
back pain<sup>5</sup>

76%  
of nurses don't have  
enough time to  
comfort the patient<sup>3</sup>

# ESSENZA

Turn To The Essence Of Care



## SUPERIOR SAFETY & ERGONOMICS DRIVEN BY NURSE- AND PATIENT-CENTRIC DESIGN



Lateral tilt turns into a new gold standard in acute care reducing physical strains on the caregiver by 67%.<sup>6</sup>



Low height helps to reduce the severity of patients' falls.<sup>7</sup>



EasyDrive<sup>®</sup> enables effortless patient transportation done by one caregiver without need of any initial push force for acceleration.<sup>8</sup>



The safe mobilization concept supports the patient through specially designed features & can help to speed up the recovering process.<sup>14</sup>

## EFFICIENCY OF A SINGLE PLATFORM UNLOCKING INCREDIBLE VERSATILITY



Single platform efficiency brought by one intuitive user interface. This means only one training for nurses and easier rotation across hospital wards.



Incredible versatility that meets all the needs of each individual department. Bespoke design is an additional bonus.

## UNPARALLELED EFFECTIVENESS BROUGHT BY ADVANCED TECHNOLOGIES



SafeSense 3 helps to save time by providing a real-time overview of the patients' position in the bed or by smart alerting when the patient is at risk of pressure injuries or falls.



SmartTrack facilitates the work of caregivers by tracking hospital assets or patients at room level accuracy.



Integrated Air2Care mattress provides easy and time-saving maintenance for caregivers.

# ESSENZA 300

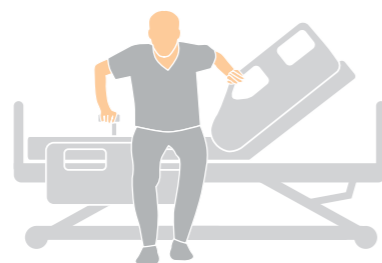
Universal low height bed with an exceptional safe working load of 300 kg improves safety for any patient.



Fall prevention during sleeping phases  
25.5 cm



Safe mobilization at chair height  
40 cm



Optimal nursing position  
78 cm



# ESSENZA 300 LT

Lateral tilt turns into a new gold standard in acute care, delivering premium ergonomics & effective mobilization.



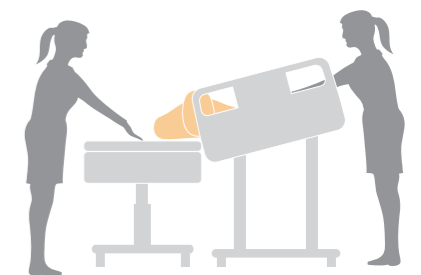
Mobilizing Patient Early



Safe Patient Handling



Easier Patient Transfer





# SOLUTIONS OVERVIEW

## ENHANCED PATIENT OUTCOME



### EARLY MOBILIZATION

Mobi-Lift®, Mobi-Pad & Mobi-Grips promote patient mobilization which can potentially decrease the length of hospital stay and all the associated complications.<sup>14</sup>



### PRESSURE INJURY PREVENTION

The integrated Air2Care mattress with 2-cell alternating pressure technology provides effective pressure relief.



### FALLS PREVENTION

Brake alarm, low height & monitoring of patient by SafeSense 3 help to prevent patients' falls.



### IMPROVE PATIENT EXPERIENCE

Bed features increasing patients' comfort during hospital stay lead to better satisfaction and health outcomes.

## IMPROVED CAREGIVER & HOSPITAL WORKFLOW



### SAFE PATIENT MOVING & HANDLING

Lateral tilt is turning into a new gold standard in acute care that delivers premium ergonomics for caregivers & effective patient mobilization.



### EASY PATIENT TRANSPORTATION

Features like EasyDrive® and 5th castor make bed manipulation easier and support caregivers during patient transportation.



### SIMPLIFY CAREGIVER PROCEDURES

SafeSense 3, SmartTrack and integrated Air2Care mattress facilitate caregivers' daily tasks and help them to be more efficient.



### HOSPITAL OPERATIONS EFFICIENCY

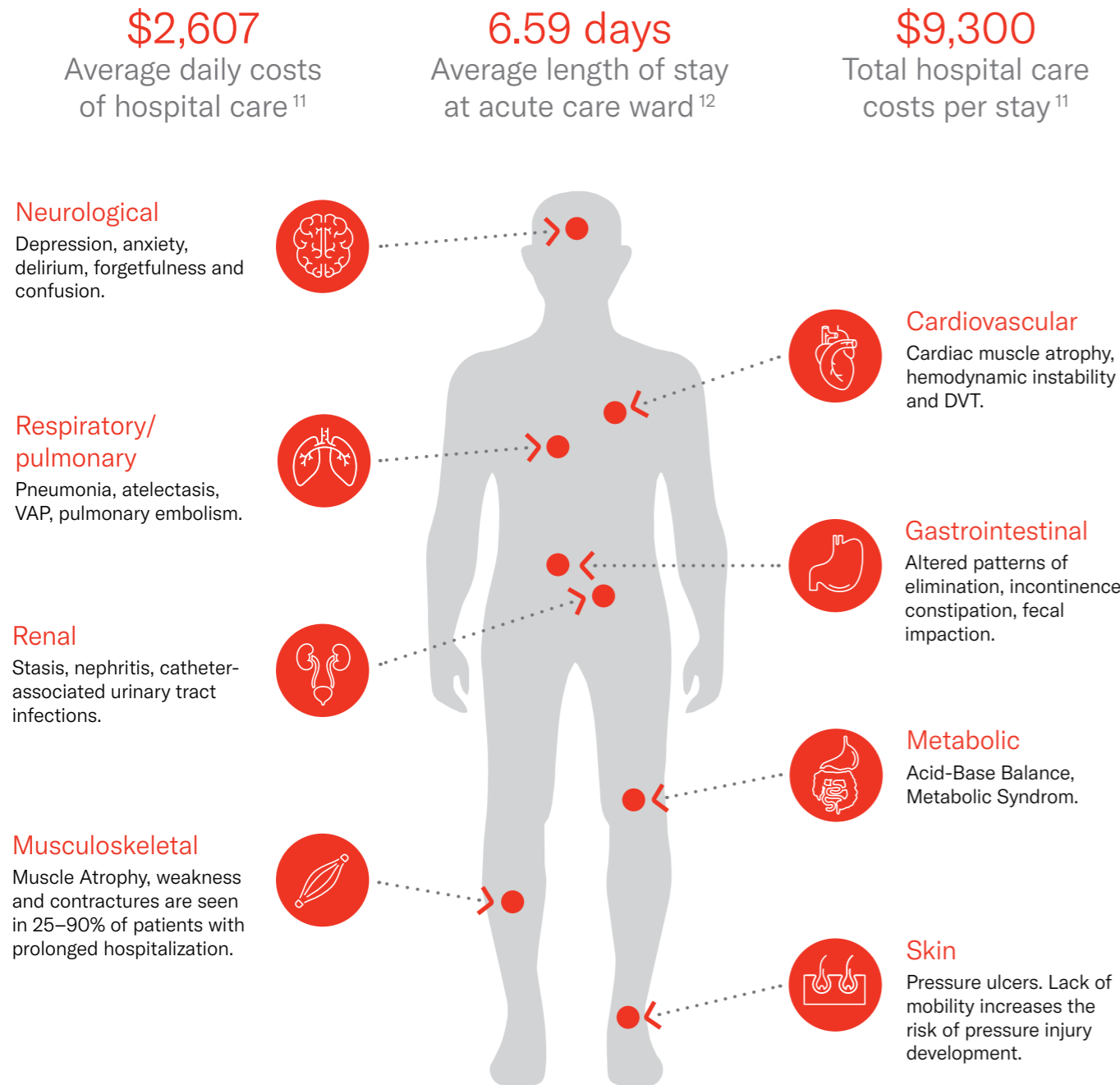
Single bed platform across all hospital wards leads to cost reduction and time-saving.



