

# medstrom solo<sup>®</sup> MH



An Innovative Electric Profiling Bed  
Suitable for Psychiatric Care

**medstrom<sup>+</sup>**  
Improved Patient Outcomes

Superior ligature reduction  
aligned with healthcare  
risk policies

Optimised safety  
and design

Protection without  
compromise

# Clinical challenges

Today's unprecedented challenges in the provision of mental health services have come about due to a 'perfect storm' of trends and extremely difficult-to-manage associated problems.

## Ageing population with increasingly complex needs



Over the last 30 years, the UK population has grown by 10.1 million.<sup>1</sup>



Often referred to as "complex patients",<sup>3</sup> the vulnerabilities of these individuals are diverse, and a careful balancing of risks is required to provide optimal care.



One in 10 patients admitted to hospital as an emergency had five or more conditions in 2006-7. In 2015-16, it was one in three.<sup>2</sup>

## The relationship between physical and mental health

Physical health problems significantly increase the risk of developing mental health problems, and vice versa:



## Hospital bed numbers

Between 1988 and 2020, the number of mental health and learning disability hospital beds decreased by 73% and 97% respectively. This was due to a policy shift where care provision was moved away from institutional settings and into the community. Today, there are approximately 18,000 mental health and 1,000 learning disability hospital beds in England.<sup>6</sup>



## How can a bed help?

Put simply, there are currently not enough hospital beds to cater for the growing number of people with multiple complex mental and physical health problems. However, an integrated and more holistic approach can help to improve care delivery and avoid different health conditions being treated as disease-specific stand-alone issues.<sup>7</sup> Any such approach should ideally take all the mental and physical needs of the person into account.

For complex clients in poor physical health, who are also at risk of harming themselves or others, an electric profiling bed may be able to benefit them physically for:



Earlier mobilisation



Upright positioning



Reduced risk of falls

This may help to reduce deconditioning and frailty, which can help to improve both physical and psychological outcomes. Having said this, using a standard med/surg hospital bed for these people has several major risks associated, including:

- Ligature risks, with numerous potential attachment or anchor points on the bed.
- The ability to remove parts of the bed (for example the head and foot boards) which can be used as a weapon.
- A non-removable electric handset which, if the patient was accidentally able to use, could result in serious injury to themselves or others.

Up to now, there has been limited choice available to address the challenges associated with managing clients with combined physical and psychological conditions. **However, the SoloMH is the ideal solution that has been carefully designed to cater for difficult environments and ensures protection is achieved without compromising clinical outcomes.**



*By seeking advice and guidance from dedicated healthcare professionals, Medstrom has truly made the effort to identify, adapt and reduce the ligature risks and anchor points on the new mental health bed frame.*

*Overall, making a piece of equipment that reflects our needs and those of our patients.*

**Davey Mitchell,  
Health & Safety Manager**

**Belfast Health & Social Care Trust & Northern  
Ireland Fire and Rescue**

# Safeguarding against ligature risk

The SoloMH has been expertly devised by listening to and understanding key opinion leaders within the mental health environment. Understanding the risks involved in safeguarding both clients and caregivers, the SoloMH has several adaptations that optimise safety and provide enhanced protection.



## Cable-free, wireless handset

If assessment determines clients need access to an electric profiling bed frame to address their physical health issues, the choice thus far has been limited.

Traditional bed frames typically have a curly cabled handset, which imposes a multitude of risks from ligature to exposed wires. Innovatively, the SoloMH is equipped with a wireless handset as standard to eliminate the risks posed by a cabled handset. Using a Bluetooth connection, it allows caregivers to operate the client's bed frame remotely as and when required.



## Superior battery life and concealed cables

The SoloMH is the only battery-powered bed on the market; providing 4x greater battery-backup than standard med/surg beds.

This means a power cable is only needed when the bed needs charging; mitigating ligature risk. As a further safety feature, the SoloMH also has concealed cables via robust trunking that prevents unintended access.



## Minimising available anchor points

For very high-risk clients, numerous components on the SoloMH have been created using shatterproof and durable polycarbonate.

From the robust sleep deck panels and anti-intrusion plates to side rail infills that can be fixed in place, this lightweight material is designed with safety in mind. Crucially, this removes the risks associated with side rails being used as anchor points, further safeguarding clients against misuse.

## Additional focus on protection

Safety is further enhanced for clients at particular risk via the inclusion of a rounded protective side panel bumper.

This protects vulnerable patients susceptible to falls, reducing the impact and harm caused by a fall or extreme restlessness. Additionally, for those mobilising from the side of the bed, the protective side panel bumper delivers effective cushioning, overall aiding improved comfort.



# Maximum security and safety

Many mental health practitioners will agree that a client's bedroom can pose numerous risks both to them and the individual. In what is often an unpredictable environment, furniture needs to be robust and have extraordinary strength and stability to avoid misuse. The SoloMH has various design features to help it withstand tough environments from a longevity and client/caregiver safety perspective, such as:



## AutoLock™ for extreme protection

When in the ultra-low position, the patented AutoLock™ feature automatically locks the side rails and brake system in place.

This mimics the enactment of a 'block-bed', creating an enclosed design for extremely high-risk scenarios. This ensures access underneath the bed is avoided, removing the possibility for self-harm or item concealment.



## Smooth, reinforced harm-free design

The curved frame, head/footboards and side rails are all free from sharp edges that could be potentially harmful to the client or caregiver.

