# VitalSyn

The remote vital signs monitoring service



## VitalSyn)

## Continuous vital signs monitoring, delivered remotely

We provide continuous, contactless and affordable vital signs monitoring, in hospitals, and the community.

We help catch serious infection early, prevent emergency admissions, to help save costs and save lives. Field Hospital

**Nursing & Care Home** 

**Hospital Ward** 

**Home Care** 

**Travel Health** 



### Continuous

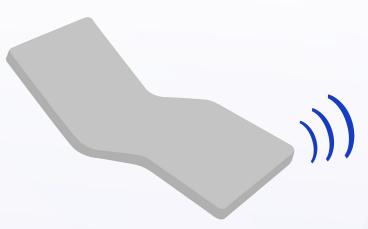
**VitalSyn's** patented bed sensors continuously track average resting heart and respiration rate

## Contact-free

No need for wearable devices or continual intervention, vital signs are tracked contactlessly

## Cost-effective

From as little as £3/day, **VitalSyn** provide continuous vital signs tracking. We then send a trained **VitalSyn** nurse to take full observations whenever someone is showing signs of concerning condition decline

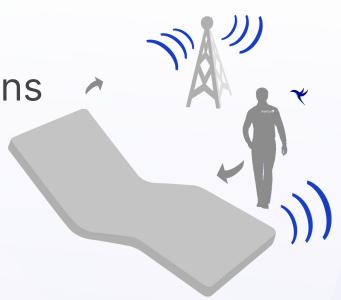




## **How it works:**

Best practice observations extended further, made safer

**VitalSyn** is a full care package involving sensors, Al alert system and 24/7 on-call nursing team...





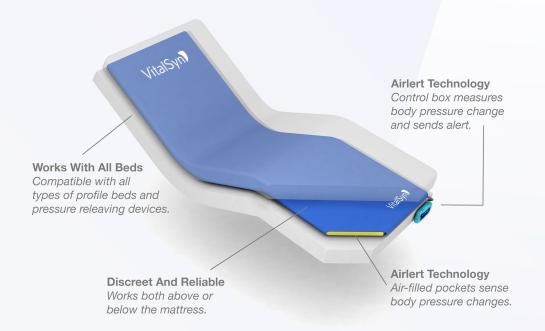


VitalSyn's patented contact-free bed sensor continuously tracks an occupant's average resting heart and respiration rates An alert is sent to the healthcare team whenever rates track outside of safe NEWS2 norms

A highly-trained **VitalSyn** nurse is called to the patient to take full observations, and escalates as appropriate



## **Enabling Remote Hospital Today**









## Field Hospital

Monitor 5,000+ patients continuously. Sensor mats, touchscreens and pagers can be supplied with or without nursing staff.

#### Included:

- > HR/RR sensor mats (wire & contact free)
- > Monitoring touchscreens
- > Pagers
- > Nurse practitioners (UK only)

#### WHY USE IT?

Manage more patients with fewer staff

Gain accurate respiration rate measurements\*

\* Semler et al (2013) - Study found directly observed respiration rate measurements were recorded inaccurately over 58% of the time



## **Hospital Ward**

Catch every patient in early decline and reduce unnecessary, costly ICU admissions.

#### Enable low cost:

- > Continuous HR/RR monitoring
- > Contact-free observations
- > Dedicated vital signs staff

#### WHY USE IT?

Monitor through the night without waking the patient

Gain accurate respiration rate measurements\*

\* Semler et al (2013) - Study found directly observed respiration rate measurements were recorded inaccurately over 58% of the time



## Nursing or Care Home

A hassle free safety system for vulnerable residents in long-term care that lets them enjoy their lives worry-free.

#### Enable contact free:

- > Sepsis prevention
- > Contagion prevention
- > Cardiac early warning
- > Dedicated vital signs nursing staff

#### WHY USE IT?

Prevent emergency hospital admissions

Rehabilitate patients with safe continuous monitoring

\* Hughes and Witham (2018) - Readmission after discharge from hospital is common and has a considerable cost... Over three-quarters of hospital readmissions are due to a diagnosis different to that of the index admission.



## **Home Care**

Provide an always-on safety net for relatives or patients recuperating at home, and with 24/7 nurse response, make hospital at home a reality.

#### Enable low cost:

- > Continuous HR/RR monitoring
- > Contact-free observations
- > 24/7 nurse response

#### WHY USE IT?

Discharge patients from hospital sooner

Continuously monitor to prevent readmissions

\* Hughes and Witham (2018) - Readmission after discharge from hospital is common and has a considerable cost... Over three-quarters of hospital readmissions are due to a diagnosis different to that of the index admission.



## **Travel Health**

For when those in your care need confidence that you can ensure the safety of them and all their fellow travellers.

Passive condition monitoring means your staff health team can be alerted promptly to unwell guests, enabling rapid, timely response to infection.