# EARLY MOBILIZATION

## CHALLENGE

- Complications associated with long hospital stay<sup>9</sup>
- Longer length of hospital stay due to immobility<sup>10</sup>
- Increased costs for the hospital<sup>9</sup>



Learn more about Early Mobilization with LINET



Read the full report Effect of Mobi-Lift on Patients' Mobilization



## SOLUTION

Mobi-Lift®, Mobi-Pad & Mobi-Grips promote early mobilization programs which can impact the length and the costs of hospital stays. Mobilization programs can reduce the incidence of pressure injuries by up to 86%.<sup>15</sup>

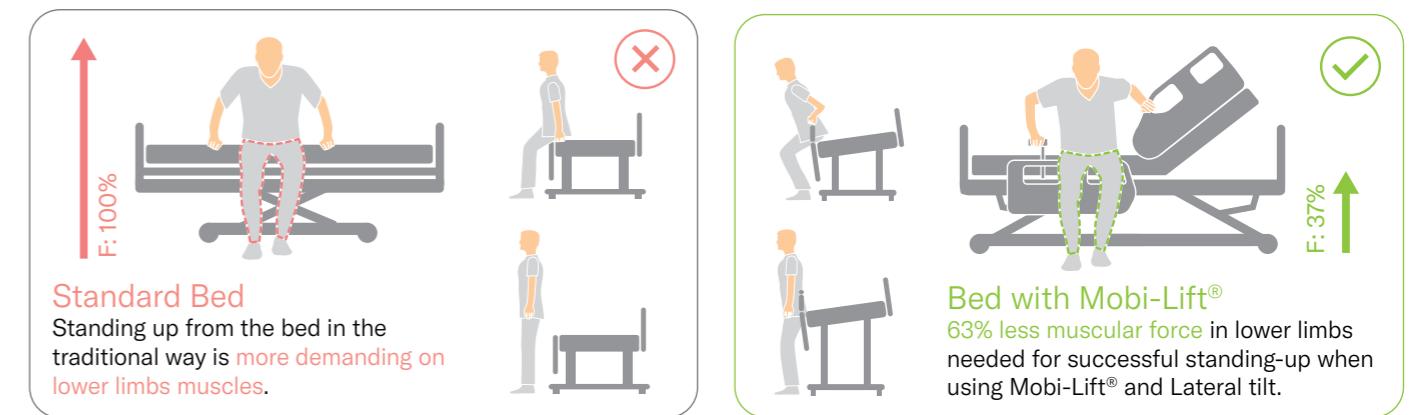
Length of hospital stay decreased by **1.5 days**<sup>13,14</sup>

In Hospital Falls reduced by **37%**<sup>14</sup>

Hospital associated infections reduced by **60%**<sup>14</sup>

	Level of Function 0	Level of Function 1	Level of Function 2	Level of Function 3	Level of Function 4
Level of function					
Criteria	Bed immobile – Clinically stable, but not able to cooperate in care	Bed Active – Able to cooperate in self-care and bedbound	Able to sit – Strong enough to sit upright and able to move leg against gravity	Able to stand – Increased strength for standing activities and actively participates in transfers to chair	Able to Walk – Tolerates walking in the room and independently transfers to chair
Solutions	– Lateral tilt – Head of Backrest – Reverse Trendelenburg – Vascular leg position	– Lateral tilt – Head of Backrest – Reverse Trendelenburg – Vascular leg position – Mobi-Grips – Cardiac chair*	– Mobi-Pad* – Mobi-Grips* – Cardiac chair*	– Mobi-Lift® handle* – Mobi-Grips* – Mobi-Pad* – Lateral tilt*	– Mobi-Lift® handle* – Mobi-Grips* – Mobi-Pad* – Lateral tilt*

## Less demanding standing procedure<sup>15</sup>





# PRESSURE INJURY PREVENTION

## CHALLENGE

- Worldwide prevalence of HAPI varies from 6–18.5% in acute care segment<sup>16</sup>
- Pressure injuries can develop within minutes of immobility<sup>17</sup>

The cost of treating pressure injuries varies from **£1,214** to **£14,108**<sup>18</sup>



Read the full report: Promoting pressure injury prevention



Learn more about the Air2Care mattresses range



## SOLUTION

The integrated Air2Care alternating pressure mattress provides periodic pressure relief.

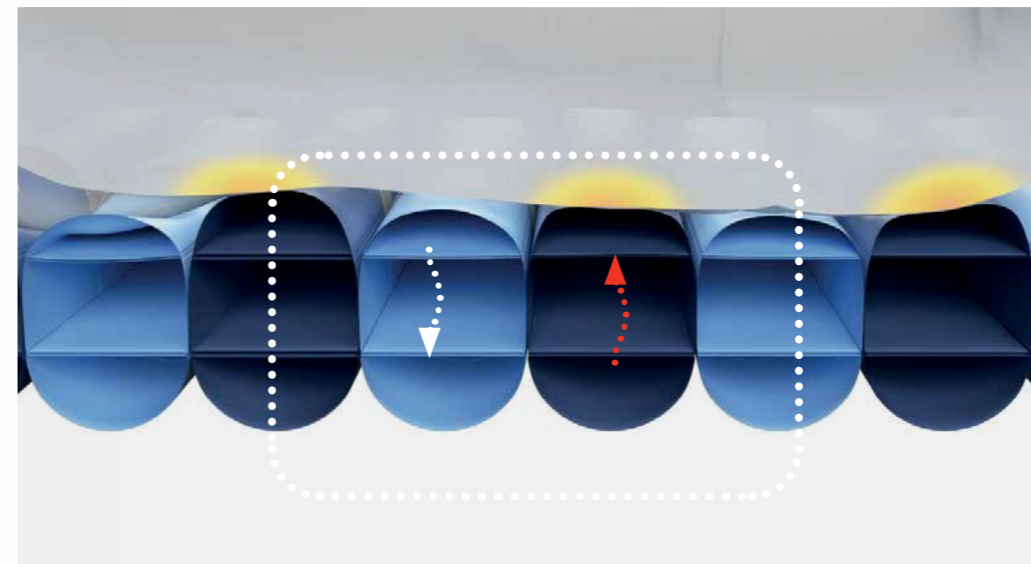


### 2-Cell Alternating System

Intermittent Pressure Reduction



2 cells



Due to the alternating 2-cell system, Air2Care reduces pressure and helps to minimize sustained pressure peaks to the patient's body. Alternating pressure can be used for pressure injury prevention as part of an overall program of care.



## Automatic Pressure Setting with the Easy Smart System

At the press of a button, the mattress will automatically and continuously adjust to the patient's individual size, weight and position. Manual pressure adjustment is available to suit patient comfort.



## Fowler Boost

### Minimized risk of bottoming while sitting

The Air2Care mattress starts to increase air inflation when it detects the backrest has been raised by 30°.

The Single Point Fowler Boost enables automatic detection of the raised backrest position.



