Fife Wide Delivery of Patientrack

As the first client in Scotland, NHS Fife has realised significant achievements in improving patient safety and care delivery in the deployment of Alcidion's Patientrack solution (now known as Miya Observations and Miya Assessments), embracing the bedside observation capture and risk screening assessment tools.

OUR CLIENT

NHS Fife is one of 14 territorial NHS Boards in Scotland. The organisation provides healthcare to a population of more than 370,000 and currently employs around 8,500 staff.

As a large, rural area, with varied geography and several centres of population, there are particular challenges in meeting the health needs of the people of Fife. To address these challenges, NHS Fife works to improve health services with the involvement and support of a variety of partners, including Fife Council, Fife Health and Social Care Partnership, other Health Boards in Scotland, the voluntary and independent sector, and most importantly, the public.

At NHS Fife, they put people at the centre of everything they do and work to a common set of values which guide the work they do, the decisions they make and the way they treat each other.

KEY STATISTICS

Area Hospitals: Ten
Beds: 1,260
Staff: 8,500
Ambulatory attendances: 121,152
ED presentations: 67,656
Surgeries: 15,228
Births: 3,177

THE SITUATION

Paper based observations can potentially create a risk of missing deteriorating patients. When vital signs observations are confined to paper charts, healthcare professionals have no way of quickly identifying the hospital's sickest patients easily to ensure they receive the timely care they need.

Early Warning Scores (EWS) have been in place for more than a decade, but manual methods of calculating a patient's EWS can lead to inaccuracies, observations being missed and pressure placed on nursing staff to find busy doctors to attend to unwell patients on the ward.

Patientrack was first introduced to NHS Fife in June 2011, when a small pilot was undertaken to assess whether the system would raise awareness of deteriorating patients in their wards. The pilot was completed within one year and was followed in July 2012 by a second pilot of text message alerting functionality.

THE SOLUTION

In late 2014-early 2015, "track and trigger" was rolled out across all 460 Acute beds with a further six wards making use of hard alerting. This "track and trigger" functionality improved visibility of deteriorating patients across the acute wards via hand-held devices and ward screens.

THE RESULT

From this initial focus and resultant success, the scope of use of the solution has been extended.

Bedside Risk Assessment Tools have been fundamental to the success of Patientrack at NHS Fife. Since operational, NHS Fife have completed 34,026,439 individual assessments. The system has been developed through collaborative working between Digital and Information and clinical services.

The Alcidion solution has supported the development of new tools including:

- **MUST (Malnutrition Universal Screening Tool) and Nutrition Profile (live 2015) with an associated automated diabetic referral report**

Healthcare Improvement Scotland issued the Food, Fluid and Nutritional Care Standards report in October 2014 which specified a minimum set of standards for food, fluid and nutritional care. At NHS Fife when a person is admitted to hospital, or
to a community caseload, a nutritional care assessment is carried out. Screening for the risk of malnutrition is also carried out, both initially and on an ongoing basis. A person-centred care plan is developed, implemented and evaluated.

Since 2015, 187,000 MUST assessments and 132,000 Nutrition assessments have been carried out.

"Ensuring a patient has an optimal experience in hospital and ensuring they do not come to any harm while in hospital are fundamental expectations. Patientrack in NHS Fife has improved the ability to identify any patients who are at risk of acute deterioration and helped improve our management of known risk factors which can lead to patient deterioration.

Since its comprehensive roll out to the acute receiving Victoria Hospital in July 2015, the system has seen the recording and communication of over 70,000 sets of patient observations per month. Sharing of this information has ensured that nurses and doctors are able to quickly see and respond with certainty to the patients who are most at risk. Since its launch, we have seen a significant increase in our ability to ensure vital observations are taken accurately and on time for all patients; our ability to make early clinical decisions has improved and our cardiac arrest rate has halved."

Gavin Simpson, Consultant ITU/Anaesthetics and project clinical lead

- **Peripheral venous Catheter (PVC) (2017)**

Following a report from Healthcare Improvement Scotland, there was a need for documentation to aid in preventing infection when inserting and maintaining a PVC catheter. This replaced the manual case note audit every week and the reporting of data to Scottish Patient Safety Programme.

417,000 have been undertaken in NHS Fife.

Patientrack: A tool to reduce peripheral vascular catheter related S. aureus bloodstream infections

NHS Fife adopted Patientrack to record peripheral vascular catheter (PVC) management in 2017. Prior to 2017, PVC management had been recorded on paper charts aligned to the Scottish Patient Safety Programme (SPSP) PVC bundle. Paper recording was onerous, time consuming for nursing staff and difficult to track if the paper file was incomplete. Process measures reported back to the ward took time to generate and did not allow real-time feedback.

