



Wearable Patient Monitor

# Infinite care with every step





73%

73% of 1855 patients who died before hospital discharge were not admitted to critical care at any stage after surgery<sup>[1]</sup>.

Wearable devices provide a safer and more comfortable monitoring experience but their accuracy and usability of wearable devices and the reliability and security of wireless signal transmission can bring great challenges to clinical application<sup>[2]</sup>.

To meet these challenges Mindray has developed the mWear\* wearable patient monitor. With simple clinical application in multiple scenarios, mWear provides accurate, comprehensive monitoring data.

## Medical-Grade Wearable Monitoring

A refined design and medical-grade algorithm give mWear the ability to enhance patient safety.



**Refined design**  
Comfortable to wear  
Complete interconnectivity



**Reliable design**  
IP22 Waterproof  
Resistant to 48 kinds of disinfectants



**Medical-grade monitoring**  
Multi-parameter monitoring  
Innovative health parameters



**Ring SpO<sub>2</sub> sensor**  
Normal hand movement with  
greater comfort

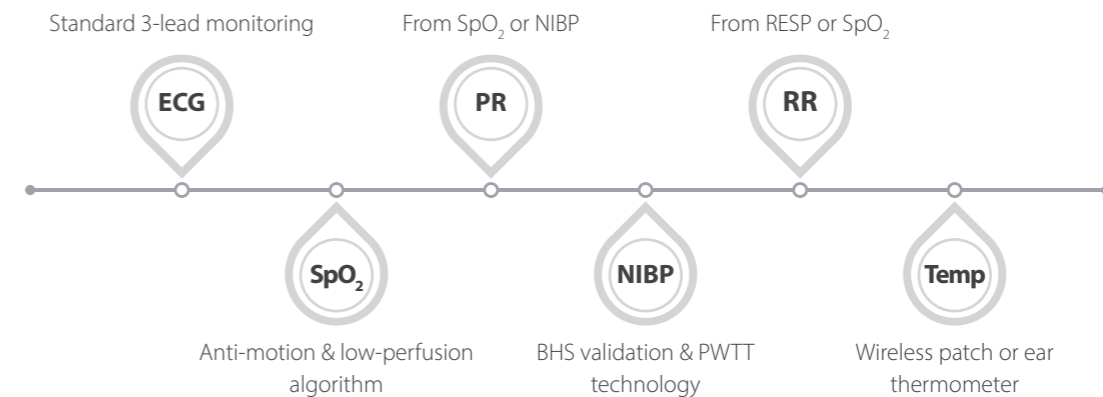
[1] Pearse R M, Rui P M, Bauer P, et al. Mortality after surgery in Europe: a 7 day cohort study[J]. Lancet, 2012, 380(9847): 1059-1065.

[2] CORDIS. <https://cordis.europa.eu/article/id/435820-wearable-sensors-improve-care-for-vulnerable-patients>

\* Including EP30, ES30 and BP20.

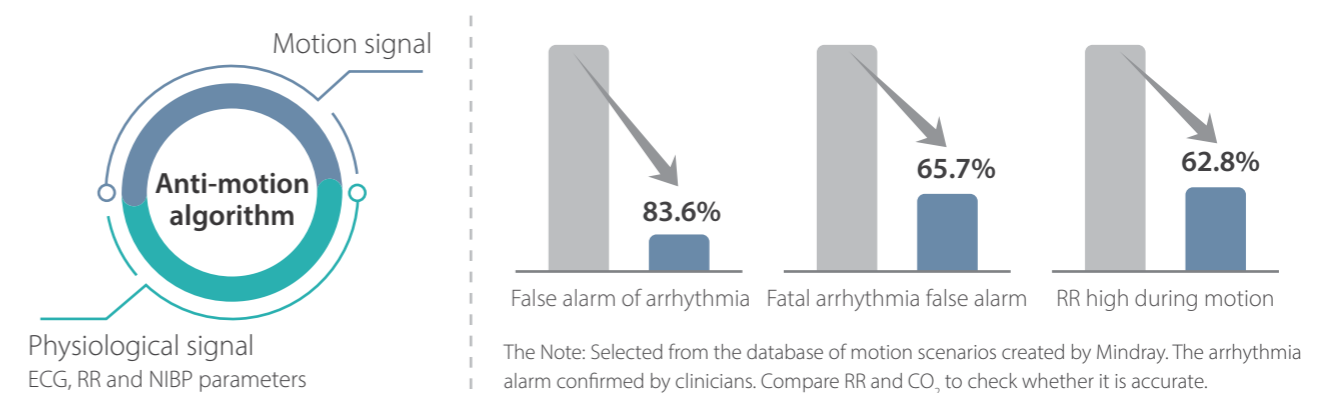
## Accurate and Reliable Multi-Parameter Monitoring

Backed by years of successful research and development, Mindray provides accurate and reliable multi-parameter monitoring for clinical teams.



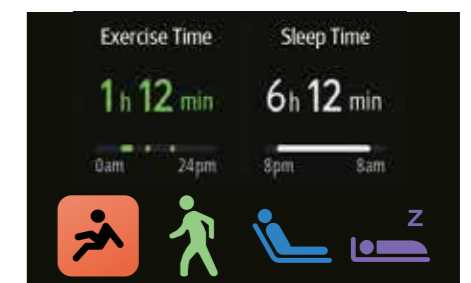
## Anti-Motion Algorithm

Mindray's innovative patented technology<sup>[3]</sup> improves the motion artefact performance of mWear to significantly increase parameter accuracy.