## Wide range of mattresses for Essenza

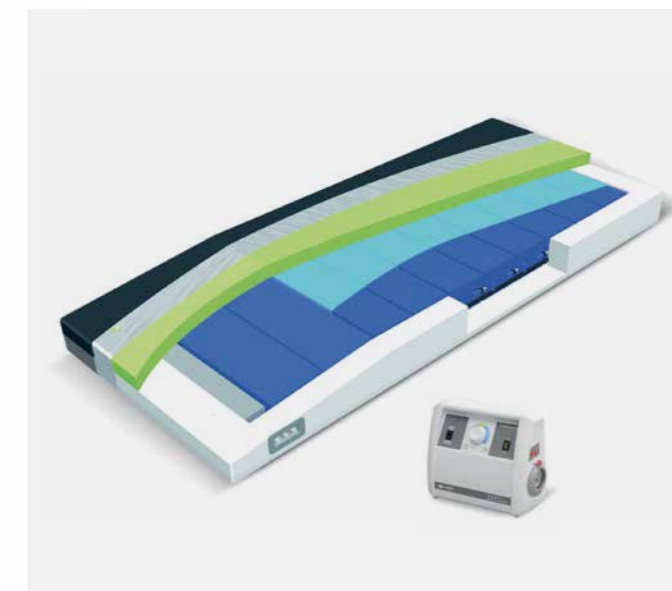
To provide high patient comfort and prevention of pressure injuries, LINET offers a wide choice of mattress replacements for Essenza according to the needs of patients with different risk levels of pressure injury development.



## Hybrid Mattress

### CliniCare 100 HF

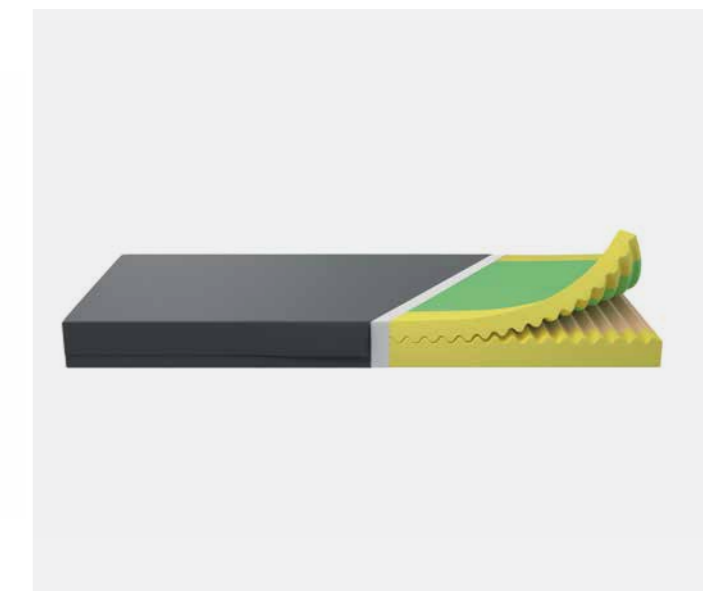
- The CliniCare 100 HF hybrid mattress is comfortable and highly efficient for the prevention of pressure injuries.
- It uses a combination of an active (air) system and a passive (foam) mattress to provide many benefits across the spectrum of hospital care.



## Passive Mattresses

### ViskoMatt, MediMatt

- The Passive mattresses portfolio is designed to improve pressure redistribution through the mechanisms of immersion and envelopment. Within the range are mattresses with combination of viscoelastic, cold and Polyuretan foams.
- ViskoMatt with viscoelastic foam ("memory foam") allows the body to sink into the mattress slightly, providing optimal support and adjustment to the body's contours.







# FALLS PREVENTION



Read the full report:  
The Power of Prevention



## CHALLENGE

— Falls are one of the most commonly reported patient safety incidents in the hospital setting<sup>19</sup>

- 84.8% of falls happen unwitnessed<sup>20</sup>
- 27% of falls happen when a patient tries to leave the bed<sup>21</sup>

11.5 days

Longer hospital stays due to IHF\*,<sup>22</sup>

£2,600

for patient fall<sup>23</sup>



## SOLUTION

Brake alarm, low height & monitoring of patient by SafeSense 3 help to prevent patients' falls.

Safe position indicator



With a low height of 25.5 cm, Essenza 300 is a premium solution for any patient who may be at higher risk of falls. Green light indicates safe position.

Brake alarm

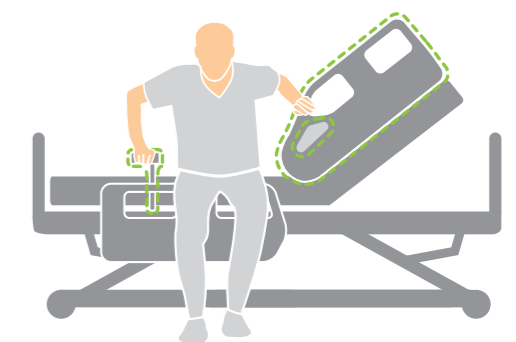


The bed automatically emits an audible signal when when it is left unbraked while the main power cable is connected.

Bed exit alarm by SafeSense 3



Staff is notified whenever patient leaves the bed. Continuous monitoring of the motion in combination with bed exit notifications can be helpful in prevention and quick reaction to any such event.



Mobi-Controls

Mobi-Lift®, Mobi-Pad & Mobi-Grips empower patients and help with their faster mobilization which can prevent patients' falls when exiting the bed.



# IMPROVE PATIENT EXPERIENCE

## CHALLENGE

- Stressful environment and patient discomfort<sup>24</sup>
- Painful movements
- Patients sleep quality is disturbed by the surrounding noise<sup>25</sup>



## SOLUTION

Bed features increasing patients comfort during hospital stay lead to **better satisfaction and health outcomes.**



### Integrated mattress

Integrated compressor Air2Care with reduced vibration by more than 50%<sup>26</sup>, which provides patients with better comfort.



### USB integration

The integrated USB port allows smart devices to be utilized safely from the bed and enables socialization.



### Compatibility with bedside cabinets

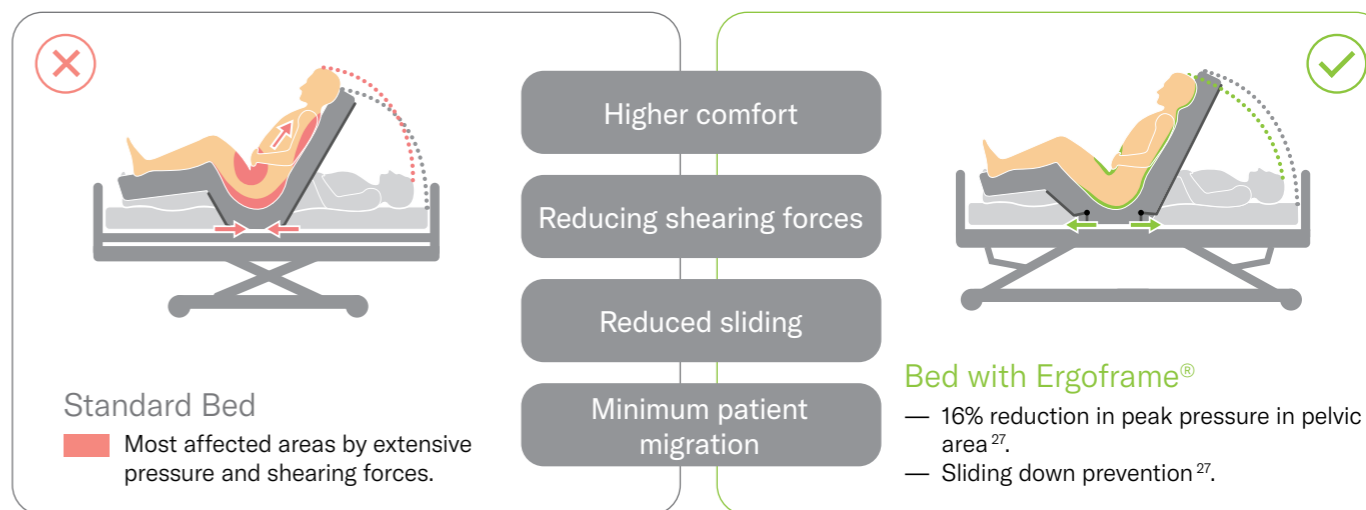
Self-service bedside cabinets influence the comfort of patients with reduced mobility.