#### Includes:

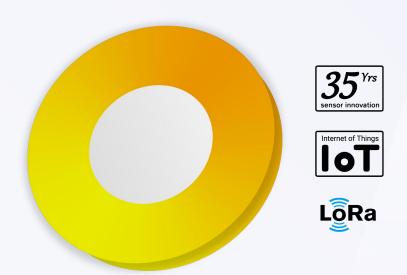
- > 24/7 condition decline alerting
- > Contact-free observations
- > On-board nursing support

WHY USE IT?

Protect staff and guests

Enable contactless monitoring of unwell guests while remaining in isolation





## Our Experience

**VitalSyn's** patented sensor system is the product of over 35 years experience in care safety sensors. Our unique innovation enables ballistocardiographic signals to be captured, optimised and monitored with a very low-power - allowing them to run for long periods (months) with no intervention.

## Reliability

Over 15,000 sensor mats, using the sensor system, are already in daily use preventing harm in clinical care settings across the UK

## Security

Data and patient security is our utmost priority. All sensor data is processed on **VitalSyn's** proprietary system conforming to ISO 13485 and ISO/IEC 27001



#### VitalSyn Service Principles

### Informed decisions taken

We make sense of the data

### Clinician-led service

Our trained nurse and GP-backed teams triage cases

## Initiating timely treatment

We reduce patient emergencies



## The **VitalSyn** Care Ecosystem

Our community of research users share daily data which trains our smart Al backed sensors.

This enables our nurses to be correctly prioritised and called to the patients in greatest need before their case becomes acute.

The result? **VitalSyn** nurses respond empowered with advanced information about their patient's condition even before they arrive at the bedside.



## Advantages In Brief









Contactless

HR & RR MONITORING

Continuous

24/7 BASELINE MONITOR

NEWS2

**ALWAYS-ON ALERT SYSTEM** 

No Set-up

WIRELESS, FULLY MANAGED



## The VitalSyn Service Options

Sensors for Call Systems

£ 1.50/day

- Unlimited patients
- Call system ready
- Battery powered units
- Hassle-free 5/7 support

Request A Trial

Sensors + Dashboards

 $_{\scriptscriptstyle ext{E}} 2_{\scriptscriptstyle ext{/day}}$ 

- Unlimited patients
- Totally wireless units
- No set-up required

#### WITH

- Hassle-free daytime support
- 2 Pagers per 50 beds
- 1 Touchscreen per site
- . 2 Account logins per site

Request A Trial

Sensors + Nurses

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- · Unlimited patients
- Totally wireless units
- No set-up required

#### WITH

- On call nursing staff
- <30 min nurse arrival time
- Fully managed service
- On-site nurses (available)

Request A Trial



**Business Case #1** 

## **SEPSIS PREVENTION**

- Annual cost of sepsis to NHS England £2bn[1]
- Approximately 30% of sepsis cases are hospital acquired, 70% community acquired[2]
- In the majority of cases sepsis can be prevented if signs of decline are spotted early and infection is treated with antibiotics.
- A large proportion of this cost and the associated ~48k deaths[3] would be avoidable if affordable, continuous vital signs monitoring were standard for the most vulnerable patients in hospital and the care system
- VitalSyn's call-system solution could be installed in every nursing & care home bed in the UK for around one sixth of the cost of preventable community sepsis cases, alone.

<sup>[1]</sup> HM Government: New action to reduce sepsis

<sup>[2]</sup> Esteban et al. Sepsis incidence and outcome: contrasting the intensive care unit with the hospital ward

<sup>[3]</sup> Rudd et al. Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study





**Business Case #2** 

## **EARLIER DISCHARGING**

- A standard ward bed costs over £400/day [4]
- VitalSyn's nurse-led active monitoring solution enables patients to be discharged earlier to the most optimal place for rehabilitation (home or residential care) but with the security of continuous hospital-level monitoring
- A single early discharge day pays for over 4 months VitalSyn continuous nurse-backed at-home monitoring



**Business Case #3** 

## **READMISSION PREVENTION**

- People spend on average 38 days in hospital in the final three years of life, over 3 admissions [5]
- The average cost of one end-of-life hospital admission is ~£5,000 [4][5]
- VitalSyn is designed to prevent readmission by catching infections and decline earlier
- For patients who have had a hospital admission of 5 days or more we recommend a two month period of VitalSyn continuous at home monitoring
- The 30-180 days after discharge is when patients are most at risk of readmission [6]
- Males are particularly susceptible due to under-reporting decline until it becomes acute leading to longer secondary admissions [6]
- VitalSyn if used for 2 months following discharge costs ~4% of the cost an average end of life admission, and by enabling early detection and intervention has the potential to reduce or prevent readmissions.

<sup>[5]</sup> Tracy Dixon et al. Hospital admissions, age, and death: retrospective cohort study

<sup>[6]</sup> Hughes et al. Causes and correlates of 30 day and 180 day readmission following discharge from a Medicine for the Elderly Rehabilitation unit

# VitalSyn)

The world's first remote vital signs monitoring service

Find out more & request a trial at vitalsyn.com