

The importance of early collaboration and co-creation

Lessons learned from
Continuous Monitoring@hospital

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Orientation



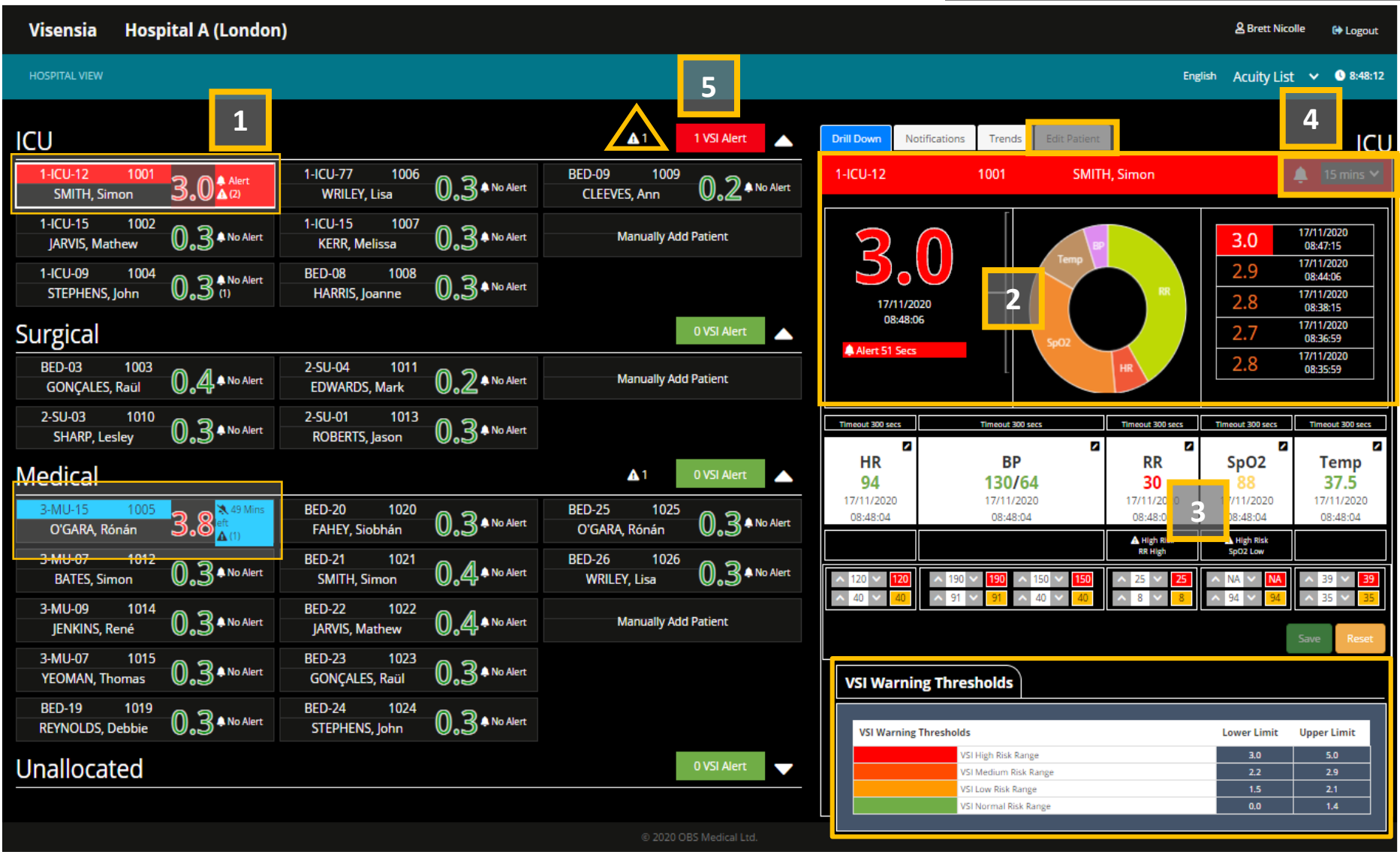
MVP



All End-users



Virtual Patient Monitoring Platform VSI Dashboard



1. VSI Alerts

VSI Alerts are generated when the VSI equals or surpasses the Care-Units defined VSI High Risk Range – Lower Limit.

VSI Alert Status

- Active VSI Alert
- Silenced VSI Alert

The Care-Units configured VSI Warning Thresholds can be found in the **Edit Patient Tab**

- VSI Warning Threshold (Edit Patient Tab)

Example High Threshold Limit configured as:

$$\geq 3.0 \text{ High Threshold} \leq 5.0$$

2. VSI Contributions Chart

VSI Contributions chart highlighting both Temp and SpO2 are major contributors to a VSI of 3.1

3. Vitals Chart

Vitals chart highlighting both Temp and SpO2 have breached defined threshold limits (Upper & Lower) if Single Channel Warnings = Enabled

- Upper Limit Breach

- Lower Limit Breach

Single channel warnings are highlighted via the patient list as triangle and no# breaches

4. VSI Silenced Alert Options

VSI Alerts can be silenced using the drop-down selector to choose the appropriate time required and then the bell icon to activate the silence status.

- The **Patient Tile** is updated to the Silenced Status, and displays the time remaining for the Silence... 41 Mins left

5. VSI Alert Notice Box

The VSI Alert Notice Box displays the number of active VSI Alerts for a monitored Care Unit

Conflicting Results

Patients, Nurses, PA's, House Officers

- ✓ Decreased/Increased workload
 - ✓ Nurse worry about sicker patients at the ward/more supported
 - ✓ Adopted technology/no turning back or turning back annoying
 - ✓ Dashboard matters
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- ✓ Less disturbance patients/safety feeling patient
 - ✓ Information overload
 - ✓ Stigmatising ('I am more than my values')
 - ✓ Only objective information ('I am more than my values')

Evidence after >3000 monitored patients

Q&S care:

✓ MEWS >6	+ 43%	(p<0,001)
✓ Rapid Response Team	- 28%	(p=0,022)
✓ Unplanned IC admittance	- 32%	(p=0,029)

At ICU admission:

- ✓ Similar condition
- ✓ ICU duration unaltered

**Business case
minus 3 ICU beds**

CM routine in Radboud university medical center

Next step: Datadriven Care Support



Lessons learned

- ✓ Early involvement of all 'users'
- ✓ Caregivers in the lead, prevent you from a solution without a problem
- ✓ Crossing borders: pilot to implementation to pilot
- ✓ Technology affects individuals, individual affects technology
- ✓ Feasibility, usability, acceptability.. before (cost)effectiveness
- ✓ Benefit is not the same as impact..Q-aim
- ✓ Payer commonly not beneficiary
- ✓ We need focus on care and not technology innovation

