

# A guide to access control for the healthcare sector



## What is access control?

Access control provides the ability to control, monitor and restrict the movement of people, assets or vehicles, in, out and around a building or site.

Access control is essential for all businesses to protect people and assets and has the added benefit of being expanded from controlling, for example, a single entrance door, to a large integrated security network. There is also huge potential in terms of integrating HR and other systems, such as Time and Attendance, Visitor Management, Automatic Number Plate Recognition (ANPR), Fire, Intruder and CCTV, which can cut costs and streamline administration costs.

## What risks does the average hospital or residential care home face and how can these be countered by access control?

Hospitals and residential care homes are not only made up of members of staff who will be there on a daily basis, but also patients and a large volume of visitors passing through the premises.

As well as this transient population, many high value goods such as computers, laptops, projectors and other IT equipment are kept on-site not to mention the personal possessions of staff and patients. Furthermore, an abundance of confidential documents such as patients' notes will be stored on the premises of the hospital or residential care home as well as a range of medication. Consequently, electronic access control systems are increasingly being used to enhance safety and security in hospitals and nursing homes to enable access only to the people with the necessary authority.

Generally, the access control systems comprise three component parts:

### 1. **The physical barrier** – to physically restrict access to a building or location via such methods as:

- Doors; secured by either a magnetic or strike lock and can be revolving or sliding.
- Turnstiles and speedgates; designed to limit access to one person for one card presented.
- Car park barriers to limit vehicular access to only those that have authority.

**2. The identification device** – there are a number of different technologies used to identify users of an access control system, including the following:

- A proximity card and reader using Radio Frequency Identification (RFID) – cards can either work at a short read range or a long read range.
- A smart card and reader.
- A swipe card and reader.
- PIN pads.
- Biometric (for example, fingerprint and iris scanning etc).

**3. The door controller and software** – The door controller and software are at the heart of the system and are used to decide who can gain access through which access point at what time of day. These can vary dependent on the size of the system and how many readers or sites you are trying to control from one point. Some of the options include:

- A stand-alone door controller linked to a single door with no software.
- A number of door controllers all linked together to a single PC to control one site.
- A number of sites all interlinked together over a wide network area.

## What added benefits can access control systems bring to the healthcare sector?

24-hour protection in hospitals and residential care homes is paramount and the following added benefits come from access control:

### Visitor monitoring

In an environment with a fleeting number of patients and visitors, the use of PC and computer networks should be considered. These systems can print photographic ID and allow access to be restricted to certain areas within the hospital or residential care home. Moving to a software solution for visitor management is an easy and inexpensive solution and can provide a number of added benefits.

### Automatic Number Plate Recognition (ANPR)

For hospitals and residential care homes where a large volume of staff, patients and visitors will be driving in and parking on-site, ANPR is a feasible option. To monitor the entrance of vehicles on-site, CCTV-style cameras and computer software can be used to identify number plates of vehicles. Some systems can also store photographs of the driver and vehicle for subsequent analysis. This sophisticated software allows critical information to be passed to the police to assist in the pursuit, identification and capture of offenders.

### Integrated security systems

Larger hospitals and residential care homes which operate on more than one floor and perhaps across several sites may also benefit from a fully integrated access control system with CCTV, intruder alarm, fire detection and building systems. One way to attain this is by adopting the use of Internet Protocol (IP) technology which allows these systems to communicate with each other to maximise their effectiveness.

## Fire roll-call software

This technology is particularly useful in hospitals and residential care homes as in the event of a fire it automatically generates a report containing crucial information in relation to who is within the building and potentially where they are. This software operates via the access control smart card or fob that an employee uses to gain access/exit to a building. In the event of an emergency, the fire roll-call software alerts occupants to the emergency whilst simultaneously activating the report at a safe pre-determined remote point.