Designed with blow-moulded plastic - similar to that used on car bumpers - this model provides the toughest reinforcement and ensures it's near-impossible to damage.



## Fixed for purpose

Sleep deck panels, in addition to head and footboards, are securely fixed in position.

This guarantees safety is prioritised, eliminating the potential for parts of the bed to be used as weapons. The feet of the frame can also be fixed in position for a permanent solution, should this be required.



# Protection without compromise

Many psychiatric beds available are single-piece constructions. Whilst there is still a definite need for this type of bed in areas of seclusion, it unfortunately offers no clinical positioning and can be extremely heavy for caregivers to move, presenting risk of manual handling injury.



## The known benefits of the Medstrom Solo+

Manufactured in the UK, the Solo+ bed frame has earned a renowned reputation for being the most clinically-evidenced med/surg bed.

With ultra-low and ultra-high capabilities built in, the SoloMH is equipped with all the respected clinical benefits of the Solo range, providing protection without compromise for clients and caregivers alike.

## Feet on the floor, say no more

Revolutionary engineering means the SoloMH possesses the greatest height range, accomplishing an ultra-low height of just 19cm.

Evidence supports the safest height for a person to egress from is their popliteal height with feet flat on the floor, and heels, knees and thighs all at a 90° angle.<sup>8</sup> With an advanced height range that goes as low as 19cm, the majority of the population can mobilise safely from the SoloMH.

The customised height feature available with the SoloMH means the individual's popliteal height can be registered, ensuring safety at all times and educating clients on the egress height that's right for them.



## Working at a safe height

To maintain a straight back and safely perform moving and handling tasks, caregivers must be able to work at their umbilical height.

In addition to a 14cm mattress, this gives a top height of 97cm; ensuring a safe and comfortable working height for the majority of caregivers.



## Falls reduction

The SoloMH achieves reduced risk of injury from a fall.

The lower the height; the lesser the impact, which is especially important in challenging environments where clients may have conditions such as delirium or dementia.<sup>9</sup>



## Additional features and benefits



The electric backrest lengthens as it articulates to a maximum of 70°, extending the platform by 23cm. Independent testing reveals that heel migration and associated shear and friction is eliminated when the patient is positioned using the auto-contour feature.<sup>10</sup>



The backrest automatically pauses at the 'Safe Stop' head of bed angles of 30° and 45°, ensuring effective client positioning and reducing guesswork for the caregiver.



A one-button cardiac chair gives excellent upright positioning. This benefits body systems through gravity, facilitates eating and drinking and offers considerable psychological benefits for bed-bound patients.



The bed frame can be decontaminated with all hospital-approved cleaning agents and the innovative apex design allows for hoist access (if required) and easy cleaning under the bed.



The SoloMH is available with a fully sealed, Crib 7 and vandal-proof Protecta 7 foam mattress, suitable for high risk environments.



## The Medstrom Solo<sup>®</sup> MH can be **customised to your needs**.

Understanding the complexities of mental health environments, Medstrom fully appreciate that different facilities have different client bases, and therefore have different needs. The SoloMH can be customised in different configurations to meet your particular requirements, as demonstrated below.

### ULTIMATE SAFETY



**1 Ultimate safety:** Available with fixed feet that can be secured in position and with polycarbonate fillers that avoid any anchor points, this configuration is made suitable for the highest risk clients such as those in psychiatric intensive care, forensic units and specialist/acute units.

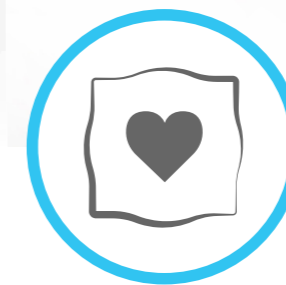
### ULTIMATE CLINICAL POSITIONING



**2 Ultimate clinical positioning:** A variety of clinical positions can be achieved to meet the needs of complex clients. With standard configurations such as wireless handset and AutoLock™ feature, it still ensures client safety whilst not compromising clinical functionality or intervention from therapy teams i.e. physiotherapists.

Suitable applications may include elderly care, dementia units and clients who have long-term conditions.

### ULTIMATE COMFORT



**3 Ultimate comfort:** Understanding that aesthetics are incredibly important within psychiatric environments in order to promote calmness, the SoloMH has been designed without an institutional or heavily clinical appearance.

Available in soft and modern colour palettes, with additional options such as padded bumpers, the SoloMH can flex to encompass a home-style environment. Suitable for long-term settings such as respite care, clients with learning difficulties or rehab.



Technical Specification			
<b>Minimum height:</b>	19cm	<b>Maximum height:</b>	81cm
<b>Safe working load:</b>	258kg (41st)	<b>Max patient weight:</b>	193kg (30st)
<b>Back rest angle:</b>	70°	<b>Knee angle:</b>	30°
<b>Calf angle:</b>	20°	<b>Trend/reverse Trend angle:</b>	+ 14° / - 14°
<b>Total length and width (side panel):</b>	225cm x 103cm	<b>Sleep deck dimensions (side panel):</b>	206cm x 91cm
<b>Total length and width (side rails):</b>	227cm x 106cm	<b>Sleep deck dimensions (side rails):</b>	206cm x 93cm
<b>Total bed weight (side rails):</b>	149kg (23st)	<b>Total bed weight (side panels):</b>	139kg (22st)

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