### Night light

Undercarriage light helps the patient with orientation in the room at night.

## The Positive Effects of Ergoframe®





# SAFE PATIENT MOVING & HANDLING

## CHALLENGE

- 20% of nurses' working time is spent on patient mobility and handling<sup>28</sup>
- 47% of caregivers reported back pain<sup>5</sup>
- Caregivers are still at top of the number of work-related MSD's<sup>29</sup>

Nurse turns immobile patients up to **11x** per shift<sup>30</sup>



Read the full report about Lateral tilt: A promising approach against MSDs



## SOLUTION

Lateral tilt is turning into a new gold standard in acute care that delivers premium ergonomics of caregivers.

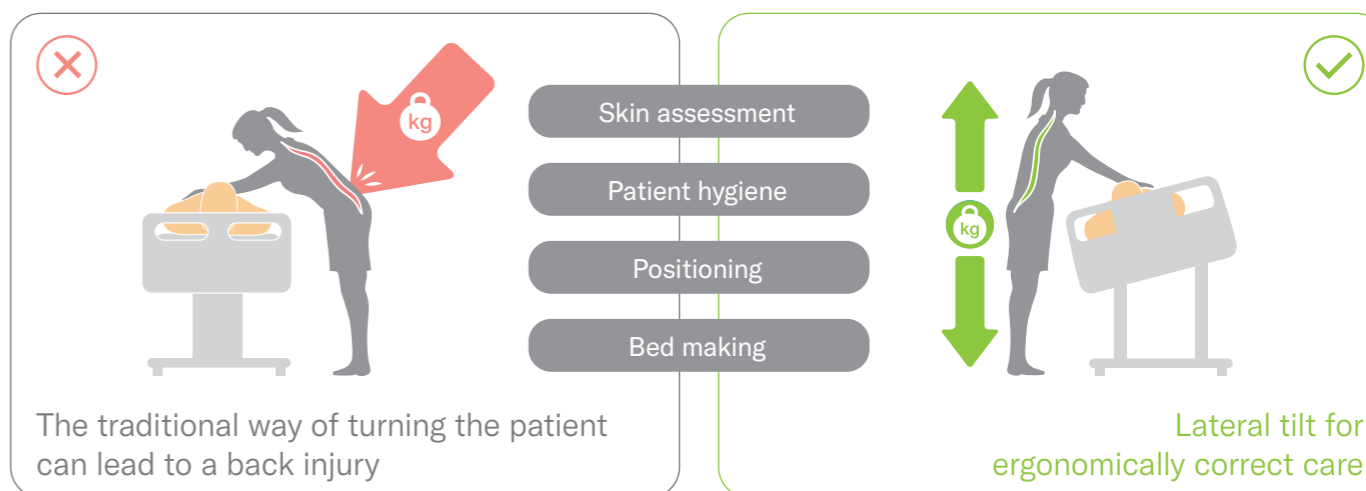
**-67%**

of forces needed for turning the patient<sup>6</sup>

**-20%**

of compression of lumbar spine during patient handling<sup>6</sup>

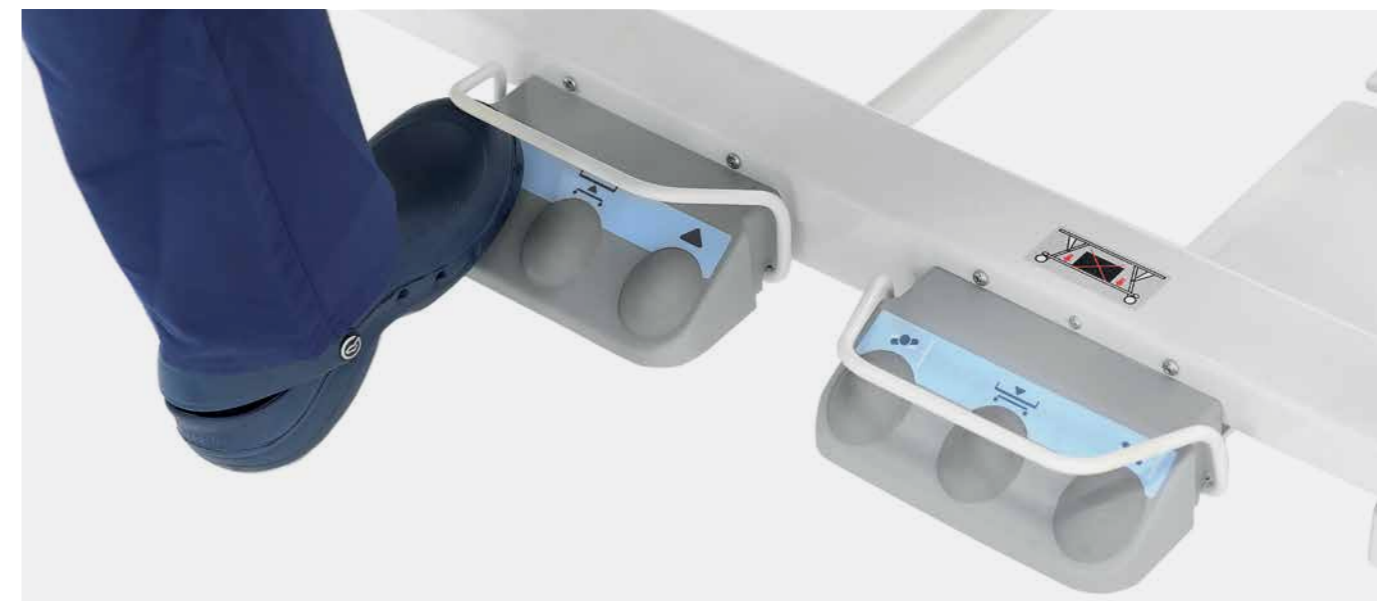
## Lateral Tilt\* simplifying daily procedures



\* Up to 15 degrees on strain reduction for repositioning immobile patients.

## Foot controls

Easy control of the hospital bed ensures the ergonomic position of the caregiver and effective handling of the patient. Left pedal adjusts height of the bed and the right one turns the bed.



# EASY PATIENT TRANSPORTATION

## CHALLENGE

- Pushing and pulling occupied beds is considered a high-risk task for developing MSD's because of spinal load<sup>31</sup>
- Maneuverability of the bed in narrow hospital corridors
- Occupied bed needs to be transported by **2 caregivers**<sup>32</sup>



Read the full report about Ergonomic and effortless activation of Softbrakes



Read the full report: Streamlining patient transport



## SOLUTION

Features like **EasyDrive®** and **5<sup>th</sup> castor** make bed manipulation easier and support caregivers during patient transportation.

**1 caregiver**

can transport patient without extended effort and risk of injury with EasyDrive®<sup>8</sup>

**5 km**

for one recharge<sup>8</sup>

### SoftBrake

A unique design of a castor that provides excellence in the operation of the brake levers, with low physical strain needed to prevent caregivers from musculoskeletal injuries.



### EasyDrive®

Powered 5<sup>th</sup> castor which supports advanced mobility of patient transportation with enhanced safety for the caregiver and patient.