NHS Fife adopted the PVC reporting tool in Patientrack to record the data points required by the SPSP, the local infection prevention team and nursing staff. Patientrack has changed behaviour. Nursing staff are alerted when a PVC needs to be reviewed or removed. Wards now achieve the process measures over 95% of the time. Senior change nurses on each ward are now informed weekly of their ward's compliance with

Local standards and the infection prevention team can focus their support on wards in difficulty. Since introducing the Patientrack PVC module, NHS Fife has demonstrated a sustained drop in the number of PVC related S. aureus bloodstream infections (see chart) and achieved more complete recording of data for the SPSP. Further, NHS Fife is now on track to reach the reduction target for S. aureus bloodstream infections set by the Scottish Government Health Department.

Keith Morris consultant Microbiologist: "NHS Fife has been asked to achieve a 10% reduction in the number of hospital acquired S. aureus bacteraemia by 31st March 2022. This is a reduction of 8 from 76 to 68. NHS Fife is on course to achieve this reduction by 31st March 2021.

- **Delirium and Frailty (2018)**

Frailty is a complex, multidimensional problem that affects all ages. It is defined as an inability to withstand illness which can cause decomposition, loss of function and disability.

There is a growing evidence base to support rapid identification and delivery of comprehensive geriatric assessment for individuals with frailty in order to deliver the best possible outcomes for them.

Delirium is the most frequent complication of hospitalisation for older people, with an occurrence in general medical and old age medicine wards of 29–64%. Many delirium episodes remain undetected or misdiagnosed by ward teams. Frailty and delirium are the key components of the national improvement programme to improve care for older people in acute hospitals/care (OPAC) and form part of the new older people in hospital standards and the inspection process.

At NHS Fife, all patients over 16 years are screened in the acute setting and over 300,000 assessments have been documented in Patientrack.

Significantly, National Cardiac Arrest Audit Data shows a significant measurable drop in cardiac arrests from 2.8 per 1,000 discharges in June 2015 to 0.66 per 1,000 discharges in August 2020.

In March 2020, a business case to extend the use of the solution to all remaining acute areas and to consolidate across community, mental health and learning disability inpatient areas was submitted as part of the response to COVID-19.

This business case was supported by a number of local and national strategies including:

- Scotland Digital Health and Care Strategy (2018) domains of service transformation and workforce capability

- NHS Fife's Digital and Information Strategy (2019-2022), which recognised the importance of conducting bedside risk assessments, and identified this as a key deliverable of their ambition to digitally deliver joined up care

- NHS Fife's clinical strategy guiding principles of patient centred and equitable care and the joining up care strategy which recognised the importance of sharing of key information when patients are transferred between a community inpatient area and an acute inpatient area.

The business case was successful and an enterprise wide agreement was reached with Alcidion which allows provision of both hard alerting and track and trigger across NHS Fife. Rollout started immediately on 8th April 2020 with three community in patient areas. The project followed a rapid rollout delivery model with training facilitated using remote screen connect software. A range of new user accounts, configuration of new service areas and reports were also created.
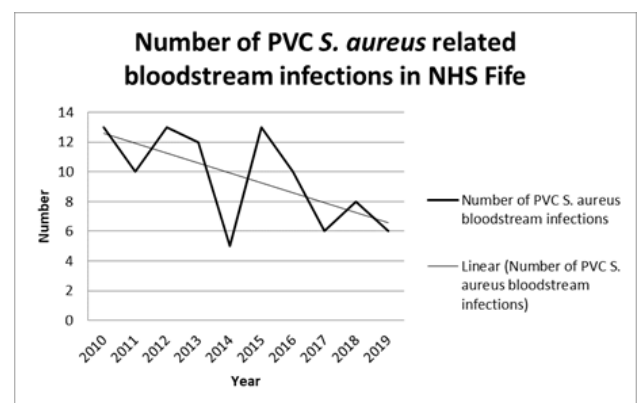
Between 8th April 2020 and 27th August 2020 an additional 42 inpatient wards and day case areas went live with observation capture and use of the assessment tools. This included provision across six community hospitals (including one with three mental health wards); two mental health hospitals and one learning disabilities hospital. 450 staff were trained remotely with many areas also cascading training to their staff.

In partnership with Alcidion, the Scottish Paediatric Early Warning score (PEWS) was built as a new assessment. This was tested and validated by the service before going live on 10th August 2020. This was an excellent achievement with only four months from specification to implementation.

A second phase to implement hard alerting is now being progressed alongside some remaining specialty acute areas.

KEY WINS

- 70% reduction in cardiac arrests
- In excess of 70k observation sets captured per month
- More than 34M risk assessments documented
- Since 2015, 187,000 MUST assessments and 132,000 Nutrition assessments recorded
- Peripheral venous Catheter (PVC) documentation at 95%
- On course to achieve a 10% reduction in the number of hospital acquired S. aureus bacteraemia
- More than 300,000 Delirium and Frailty assessments documented

Number of PVC *S. aureus* related bloodstream infections in NHS Fife

The world of healthcare is evolving. At Alcidion, we're playing our part. Every day, we help healthcare organisations to embrace smart technology, unlock new insights and drive innovation. To make life on the floor simpler, more efficient and the delivery of care safer than ever before. We call it a smarter future of care and we think you will too. For more information contact us at info@alcidion.com