# Case studies

## 1. Integrated systems – Derbyshire Mental Health Services NHS Trust

Derbyshire Mental Health Services NHS Trust was experiencing difficulties with repeat offences such as theft, robbery and motor vehicle burglaries at its sites and so used a BSIA member to install an access control and CCTV solution.

The BSIA member installed CCTV across a network of 11 Derbyshire NHS sites, which linked back to a monitoring station. Across the 11 sites, a variety of 37 CCTV units, infrared detectors and tannoy solutions were installed. Furthermore, the BSIA member also introduced a total of 17 access control installations as well as 24 proximity readers, break glass and infrared detectors. This integrated system provided operators with a quicker and more effective solution and a thorough overview of the entire site's security.

Each member of Derbyshire NHS staff was issued with an access key. On using the key, the action is bookmarked along with the footage from the nearest CCTV unit. If an access card is stolen and access is granted fraudulently, CCTV footage of when and where it was used can be brought up on the integrated recording timeline. This is done almost instantaneously thus allowing for quick evidential footage retrieval. Furthermore, if one of the break-glass detectors or an infrared alarm is activated, this is also logged into the CCTV footage, which operators can examine straightaway.

Since installing the system, crime rates across Derbyshire Mental Health Services NHS Trust have reduced to zero.



## 2. Securing sites - Stobhill and Victoria hospitals in Glasgow

A BSIA member has supplied a fully integrated IP security solution at Glasgow's new £100 million Stobhill and Victoria hospitals to secure each of the state-of-the-art facilities.

The BSIA member has secured all of the access points within both hospitals with card readers, which provide an in-built database for off-line card validation, keypad for added PIN security and a unique backlit LCD screen showing easy-to-understand response messages for the cardholder, for example, access denied and card expired. Furthermore, the BSIA member's flexible system means that it can monitor and control access for temporary visitor cardholders.



The system provides a highly integrated security solution, which will help to protect staff, patients and the hospital equipment and premises. As well as offering fully integrated access control, alarm processing and a photo badging security system that has been installed all over

the world, the BSIA member offers both Stobhill and Victoria hospitals every operational application they may need to secure their environment.



### 3. Improving access control – Addenbrooke's Hospital

Addenbrooke's Hospital currently employs over 6000 staff at its campus and there are in excess of 5000 staff from other organisations based on the site. In addition, during an average year, a total of over 280,000 outpatients, 25,000 day cases and 44,000 inpatients are treated at the hospital.

To manage its campus, Addenbrooke's installed an access control solution in the late 1990s for use in their car parks, buildings and temporary facilities. Ten years on, Addenbrooke's realised they needed a new solution for their identification and access control needs.

The hospital contracted a BSIA member to provide an up-to-date security system and enabled Addenbrooke's to integrate the solution with CCTV and alarm management, which is ideal for large campus environments. The BSIA member's technology appealed to the hospital as the number of cardholders and readers the system can manage is unlimited.

Before the new system was installed, the BSIA member carried out a complete survey of the hospital's current access control technology. It was found to be in good condition and capable of integrating with the BSIA member's access control system. As a result all readers, enclosures and cabling were maintained in order to keep the cost down.

The BSIA member expanded its system to a further 24 wards, with software to support a further 516 readers. A single database was created for all administration activities including card creation, access rights and identity amendments.

With the system in place, attention has turned to future expansion, which may include CCTV integration and a move to smart card technology. The BSIA member's technology is the ideal platform to support Addenbrooke's decision to evolve their security system.

### 4. BSIA member aids elderly residential care home

Forest Care turned to a BSIA member for help when the home decided to look for a greater cost-effective time and attendance system from a good supportive supplier.

After considering its many options, the care home opted for the BSIA member's smart card based time and attendance and access system, which was installed in 2008. Staff from the home received thorough training on how to use the system to ensure the transition was as smooth as possible.

Forest Care home has praised the BSIA member's system for its reliability and user-friendly technology and claims it has been extremely cost-effective.