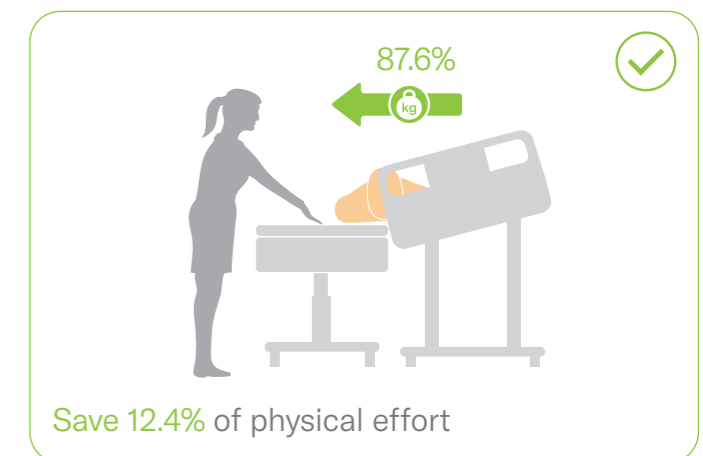
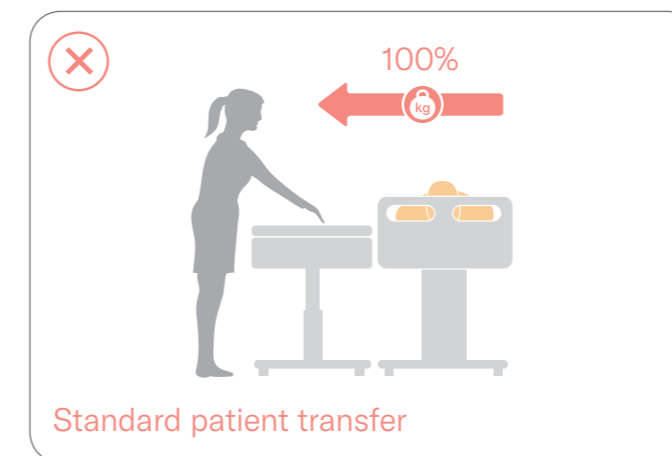


### 5<sup>th</sup> castor

The 5<sup>th</sup> castor makes transporting the bed through long corridors easier, maintaining a straight line. In addition, the castor creates a turning point in the center of the bed.



Lateral tilt making patient transfer easier<sup>30</sup>

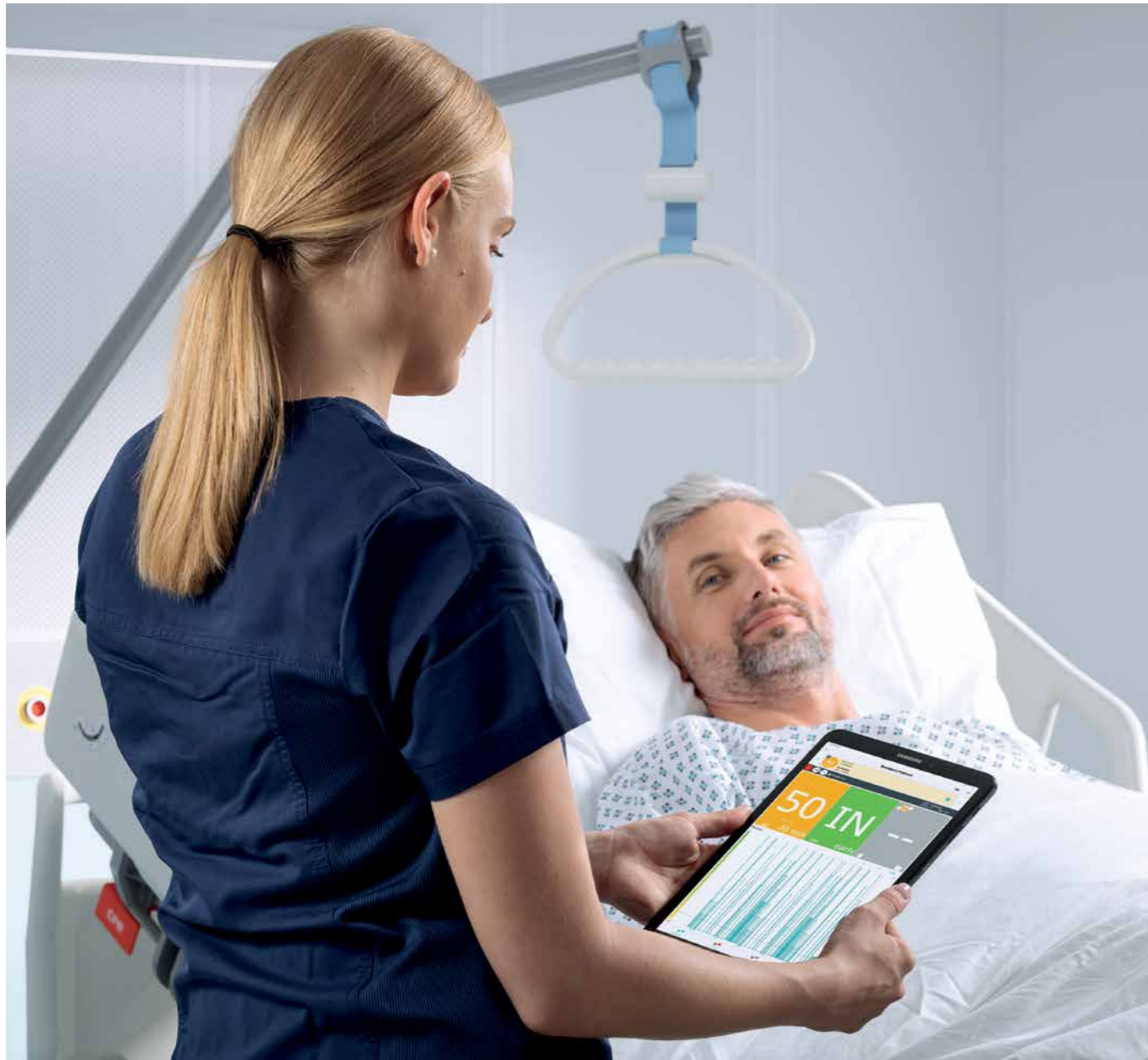




# SIMPLIFY CAREGIVER PROCEDURES

## CHALLENGE

- Patient care can be compromised because of the insufficient number of registered nurses<sup>33</sup>
- 15.6% of nurses reported burn-out<sup>2</sup>
- 41% of caregivers suffer from a lack of time<sup>5</sup>

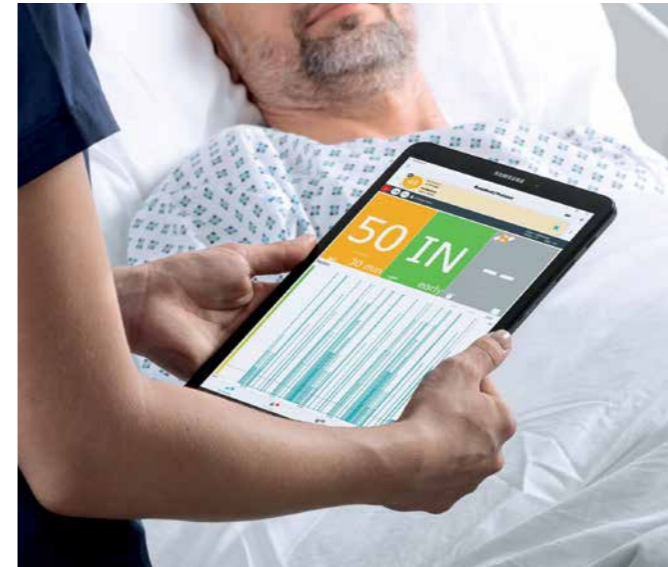


## SOLUTION

Our smart care solutions such as SafeSense 3, SmartTrack & Integrated Air2Care mattress facilitate daily tasks of caregivers and help them to be more efficient.

