

CASE STUDY

The Rotherham NHS Foundation Trust makes interconnected medical devices vision a reality with Imprivata Medical Device Access



The Rotherham NHS Foundation Trust

Challenge

- Nurses had to enter patient data via workstations on wheels (WoW) and manually enter between systems taking up valuable time
- Risk of transcription errors for key data such as patient vital signs
- Risk of incomplete audit trails of who had done what and when

Solution

- Facilitated fast access to integrated patient information from multiple devices using Imprivata Medical Device Access

Results

- Fast and secure access to readings from interconnected medical devices
- Increased productivity by removing the need for manual recording of vital signs
- Elimination of potential data transcription errors enabling faster access to more accurate data for better, speedier decision making

Organisation snapshot



Location: South Yorkshire, UK



Industry: Healthcare



Employees: Circa 5,000

The Rotherham NHS Foundation Trust is a combined acute and community trust providing services at Rotherham Hospital and across the borough to a population of 264,700 people. The 400+ bed Rotherham Hospital first opened in March 1978 with Rotherham community services integrating with the Trust in 2011. The Trust continues to provide a full range of district hospital and community services to Rotherham and the surrounding area alongside partner organisations. The Urgent and Emergency Care Centre (UECC) opened in 2017 and sees approximately 75,000 attendees per year. Annually there are approximately 55,000 inpatients and 250,000 outpatient attendances.

Challenge: How to electronically record patient vital signs

The Trust had been using Imprivata Enterprise Access Management (formerly Imprivata OneSign) since 2015 for single sign-on, so staff were familiar with tap and go for accessing patient information and systems, such as electronic patient records (EPR). However, in 2021 the Trust instigated a new project around the use of observation devices to collect and record vital signs information for in-patients.

In the past nurses would need workstations on wheels (WoW) to manually enter information on vital signs. Data would have to be manually transcribed from one device or system to another such as the EPR. This proved time consuming and introduced transcription errors and problems in producing a complete audit trail of who collected the data and what was done with it, especially during busy times.



The overall aims of the project were to produce rich EPR data, enhance clinical workflows, reduce or remove paperwork, create comprehensive audit trails, and help improve patient outcomes. A variety of solutions and systems engage in the process. The Trust uses two EPR solutions – MEDITECH and TPP SystemOne. MEDITECH is used to generate orders which are sent electronically to the laboratory, which reduces the amount of manual data entry needed.

The Trust also uses the National Early Warning Score (NEWS2). Various measurements taken – including respiration rate, oxygen saturation, blood pressure, pulse rate, cognition, and temperature – are collected to improve the detection and response to clinical deterioration. Welch Allyn/HillRom medical devices were selected to produce such measurements.

The key challenge for the Trust became how to seamlessly join all the elements of the solution in a way which simplified processes for clinicians and improved the efficiency of workflows while maintaining full data, audit trails, and system security.

Solution: Fast access to integrated patient information from multiple devices

The components of the Trust's desired solution were in place but a means to knit them together more efficiently was needed. Imprivata Medical Device Access was chosen as the right tool to make this a reality. The Trust needed interconnected medical devices to play an increasingly valuable role in the delivery of patient care, enabling data to be captured, aggregated, transmitted, and analysed in real time.

Such advanced capabilities bring new security threats, as each device represents a potential point of exposure of patient information and can be the target of cyber-attack. Enforcing authentication through manual entry of usernames and passwords to access data from devices creates tedious, inefficient workflows that impede the delivery of care. The Trust used Imprivata's authentication management platform to replace the cumbersome manual entry of user data with fast, automated authentication through the simple tap of a badge.

“Imprivata Medical Device Access enabled the Trust to optimise its use of interconnected patient diagnostic devices. This reduced the effort needed from clinicians and minimised data errors while maintaining security. The improvement in workflow efficiencies gave clinicians back more time to focus on patient care which was informed by accurate NEWS2 scores and trustworthy data automatically collated into the EPR.”

– Kevin Grice, Digital Programme Manager, PMO, Health Informatics, The Rotherham NHS Foundation Trust

Result: Fast and secure access, increased productivity, and elimination of potential data transcription errors

The Welch Allyn/HillRom devices are configured to use the secure hospital Wi-Fi. Once authentication using Imprivata has taken place, patient readings are pushed straight through to the EPR. The patient record is updated in real time enabling speedier decisions using the accurate NEWS2 score, which feeds into a traffic light system and flags potential problems on a patient dashboard in real time. The system will also show if observations for a particular patient are late, meaning nurses can react rapidly.

The Trust's clinical staff were already familiar with Imprivata solutions for use to access desktops and WoWs, so extending their use to medical devices kept the same style of tap on/tap off access so new workflows were easily adopted. The Imprivata solution was essentially transparent to users, meaning clinicians did not need to think about secure access. This was in sharp contrast to the previous manual entry of user IDs and passwords and transcription of data between systems.

Next steps

After the success of this project around the use of observation devices to collect and record vital signs information, the Trust is beginning a Proof-of-Concept study using Imprivata solutions to securely access Seca scales to collect weight and height data. Initially, this will be used for baby weighing scales where measurement collection is currently a manual process. Secure readings will enable accurate calculations for adjustments to feeding and the prescribing of any required drugs. Clinicians will benefit from a unified authentication process prior to each Seca measurement and weighing using existing Imprivata credentials. Imprivata Medical Device Access will simplify yet another process by the wider adoption of a well-accepted solution which has become transparent and effortless for Rotherham's clinicians.



Imprivata is the digital identity company for mission- and life-critical industries, redefining how organizations solve complex workflow, security, and compliance challenges with solutions that protect critical data and applications without workflow disruption. Its platform of interoperable identity, authentication, and access management solutions enables organizations in over 45 countries to fully manage and secure all enterprise and third-party digital identities by establishing trust between people, technology, and information.

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