

[Supplementary material] SDC 1. Desired features and examples

Feature	Example
Integration with other devices	Added features such as television monitor for v/s, smart television
	Patient health caregiver notification app
	AI featured music play
	Automated over-bed tables
	Voice recognition, voice call, ease of call-bell
	Vibrator for percussion or lung care
	Attaching and managing drain tubes and IV lines
	Restraint apply
Skin pressure related	Clean oxygen supply
	Shower in bed
Excretion related	Back massage
	Air-mattress function
	Stool emission sensor, wet sheet recognition
	Drainage volume measurement for hour urine
Tele-monitoring	Fixing and managing of urine-bag
	Excretion care, defecation in bed without diapers
	EMR interworking
Fall related	Automatic measurement of body temperature, vital sign
	Wireless-device
Bed making and	Movement detection and side-rail sensors
	Out-of-bed detection
Bed making and	Ease of cleanliness and disinfection

cleaning	Tidy-up in a more convenient way
	Flattening sheets with rolling-function
Temperature	Heating/cooling based on body temperature
control and air	Cooling for hypothermic therapy
circulation	Ventilation and drying
	Customized setting and adjustment
Alarm	Alarm if cutoff values are exceeded
	Alert of sudden or abnormal changes in vital signs, symptoms and status
Body measurement	Height measurement
	Automatic body weight measurement
	Difference from the previous weight
	Automated position change
Body position	Reposition toward the head of bed after sliding down
change related	Angle adjustment of both sides of frame or for upper-body elevation
	Adjustment of bed height based on patients' weight
Emergency	Malfunction management
readiness	Button for CPR to flatten bed automatically
Convenient use related	One-touch operation
	Battery chargeable
Moving/ transferring	Auto-transfer
	Ease of moving
	Inter-bed transfer
Others	Analysis of sleep patterns
	Helping ROM exercise
	After-sales services (FAQ, mattress replacement)

Note: AI=artificial intelligence, EMR=electronic medical record, CPR=cardiopulmonary resuscitation,
FAQ=frequently asked questions