### SafeSense 3

Smart care solution which helps to save time by giving a real-time overview of the patient and reduces the number of unnecessary operations.



### SmartTrack

A unique smart concept that performs assets and patient tracking and enables caregivers to find equipment with room-level accuracy.



### Integrated mattress control panel

Control panel of integrated Air2Care mattress is a part of siderails and allows easier & quicker setting to fit the clinical conditions of patients.



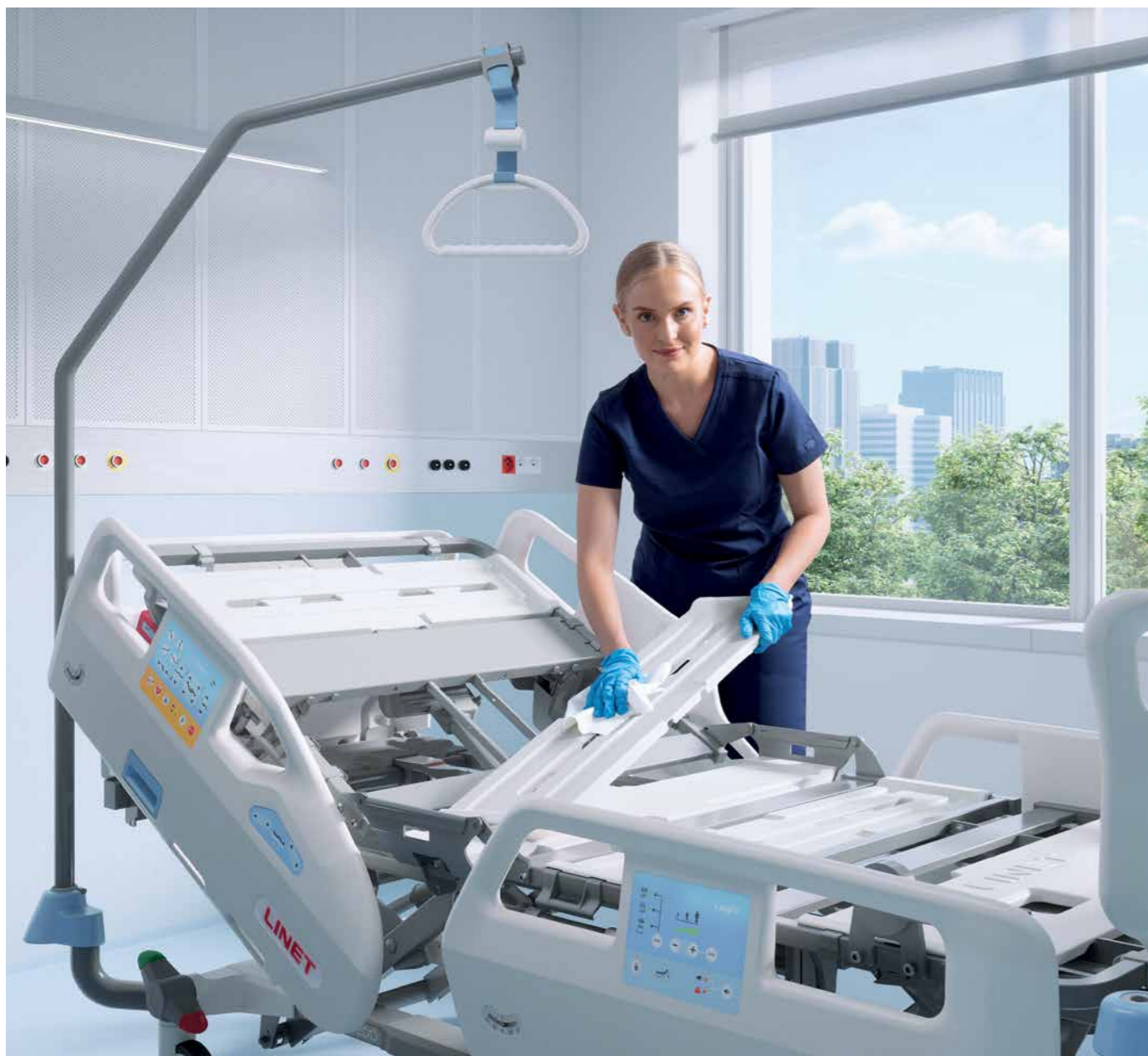
### X-ray cassette holder

X-ray procedure without the need of transferring the patient.



## CHALLENGE

- The need for fast and effective cleanability of the equipment and prevention of infection
- Nurses can spend **27%** of their shift dealing with administrative tasks<sup>34</sup>
- **25%** of injuries in hospital are related to slip, trip and fall<sup>35</sup>



## SOLUTION

Advanced technologies allow easier patient moving, handling and monitoring.

### Active Mattress Integration

Air2Care integrated helps to save space due to the absence of the external compressor and reduces the risk of cable damage while transporting.



### Convenient cells maintenance

Individual cells of Air2Care Integrated are removable and can be easily cleaned, decontaminated or replaced.



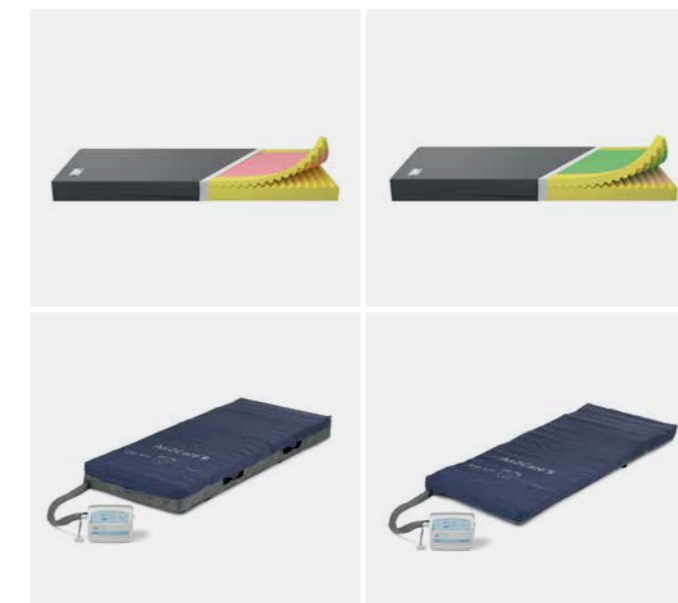
### Single platform

Platform solution means only one user-friendly interface, simpler training for nurses, and standardized cleaning procedures.



### Open Mattress Architecture

Any type of mattress can be placed on the bed and follow hospital standards for pressure prevention.



# KEY FEATURES OVERVIEW



**Lateral tilt** delivers premium ergonomics to caregivers and effective patients' mobilization.



**Mobi-Lift® handle** provides support during bed exit.



**EasyDrive®** enables patient transportation by only one caregiver.



**SoftBrake** castor makes operation of the brake levers easier with less physical strain.



**Integrated Air2Care mattress** increases patient comfort and ease of caregiver use while minimizing physical strain.



**Mobi-Grips** provide support for self-mobilization.



**Mobi-Pad** adjusts the height of the bed.



**ErgoFrame®** makes patient positioning more comfortable.

# SIDERAILS OVERVIEW



**Safe&Free siderails** for nursing homes add a home look to the bed, can be adjusted to different heights and assist patients whilst standing up.