### 5. Controlling visitors – Sheffield Children's Hospital

A BSIA member worked with Sheffield Children's Hospital (SCH) to improve their security system, which previously consisted of standalone keypads with locks at every door.

As a children's hospital, there is an abundance of concerned and emotional children and parents. Security became an issue as anxious parents learnt the keypad codes after seeing staff type them in meaning unauthorised people could enter restricted



areas. Hospital staff became concerned about the safety of patients, as well as the potential for theft and child abduction.

To solve the problem the BSIA member introduced its system whereby every staff member was required to wear an ID badge which doubled as an access card. This enabled staff to enter restricted areas and kept visitors out. Furthermore, the system secured high risk areas of the hospital including the MRI suite, pharmacy and mortuary. Monitoring the pharmacy was particularly crucial and reports are now regularly run to track who has entered this area and when.

Security is tightened at certain times of the day and between 8pm and 6am, employees have to swipe their card and enter a PIN on all external doors.

SCH report that staff and patients are much safer and morale has improved since the introduction of the security system. The hospital is so impressed that they plan to expand the system and may apply it to their car park scheme in the future.



## 6. Setting up flexible working arrangements – Royal Liverpool Hospital

Back in 2007, the Royal Liverpool Hospital used a BSIA member to manage the introduction of flexible working arrangements.

The BSIA member installed its keyfob attendance monitoring system in 2008, which allows for day-to-day monitoring of staff movements and auto reporting facilities and saves time by avoiding manual data entry of staff working arrangements.

The hospital are so impressed with the BSIA member's technology that the system has now been extended to other sites within the Trust.

## 7. BSIA member modernises housing society's time and attendance system

A BSIA member was selected to modernise the time and attendance system at West Sussex Housing Society Ltd's most highly rated homes in Worthing and Southwick.

The society provides long-term care, short stay, convalescence and respite care at their retirement homes and wanted to improve the management of its staff attendance recording. It was essential that the technology reduced the paperwork involved in calculating hours worked and reduced calculation errors involved in the manual process.

Consequently, the BSIA member installed a smart card biometric fingerprint time monitoring and fire roll call systems in the homes. The society has praised the BSIA member's technology and comments that it is very easy for employees to use.

## What key considerations should be taken into account when considering access control?

The outcome of a thorough risk assessment for your hospital or residential care home will determine the level of security you require and in turn influence your choice of access control system. BSIA access control members and professional security consultancies can assist with this.

BSIA members are subject to rigorous checks before they are admitted into membership so customers have peace of mind that they are selecting a quality company. Below are just some of the ways you could benefit from using the services of a BSIA member:

- Independently inspected to the quality standard ISO 9001 with a UKAS accredited inspectorate.
- Compliant with relevant British and European Standards and codes of practice.
- Financially sound.
- Professional.
- Staff vetting conducted (where appropriate).
- Technically proficient.
- Committed to quality training and development.
- Up-to-date with the latest developments in British and European policy and legislation.

## Is there any legislation I should be aware of?

The Disability Discrimination Act was amended in 2005 and has significant impact not only in terms of the design of new systems, but also means that many systems may need to be upgraded to ensure compliance. This is of particular importance also for the healthcare sector as staff, patients and visitors will all need to have adequate and user-friendly access to the building. The BSIA has created a guide to help design access control systems following the introduction of the revisions which can be downloaded from [www.bsia.co.uk/publications](http://www.bsia.co.uk/publications).

## What key considerations should be taken into account when considering access control?

National minimum care standards.

Health and Safety at Work Act.

Occupiers Liability Act.

Management of Health and Safety at Work Regulations.

## What should I do now?

To find an access control provider in your area, visit [www.bsia.co.uk/find-a-security-company](http://www.bsia.co.uk/find-a-security-company)

For more information on the work of the BSIA Access and Asset Protection Section, visit [www.bsia.co.uk/sections/access-asset-protection](http://www.bsia.co.uk/sections/access-asset-protection)