

# EarlySense

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- Contact-free, Continuous, monitoring of Heart rate, Respiratory rate, and motion.
- **Respiratory rate** is a leading indicator of patient deterioration including identifying respiratory illnesses, infection, and overall worsening of condition
- FDA Clearance and CE Mark with more than 1 million patients monitored worldwide for the past 10 years
- Data is updated **twice per second** with clinically proven outcomes, published in the *American Journal of Medicine*<sup>1</sup>.
- Deployed in 300+ medical facilities worldwide





### Early Detection of Patient Deterioration



#### Heart

- Beats per minute (BPM)
- Highly validated
- Thresholds crossing notifications
- Indication of significant trend changes



#### Respiratory

- Breath per minute (Br/min)
- High accuracy
- Thresholds crossing notifications
- Indication of significant trend or pattern changes

### Safety



#### Fall Prevention

- Bed occupancy (in / out of bed indication)
- 6 levels of bed exit sensitivities
- Delayed exit notification for wandering patients
- Additional visual indication of potential exits



#### Pressure Ulcer Prevention

- Motion analysis
- Indication of low movement patients at risk
- Patient turn reminders
- Posture change detection



### Sleep

- Sleep staging (deep, light, REM, wake)
- Full sleep analysis (time to fall asleep, number of awakenings, sleep efficiency)
- “Sleep score” derived from all of the parameters above
- Sleep apnea detection



### Completely Contact-Free monitoring

- FDA/CE cleared, Heart rate & respiratory rate monitoring
- Gold standard accuracy
- No need to attach anything to the patient – reduce risk of team cross-contamination
- No consumable parts that need to be replaced every few days
- No need to recharge power to the sensor
- No wireless network disconnections

### Minimize care team's exposure

- Vital signs data on display outside of patient's room
- Central display provides vital sign data on all admitted patients in a centralized location
- Less in-room patient interaction (reducing team risk)



Isolation Room Configuration with External Vitals Display







Prof. Galia Rahav at Sheba's COVID19 command center

Room	Initials	HR	RR	Fall Prevention	Patient Motion	Patient Turn	Alert	Recent Events
413-A	P. F.	91	12					
417-B	C. M.	--	--					
419-A	H. G.	83	18					
420-A	E. M.	70	20					
423-B	V. F.	--	--					
427-A	R. T.	62	14					
428-A	L. P.	75	20			L		
428-B	J. S.	53	20			L		
432-B	R. A.	97	7	32				
435-B	R. G.	67	15					
436-B	S. W.	71	17					
437-B	P. E.	98	18					
438-B	J. M.	--	8	35				
404-A	A. B.	76	26					
425-A	B. W.	--	--					
425-B	A. B.	62	28					
426-A	J. M.	57	24					
418-B	C. F.	45	11					
431-A	R. R.	65	16					
431-B	G. Q.	65	13					
432-A	J. H.	54	18					
403-A	K. J.	40 100 131	6 12 32			01:44		
406-A	S. R.	79	8 35 36				Mute 12:24 High Resp.Rate: 36 Br/min	
406-B	P. R.	72	8 16 36					
433-B	A. B.	82	27			0:23		
434-B	C. G.	--	--					
404-C								
417-A								
423-A								
436-A								



Central Display Provides Comprehensive View of All Patients Admitted with Ability to Send Alerts to Communications Devices





Contact free under mattress  
/ in-chair sensing that requires no  
patient compliance



Uniquely precise algorithms convert  
data to accurate vital signs and  
patterns:

- Heart rate, HRV and cardiac pattern (opening of Aortic Valve detected through mattress)
- Respiratory rate and pattern
- Motion, patient turn verification, in/out of bed, bed exit prediction



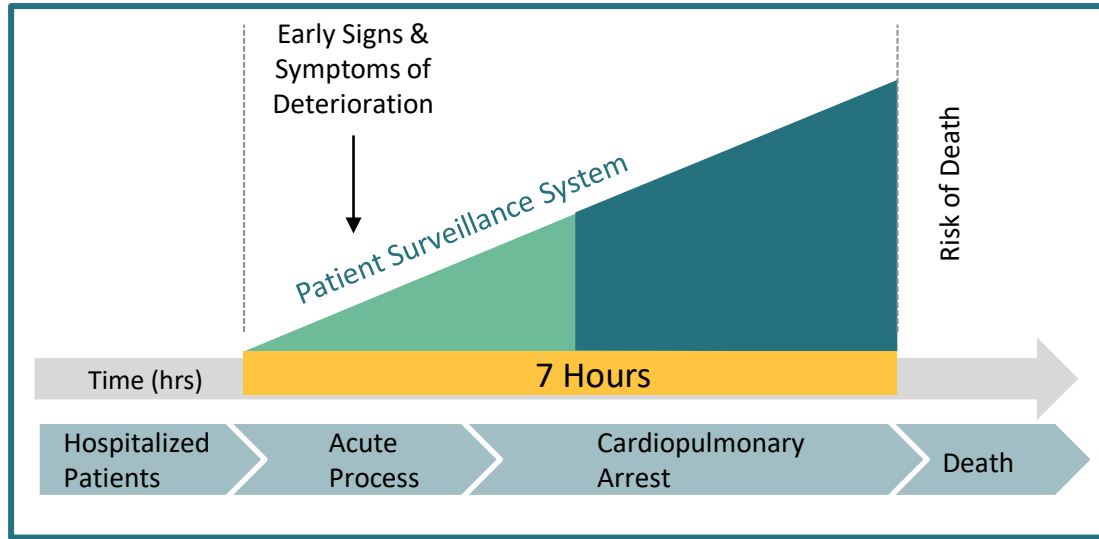
Patented AI-based predictive analytics for:

- Sepsis, fall risk, pressure ulcer risk
- Respiratory depression, arrhythmia, etc.
- Changes in trends

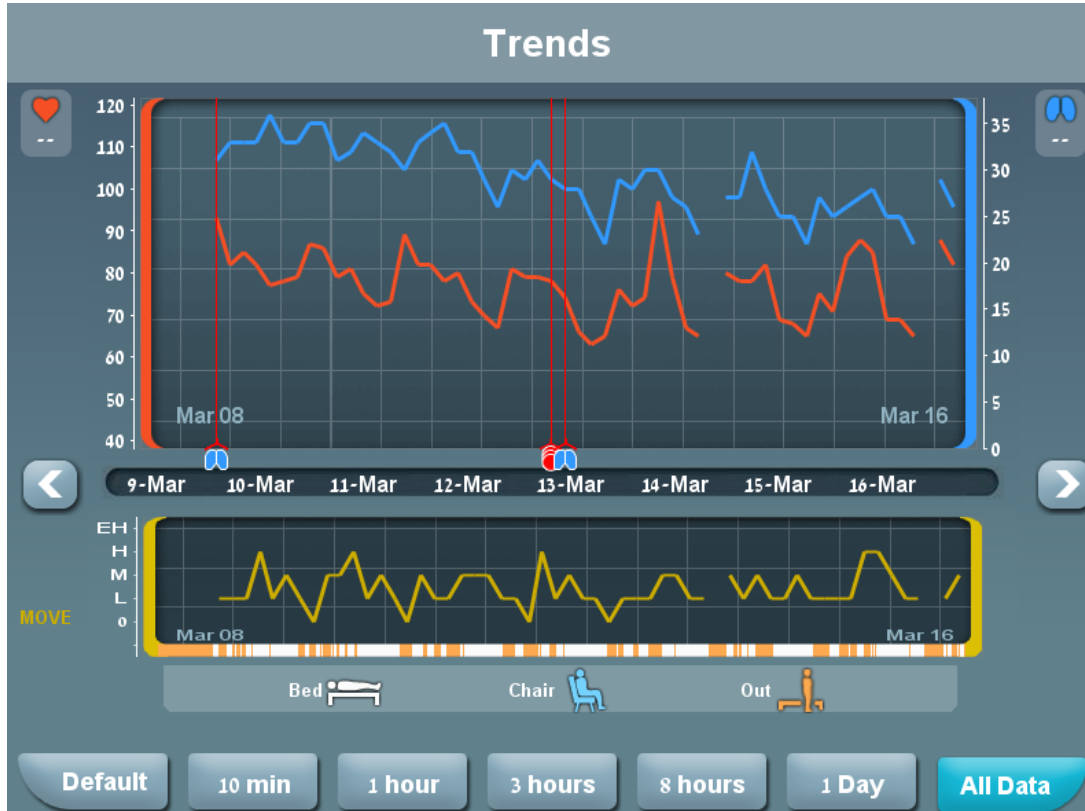


Big data continuously  
collected towards additional  
predictive solutions

- Accuracy Extensively validated in multiple studies
- 25 Global Patents granted









**01** | Founded in **2004** |  
HQ in Israel & Subsidiary  
USA

**02** | Installed in over **300**  
medical facilities  
worldwide | more than  
**1,000,000** patients  
monitored

**03** | FDA cleared & CE  
approved technology -  
proven to save lives and  
reduce costs

**04** | Superior AI, providing  
Personalized, predictive  
analytics, e.g.: Cardiac  
events, apnea onset  
alerts, Premium service,  
expert advice engine

**05** | The largest ever  
cardiac/respiratory  
medical grade database,  
over 100 Million hours in  
2018

**06** | **24** US Patents granted,  
several more pending in  
US & globally

**07** | Privately held: backed by  
**Samsung, Mitsui, Hill-  
Rom, Wells Fargo** and  
others

**08** | **100** dedicated PhDs, RNs,  
HW & SW Engineers,  
Quality & Clinical experts,  
in Israel & USA



EarlySense

In Partnerships with:

**PHILIPS**



**WelchAlllyn**

**Hill-Rom**

**SAMSUNG**

**beurer**  
HEALTH AND WELL-BEING



## Currently Serving 300+ Hospitals and Post-Acute Healthcare Providers

### Acute



### Post-Acute / Other



**2019:** Hill-Rom  
Centrella Smart Bed  
with EarlySense patient  
monitoring



**2017:** Integration with  
Philips IntelliVue  
Guardian



**2013:** Integration  
with Welch-Allyn



**2018:** Integration with  
LACHESIS *smart ward*

深圳市联新移动医疗科技有  
限公司



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谢谢

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