

“There are now periods of silence in the unit”

Mr Bouchareb, Nurse Manager, Tourcoing General Hospital

Customer

Tourcoing General Hospital, France

Challenge

Reduce the number of non-actionable alarms in order to improve patient safety and staff wellbeing in the intensive care unit (ICU).

Our solution

Philips reviewed alarm data and settings, staff workflow and processes, and worked collaboratively with the hospital to support optimal practices configured to the needs of the patients and staff.

Benefits

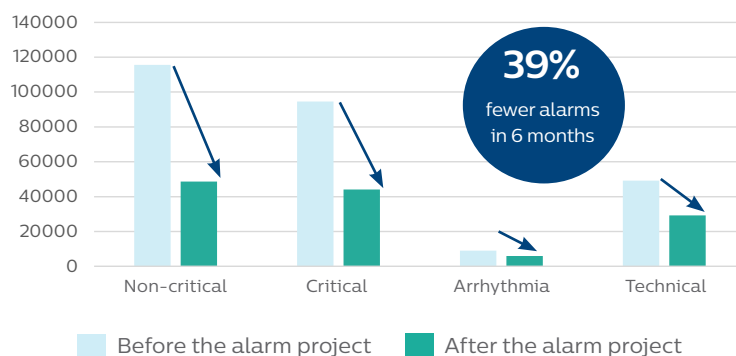
“The alarms project has reduced noise pollution and improved patient care within the unit.” -Dr Delannoy, ICU doctor, Tourcoing General Hospital

Reducing alarm fatigue in the ICU

In the intensive care unit (ICU), alarms on monitoring devices alert clinicians to a change in a patient’s condition, or warn that the device may have failed. Each day, staff can be exposed to as many as 350 alarms per patient¹. Different devices compete for their attention, and false alarms are common. This can desensitize staff to alarms.

Faced with this challenge, the ICU at Tourcoing General Hospital in northern France called on Philips consultants to work together to find a solution. Together they devised a customized approach to clinical, operational and technical processes, which led to a reduction in the number of non-actionable alarms by 39% in six months.

Alarms by type at the ICU of Tourcoing General Hospital





“Reducing the number of non-actionable alarms has enabled us to be more vigilant with regard to critical alarms, so we are a lot more responsive.”

**Ms Jouvenez, Nurse,
Tourcoing general hospital**

Tourcoing General Hospital

Tourcoing General Hospital (Centre Hospitalier de Tourcoing) is a French public hospital located to the north-east of Lille near the border with Belgium. The university hospital has a bed capacity of 975 across five sites. It provides multidisciplinary services, with a particular focus on Obstetrics and Neonatology, General Medicine, Surgery, Oncology, and Geriatrics.

What causes excessive alarms?

Often, the issue is not that alarms do not work; it is that they work too precisely. Part of the challenge with a project like this is that there are multiple reasons for alarms to sound.

These can include settings that are not tailored to the individual patient, alarms that repeat, or incorrectly attached electrodes and sensors. Alarm noise can prevent patients from resting and can make nurses and physicians feel overwhelmed and eventually de-sensitized to an alarm.

Alarm fatigue project

In 2015, Philips and the hospital set up a project team including ICU nurses, physicians and executives, and a biomedical engineer, supported by Philips consultants. Philips built an alarm management performance dashboard to provide a detailed view of alarm data and trends.

When the team assessed the Philips monitors in the ICU over the course of one week, they found that an average of 237 alarms sounded per day per bed, equal to one alarm every five minutes.

The team then reviewed alarm settings and staff workflow, conducted key stakeholder interviews and documented current processes, after which they recommended a new alarm management strategy tailored to their needs.

The team identified a number of immediate changes they could implement. These included pausing the alarms when performing bedside procedures such as drawing blood, and reducing the sensitivity of some of the monitors. This project has enabled the care teams to make better use of the capabilities of monitoring devices and to adopt new practices that are now integrated into their daily routine.

Bringing silence back to the ICU

“The Philips team understood that we needed facts and not assumptions or contingencies. Simply by outlining some short-term actions, we have seen a difference. There are now periods of silence in the unit,” said Mr Bouchareb, Nurse Manager at Tourcoing general hospital. Six months after the project, a second assessment of monitors revealed a 39% reduction in non-actionable alarms, from 237 down to 173 alarms per day per patient.

1. Keith J. Ruskin and Dirk Hueske-Kraus, Alarm fatigue: impacts on patient safety, Current Opinion in Anesthesiology, Volume 28, Number 6, December 2015

Daily average alarms count by the hour of the day