**Safe&Free full split siderails** in combination with mobilization features support patients during ingress and egress out of the bed and help with early patient mobilization.



**Single collapsible siderails** contribute effectively to fall prevention and thanks to the simple release mechanism are easy to use by staff.

## SmartInk



Apple green



Beige grey



Coral red



Garnet red



Ochre yellow



Jade green



Light blue



Paris blue



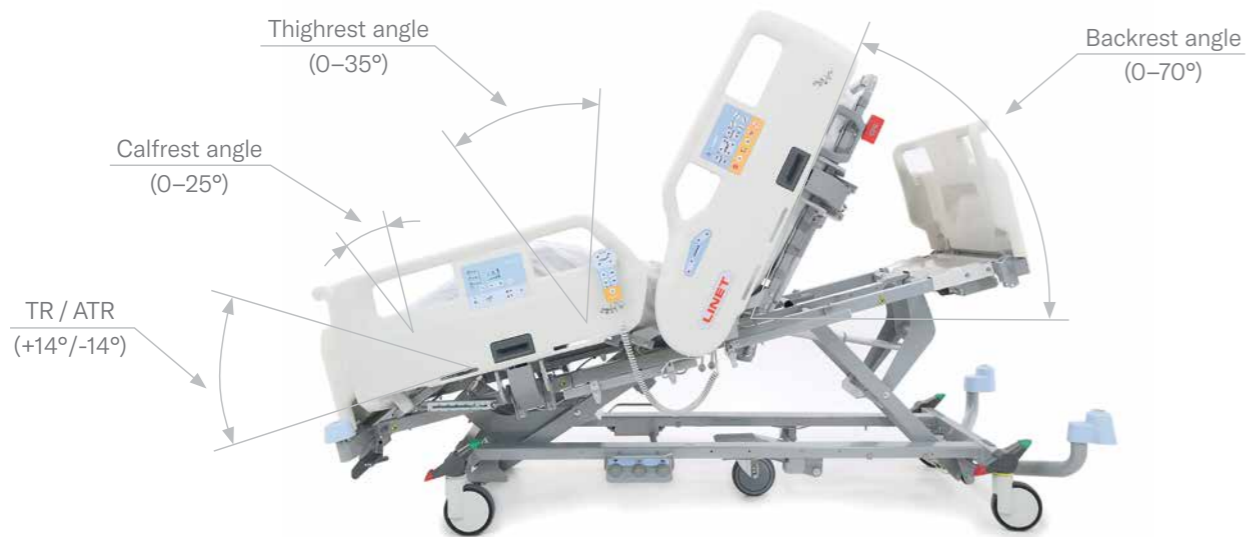
Royal blue



Olive green

\* Please note actual shade of color may vary.

# TECHNICAL SPECIFICATIONS



## BED HEIGHT SPECIFICATION\*

CASTOR TYPE	300 MIN	300 MAX	300LT MIN	300LT MAX
Tente Linea 125 mm	25.5 cm	75.9 cm	39.4 cm	89.8 cm
Tente Linea 150 mm	28 cm	78.4 cm	41.9 cm	92.3 cm
Tente Integral 150 mm	31.3 cm	81.7 cm	45.2 cm	95.6 cm
Tente Integral Soft Brake 150 mm	30.8 cm	81.2 cm	44.7 cm	95.1 cm

The SafePosition is elevated by 11,9 cm from its lowest position.

## TECHNICAL SPECIFICATIONS

ESSENZA	300	300LT
SWL	300 kg	270 kg
Max. patient weight (application environment 1,2)	235 kg	205 kg
Max. patient weight (application environment 3,5)	265 kg	235 kg