## Health Parameter Monitoring

- Innovative health parameter: Specialised algorithm based on clinical evidence to monitor patient's exercise and sleep time
- Identify four patient statuses: Falls, exercise, sleep, and rest



[3] Technical algorithm patent No.: EP 18921425.7, PCT/CN2018/088982



### Rising to the challenge

Wearable devices are well accepted by patients, and clinical staff have called for increased accuracy and usability of such devices.<sup>[4]</sup>

## Smooth Workflow

How can we make wearable devices easier to use for patients and clinical staff? Informed by real clinical needs, Mindray is tackling these challenges in three ways:



### Monitoring Preparation

- Pairing through a single touch
- Patient information auto bound through PDA scanning



### Patient Monitoring

- Unified management and viewing through central station
- Supports two kinds of multi-bed screen



- For more detailed information, Mindray provides single-bed screen.

[4] Leenen JPL, Dijkman EM, van Dijk JD, et al. Feasibility of continuous monitoring of vital signs in surgical patients on a general ward: an observational cohort study. *BMJ Open* 2021;11:e042735.

### Innovative Wearable Mode

- Display patient status.
- Calculate and display the EWS score.
- Display health parameters
- Refresh parameters every two minutes

### Falls Warning

A falls warning and the position of the patient are displayed.

### Emergency Monitoring

- When a patient has abnormal fatal signs \*, or clinicians want to see detailed vital signs, "Wearable mode" can be switched to "Continuous mode". The central station refreshes parameters every second.
- When serious alarms are identified, alarm escalation will be triggered, with special audio and visual cues.



Wearable Mode



Continuous Mode



Fall Down Warning



### Charging & Device Management

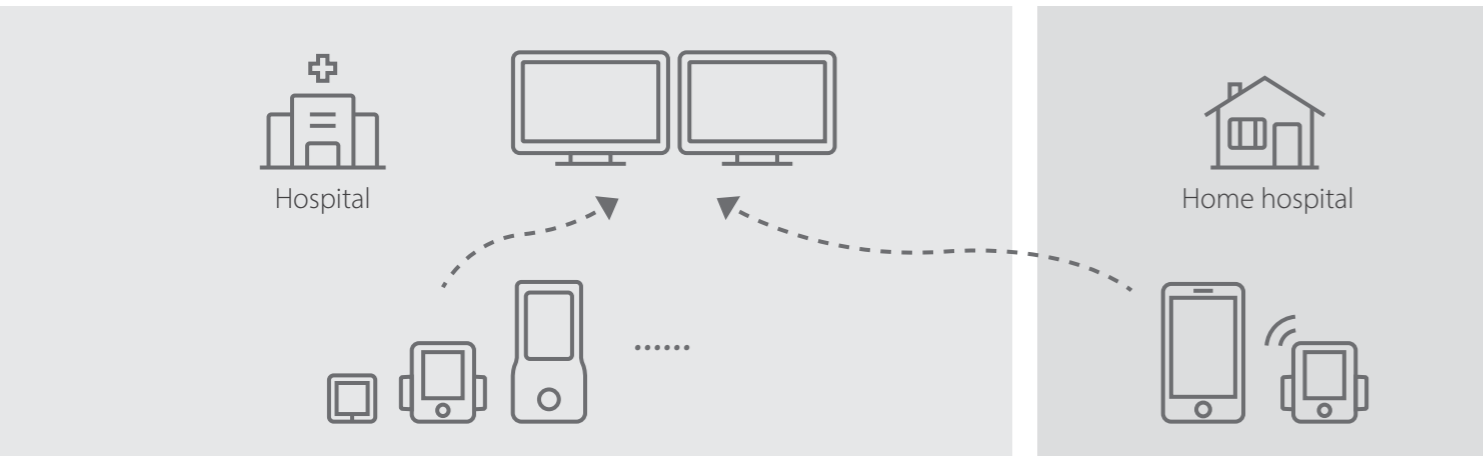
- Long lasting: at least 48 hours battery life
- Replace the battery with a single hand
- Centralised charging. Clear charging instruction
- Large volume storage



\* Including 4 types of arrhythmia: Asystole, V-Fib/V-Tach, Extreme Tachy and Extreme Brady.

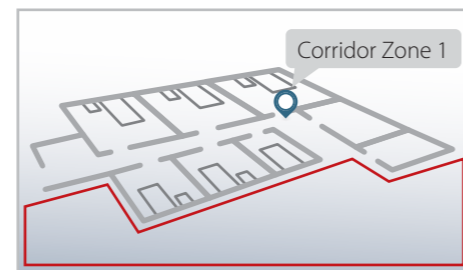
# Reliable and Accessible IT Solution

Mindray understands that data accuracy is important and requires a reliable and stable IT network. Extend your network through the mWear app so that patients are safely monitored at home. mWear uses the same centralised monitoring system whether the patient is in hospital or at home. All data can be seamlessly connected to the EPR.



## Intelligent Device Location

- Device search: Use the central station to locate a device
- Electronic fence: When the wearable device exceeds the network range, the central monitoring system will beep



## Home hospital application

- Dedicated app design
- App sends the data back to the central station in hospital for unified management of patient data in the ward.
- Independent charging pod



## Collaboration

- Officially linked with iThermonitor® wireless temp patch
- Actively welcoming more partners to join the Mindray system



## Reliable Signal Transmission

- Seamless roaming technology: Ensure the seamless connection and stable transmission of signals when switching between different patients.
- Secure encryption: mWear supports multiple WiFi encryption technologies to securely access a hospital network under the dedicated network environment. mWear adopts TKIP and AES encryption to ensure the security of signal transmission.

## Accessible IT Solution

Mindray's IT solution provides patient-centric data collection. All data can be displayed, analysed, alarmed, reported and sent to the 3rd-party EPR via Mindray's standard interface for a more comprehensive picture of patient health.

