



# CAMBRIDGE UNIVERSITY NHS FOUNDATION TRUST

Improves Clinician Efficiency with Imprivata® and Carefx®

## THE BUSINESS CHALLENGE

Cambridge University Hospitals NHS Foundation Trust is the organisation behind Addenbrooke's Hospital, one of the leading teaching hospitals in the UK. The Trust undertakes world-class research, working in partnership with Cambridge University and the Medical Research Council, as well as providing a high level of patient care and excellence in service delivery. Addenbrooke's serves the needs of around 500,000 citizens in the local area.

The Trust has over 7,000 staff in total, with an estimated 5,000 workers requiring access to IT resources. For these employees, logging into applications required a user-name and password for each system, and each user had an average of between eight and ten different credentials to remember. The Trust's security policy on access requires that strong passwords are used rather than dictionary words, that different passwords are used for each application and that they are changed every 90 days. While this approach ensured that application access remained secure, it was difficult for users to remember all their credentials and they would therefore have to call the IT helpdesk for password resets.

This was becoming a significant issue for the team to support, with around 30 percent of all helpdesk calls specifically related to password reset requests. It was also leading to user frustration, as clinical staff would be locked out of their applications while any reset process was completed. Dianne Nixon, Head of IT Programme Management at the Trust is responsible for the delivery of IT services to the organisation; she decided to look at approaches that would remove this problem from the helpdesk and improve user satisfaction.

In order to solve the password management problems at the Trust, Nixon chose to look at single sign-on: instead of disparate passwords, users have all their access rights linked to one single network credential. When they open up a new application for access, the user's log-in details are automatically entered on their behalf.

"We were aware of single sign-on as a technology, but previously it had always been too expensive to implement and required a large amount of support. However, one of our IT partners suggested that we look at Imprivata OneSign® as a new way to implement SSO, and so we decided to resurrect our interest in this technology," said Nixon.



### Before OneSign

- Strict security policy on passwords led to employees forgetting credentials and calls being placed to IT helpdesk
- Clinical staff frustrated at being locked-out of applications
- Burden of password reset requests on helpdesk staff

### After OneSign

- Clinical context management from Carefx® along with OneSign Single Sign-On ensures improved staff efficiency and reduced steps required during user workflows
- Reduced password reset request calls from helpdesk
- Created central repository for all application access requests, making reporting and auditing easier for IT

## THE IMPRIVATA ONESIGN SOLUTION

Imprivata OneSign is an identity and access management appliance, designed to make SSO and strong authentication management easy, smart and affordable to implement. Using its Application Profile Generator, users can enroll their applications for SSO using a simple drag and drop menu system that eliminates any requirement for scripting expertise. The OneSign appliance is shipped in pairs, to provide resilience and business continuity; if an appliance fails then service automatically fails-over without affecting end-users.

*“OneSign provides us with single sign-on and strong authentication for our clinical and non-clinical staff, making their everyday lives easier and ensuring that they are not locked out of applications. This overall approach has improved staff efficiency providing the Trust with a significant return on investment.”*

– Dianne Nixon,  
Head of IT Programme Management  
Cambridge University  
NHS Foundation Trust

Nixon decided to trial the OneSign appliance in a proof-of-concept pilot programme with 200 of the most intensive users of IT. This would determine whether the appliance could deliver the results that Nixon and her team were expecting, as well as how SSO could be linked to other technologies. Following the installation, applications were enrolled for SSO and then users had their workstations updated with the OneSign Agent. This would automatically capture their log-in credentials, and then present them to the application the next time they opened up that application screen.

Alongside SSO, clinical staff at the Trust was given the National Program for IT smart card, which would provide them with secure access into centrally provided applications such as the NHS Spine. Imprivata OneSign provides support for this card, along with many other strong authentication options, allowing it to be used as a factor for strong authentication into the Trust’s local applications as well, if required.

Following this pilot, Nixon and her team saw that they had substantially reduced the volume of password reset requests that the pilot group were making, as well as improving the efficiency of the clinical staff that were included. “We saw an immediate reduction in calls, and the number of times that the clinical staff had to enter their passwords was also brought down dramatically. In speaking to the clinical staff involved, they also saw the benefits of the project – clinicians have previously expressed on numerous occasions the frustration of having to actively manage numerous usernames and passwords, as it was not unusual for them to enter the required credentials in excess of 200 times per day,” explained Nixon. “Using OneSign ensures that all access is secure, and that we can put together a complete audit trail.”

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### By the NUMBERS:

No need for clinicians to enter passwords – eliminated 200 log-in events per day  
Cut number of steps required when accessing applications from 29 to just nine  
Reduced helpdesk password reset requests from 30% to zero

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## THE RESULTS

After this pilot, Nixon has overseen the roll-out of OneSign across the rest of the Trust to a mixture of clinical and non-clinical staff. One of her overall aims for the programme was to create a more flexible, efficient system of accessing applications and patient data for clinicians. In order to achieve this and increase the value delivered by its identity management platform, Nixon decided to implement a clinical context management strategy, based on Fusion from Carefx.

“Clinical context management involves creating links between applications and automating workflows based on what activities the clinician is carrying out, and the type of data that they are accessing. As a user opens up patient data screens, further information that is relevant to those inquiries is brought up from the other applications, allowing it to be accessed in future,” explained Nixon. “By taking this approach, we can reduce the number of steps that are required to complete tasks. Our workflow was reduced from requiring 29 steps to be completed to just nine, automating around two-thirds of the process. This makes them more efficient, and improves the quality of care that our clinical staff can offer by letting them concentrate on the patient, not on using IT.”

The Fusion from Carefx implementation relies on the Imprivata OneSign SSO system in order to support employees being delivered the right information, as well as ensuring that their access privileges are at the right level. Fusion aggregates applications to synchronise the patient, user and individual encounter with a patient record. The user’s credentials are entered into the relevant application screens in the background. As the clinical user moves from application to application, all the data and other applications are switched automatically to ensure that the necessary information is to hand immediately, rather than requiring users to go through multiple screens to access the data they require. When the user is finished with that patient, all the relevant screens on that patient are also closed in the background.

“We chose Carefx for a number of reasons. Its solutions are based on an open and scalable architecture, enabling seamless interoperability with our existing IT investments, while the level of success and satisfaction reported by Carefx clients that we spoke to was impressive,” commented Nixon. “With our OneSign appliance in place, we have a complete identity management platform to support our clinical context deployment successfully. Our clinicians are seeing additional performance enhancements due to the clinical context system on top of the benefits from single sign-on and strong authentication. Overall, we have a strategy in place now to improve security and clinician efficiency for the foreseeable future.”

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