## Accessories



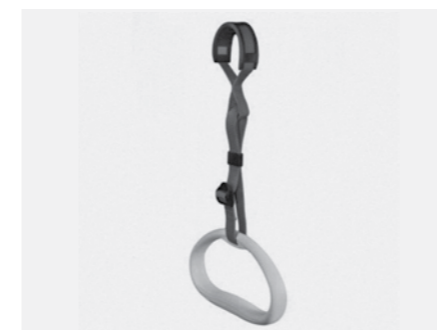
Telescopic IV pole



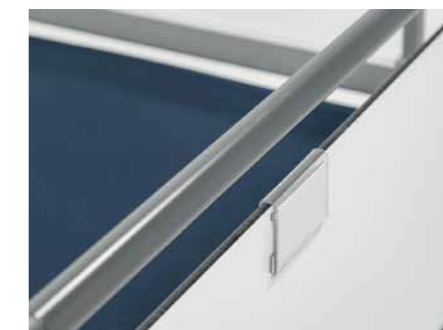
Lifting pole handle



Handset holder horizontal



Grey plastic triangular holder



Name holder



Positioning cushion



# REFERENCES

1. Nursing and midwifery. WHO. 18 Mar 2022. Cited: 29 Sept 2022. Available online: <https://www.who.int/news-room/fact-sheets/detail/nursing-and-midwifery>
2. PRC National Nursing Engagement Report. Trends and Implications with Nursing Engagement. 2019. Available online: [https://prccustomresearch.com/wp-content/uploads/2019/PRC\\_Nursing\\_Engagement\\_Report/PRC-NurseReport-Final-031819-Secure.pdf](https://prccustomresearch.com/wp-content/uploads/2019/PRC_Nursing_Engagement_Report/PRC-NurseReport-Final-031819-Secure.pdf)
3. Govasli L, Solvoll BA. Nurses' experiences of busyness in their daily work. *Nurs Inq*. 2020 Jul;27(3):e12350. doi: 10.1111/nin.12350. Epub 2020 Mar 4. PMID: 32133740.
4. Smiley RA, Ruttinger C, Oliveira CM, Reneau KA, Silvestre JH, Alexander M. The 2020 National Nursing Workforce Survey. *Journal of Nursing Regulation*. S1-S96;12. [Online] 2021. [https://www.journalofnursingregulation.com/article/S2155-8256\(21\)00027-2/fulltext#articleInformation](https://www.journalofnursingregulation.com/article/S2155-8256(21)00027-2/fulltext#articleInformation).
5. OSHA. Musculoskeletal disorders in the healthcare sector. European Agency for Safety and Health at Work. 2020. Cited: 12 Dec 2022. Available online: <https://osha.europa.eu/en/publications/musculoskeletal-disorders-healthcare-sector>
6. MCX LINET Report Lateral tilt - Effect of lateral tilt on patients turning. 2019
7. Bowers B, Lloyd J, Lee W, Powell-Cope G, Baptiste A. Biomechanical evaluation of injury severity associated with patient falls from bed. *Rehabil Nurs*. 2008 Nov-Dec;33(6):253-9. doi: 10.1002/j.2048-7940.2008.tb00237.x. PMID: 19024240.
8. Linet White Paper: Streamlining patient transport and maximizing operational efficiency. 2023. Available on Linet SalesHub
9. Bai AD, Dai C, Srivastava S, Smith CA, Gill SS. Risk factors, costs and complications of delayed hospital discharge from internal medicine wards at a Canadian academic medical centre: retrospective cohort study. *BMC Health Serv Res*. 2019 Dec 4;19(1):935. doi: 10.1186/s12913-019-4760-3. PMID: 31801590; PMCID: PMC6894295.
10. Cortes OL, Delgado S, Esparza M. Systematic review and meta-analysis of experimental studies: In-hospital mobilization for patients admitted for medical treatment. *J Adv Nurs*. 2019 Sep;75(9):1823-1837. doi: 10.1111/jan.13958. Epub 2019 Mar 6. PMID: 30672011.
11. Fay B. Hospital and Surgery Costs. America's Debt Help Organization. 12 Oct 2021. Cited: 21 Sept 2022. Available online: <https://www.debt.org/medical/hospital-surgery-costs/#:~:text=Hospital%20costs%20averaged%20%242%2C607%20per%20day%20throughout%20the,distant%20second.%201f%20you%20stay%20overnight%2C%20costs%20soar>
12. Average length of stay, acute care hospitals only. WHO. Cited: 21 Sept 2022. Available online: [https://gateway.euro.who.int/en/indicators/hfa\\_541-6110-average-length-of-stay-acute-care-hospitals-only/visualizations/?EU\\_MEMBERS;EU\\_BEFORE\\_MAY2004;EU\\_AFTER\\_MAY2004;CIS;CARINFONET;SEE HN;NORDIC;SMALL#id=20120](https://gateway.euro.who.int/en/indicators/hfa_541-6110-average-length-of-stay-acute-care-hospitals-only/visualizations/?EU_MEMBERS;EU_BEFORE_MAY2004;EU_AFTER_MAY2004;CIS;CARINFONET;SEE HN;NORDIC;SMALL#id=20120)
13. Lisi C, Caspani P, Bruggi M, Carlisi E, Scollè D, Benazzo F, Dalla Toffola E. Early rehabilitation after elective total knee arthroplasty. *Acta Biomed*. 2017 Oct 18;88(4S):56-61. doi: 10.23750/abm.v88i4-S.5154. PMID: 29083354; PMCID: PMC6357664.
14. Help Whittington Health to #EndPjParalysis. Whittington NHS UK. 2018 Apr 20. Cited 2022 Sept 20. Available online: <https://www.whittington.nhs.uk/mini-apps/news/newsPage.asp?NewsID=2092#:~:text=The%20application%20of%20%23EndPjparalysis%20in%20Ward%20C4%2C%20Trauma,reduction%20in%20falls%2086%25%20reduction%20in%20pressure%20injuries>
15. MCX LINET Report Mobi-Lift with lateral tilt - Patient mobilization. 2019
16. Tervo-Heikkinen TA, Heikkilä A, Koivunen M, Kortteisto TR, Peltokoski J, Salmela S, Sankelo M, Ylitörmänen TS, Junttila K. Pressure injury prevalence and incidence in acute inpatient care and related risk factors: A cross-sectional national study. *Int Wound J*. 2022 May;19(4):919-931. doi: 10.1111/iwj.13692. Epub 2021 Oct 4. PMID: 34605185; PMCID: PMC9013578.
17. Gefen A, Brienza DM, Cuddigan J, Haesler E, Kottner J. Our contemporary understanding of the aetiology of pressure ulcers/pressure injuries. *Int Wound J*. 2022 Mar;19(3):692-704. doi: 10.1111/iwj.13667. Epub 2021 Aug 11. PMID: 34382331; PMCID: PMC8874092.
18. Padula WV, Delarmente BA. The national cost of hospital-acquired pressure injuries in the United States. *Int Wound J*. 2019 Jun;16(3):634-640. doi: 10.1111/iwj.13071. Epub 2019 Jan 28. PMID: 30693644; PMCID: PMC7948545.
19. LeLaurin JH, Shorr RI. Preventing Falls in Hospitalized Patients: State of the Science. *Clin Geriatr Med*. 2019 May;35(2):273-283. doi: 10.1016/j.cger.2019.01.007. Epub 2019 Mar 1. PMID: 30929888; PMCID: PMC6446937.
20. Staggs VS, Mion LC, Shorr RI. Assisted and unassisted falls: different events, different outcomes, different implications for quality of hospital care. *Jt Comm J Qual Patient Saf*. 2014 Aug;40(8):358-64. doi: 10.1016/j.s1553-7250(14)40047-3. PMID: 25208441; PMCID: PMC4276137.
21. Jurásková, D. PATIENT FALL INJURIES DURING THEIR HOSPITALISATION – HEALTH CARE INDICATOR. Thomayer University Hospital. 2003.
22. Dunne TJ, Gaboury I, Ashe MC. Falls in hospital increase length of stay regardless of degree of harm. *J Eval Clin Pract*. 2014 Aug;20(4):396-400. doi: 10.1111/jep.12144. Epub 2014 May 9. PMID: 24814338.
23. The CSP. Regulator reveals 250,000 falls were reported in England's NHS last year. The Chartered Society of Physiotherapy. [Online] 2017. Cited: 25 Nov 2022 <https://www.csp.org.uk/news/2017-07-26-regulator-reveals-250000-falls-were-reported-englands-nhs-last-year>.
24. Alzahrani N. The effect of hospitalization on patients' emotional and psychological well-being among adult patients: An integrative review. *Appl Nurs Res*. 2021 Oct;61:151488. doi: 10.1016/j.apnr.2021.151488. Epub 2021 Aug 12. PMID: 34544571.
25. Darbyshire JL, Young JD. An investigation of sound levels on intensive care units with reference to the WHO guidelines. *Crit Care*. 2013 Sep 3;17(5):R187. doi: 10.1186/cc12870. PMID: 24005004; PMCID: PMC4056361.
26. Linet White paper: Integrated pressure air mattress for acute care department. 2023
27. Linet White paper: Enhanced features of the Sprint 200 stretcher that support the prevention of pressure injuries. 2022
28. Al Johani, W. A., & Pascua, G. P. Impacts of manual handling training and lifting devices on risks of back pain among nurses: An integrative literature review. *Nurse Media Journal of Nursing*. 2019 9(2), 210-230. doi:10.14710/nmjn.v9i2.26435.
29. Number and rate of nonfatal work injuries in detailed private industries. U.S. BUREAU OF LABOR STATISTICS. 2020. Available online: <https://www.bls.gov/charts/injuries-and-illnesses/number-and-rate-of-nonfatal-work-injuries-by-industry-subsector.htm>
30. Linet White Paper: Fighting against MSD by lateral tilt. 2023
31. Waters TR, Nelson A, Proctor C. Patient handling tasks with high risk for musculoskeletal disorders in critical care. *Crit Care Nurs Clin North Am*. 2007 Jun;19(2):131-43. doi: 10.1016/j.ccell.2007.02.008. PMID: 17512469.
32. Waters T, Lloyd JD, Hernandez E, Nelson A. AORN ergonomic tool 7: pushing, pulling, and moving equipment on wheels. *AORN J*. 2011 Sep;94(3):254-60. doi: 10.1016/j.aorn.2010.09.035. PMID: 21884845.
33. Guidance on safe nurse staffing levels in the UK. Royal Collage of Nursing. 2010. Last update: 03 Apr 2021. Available online: <https://www.rcn.org.uk/About-us/Our-Influencing-work/Policy-briefings/pol-003860>
34. Michel O, Garcia Manjon AJ, Pasquier J, Ortoleva Bucher C. How do nurses spend their time? A time and motion analysis of nursing activities in an internal medicine unit. *J Adv Nurs*. 2021 Nov;77(11):4459-4470. doi: 10.1111/jan.14935. Epub 2021 Jun 16. PMID: 34133039; PMCID: PMC8518809.
35. Slip, Trip & Fall Prevention for Healthcare Workers | NIOSH | CDC. Centers for Disease Control and Prevention [online]. Available online: <https://www.cdc.gov/niosh/docs/2011-123/>

 wissner-  
bosserhoff

**LINET**

Members of LINET Group

**LINET spol. s r.o.**

Želevčice 5 | 274 01 Slaný | Czech Republic

tel.: +420 312 576 400 | fax: +420 312 522 668 | e-mail: [info@linet.com](mailto:info@linet.com) | [www.linet.com](http://www.linet.com)



[www.linet.com](http://www.linet.com)