

## Croydon University Hospital reduce cardiac arrests by 70%

Croydon University Hospital is using Vitalpac to improve the quality of patient monitoring. Observations are more timely and complete, which helps ensure that deteriorating patients are spotted early and their care is escalated promptly to senior staff.

As a result, cardiac arrest calls have fallen by 70%, which is equivalent to 120 fewer cardiac arrests in a year. The acute medical unit went for 100 days without a single cardiac arrest on the ward.

### The problem



#### Spotting patients at risk of cardiac arrest

Detecting deteriorating patients became a priority for Croydon University Hospital when they noticed that the care of many patients was not being escalated in due time. Clinicians could not make an informed decision on a patient's condition and decide on the most appropriate action because patient observations were often incomplete.

Hospital staff needed more information about patients to understand when they might be at risk of cardiac arrest and require early intervention. Signs of deterioration are detectable before 75% of cardiac arrests. But these warning signs are acted

on in only 35% of cases. Patients at risk of deteriorating can be identified by calculating an Early Warning Score (EWS). But calculating the EWS is complex, and is miscalculated up to 80% of the time.

The need for better, more timely and more accurate observations at Croydon University Hospital was clear.

### The solution



#### Using Vitalpac to identify deteriorating patients

In 2010, the hospital started using Vitalpac – touch screen, handheld technology used by nurses to input patient observations.

Observations taken at the right time increased across the board. Among low and medium risk patients, timely observation increased by 50%. Even among high-risk patients, observations recorded on time increased from 50% to 70%. The number of observations taken between midnight and 6am increased by 300%.

Vitalpac automatically calculates the EWS based on the information inputted by nurses. This has reduced errors, and made identifying patients who are deteriorating and at risk of cardiac arrest more reliable.



## Timeline

2009

Observations taken on time just 60% in the day and 50% at night

May 2010

Trust deploys Vitalpac

2011

2012

May 2013

90% day time observations are on time, 100% complete night-time observations

May 2013

Cardiac arrests down by 70%

Nov 2013

No cardiac arrest on Acute Medical Unit for 100 days



# The results



## Cardiac arrests reduced by 70%

Vitalpac ensures nurses are more informed about the condition of their patients. When patients deteriorate, nurses can now act quickly and escalate their care. This has contributed to a 70% reduction in cardiac arrests, which is equivalent to 120 fewer cardiac arrests during the year. The reduction is derived from comparing the number of cardiac arrests in June - November 2010 to the same period in 2013. Vitalpac was introduced in 2010.

Steve Cairney, Head of Nursing for the trust's 24/7 team explains the significance of these findings and the Trust's plans for the future:



On the back of the CQC visit, we uncovered that we haven't had a cardiac arrest on the Acute Medical Unit for almost 100 days, or indeed a ward arrest for almost two weeks. This is particularly impressive considering that nationally, 23,000 people suffer preventable cardiac arrests in hospital, and fewer than 20% survive the discharge. Using Vitalpac to spot deterioration has proved invaluable. We will work with The Learning Clinic to understand what other outcomes we can improve using Vitalpac".

