

Proxximos Safer Care

Proxximos has created a high precision real-time location & tracking system to enable next generation digital contact tracing. Designed to help prevent the costly and harmful spread of infection the system can also track beds and medical assets too. The solution consists of static hubs requiring no fixed cabling, wearables & asset trackers. The system is accurate to 25cms every 10 seconds. The Proxximos Safer Care solution has 3 distinct use cases for NHS Trusts as follows:

- Digital Contact Tracing for Infection Control
- Bed Tracking
- Medical Device Asset Tracking

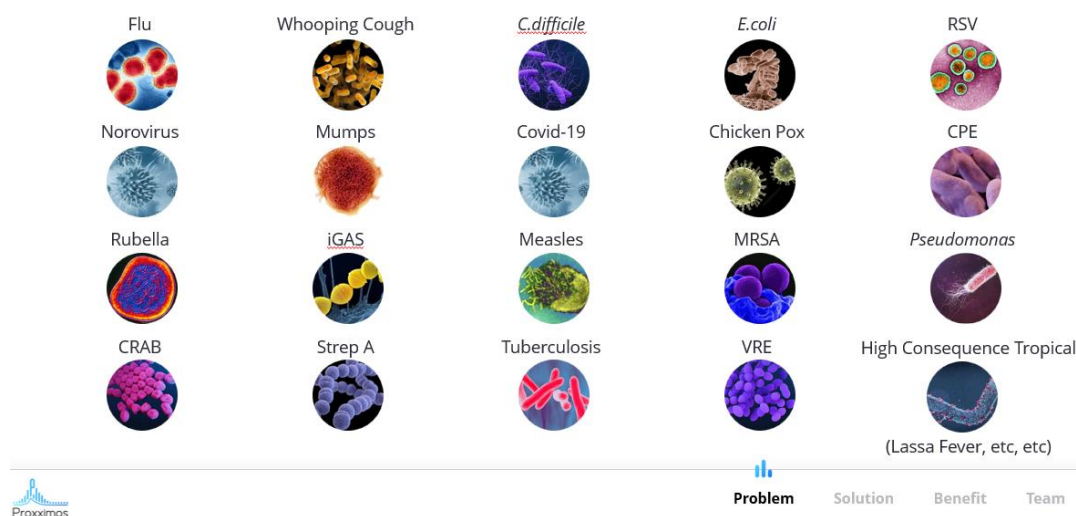
Customers can combine these use cases as required.

Proxximos Infection Control

There is a profound impact in NHS hospitals (and in all hospitals worldwide) of Healthcare Acquired Infections (HCAI's). Proxximos is aiming to mitigate and suppress this challenge through our innovative digital contact tracing technology. The following diagram highlights the HCAI & infections challenges seen across healthcare settings:



Currently manual contact tracing is used to tackle all these examples below (and more) healthcare acquired infections that can appear in hospitals and healthcare settings





The HCAI impact for typical NHS trusts is significant:

Current HCAI impact on a 1,000 bed hospital If the hospital reflects the national average then...

HCAIs per year
800,000 infections across
the NHS

5,700

Beds occupancy
Patients with HCAIs overstay
significantly occupying 21% of
beds

210 per day

Patient deaths
28,000 patient deaths
caused by HCAIs annually
across the NHS

200

Direct costs per year
The drugs, drips, dressings,
diagnostics, etc consumed treating
HCAI patients

£20m

[Modelling the annual NHS costs and outcomes attributable to healthcare-associated infections in England | BMJ Open](#)



Problem

Solution

Benefit

Team

How the Proxximos solution works

The Proxximos system works by providing staff and patients with a wearable device such as the following:



The staff wearable will be on a lanyard with their NHS pass. The patient wearable can be worn on the wrist attached to their patient ID band. Hubs (located every ward or so), can then see and range the wearables. This data is then used to measure the precise location of the wearable every 5-10 seconds. These locations are then just stored in the cloud.

Once an infection is suspected or confirmed, NHS staff enter the name of that infected person and at that point, the system will automatically identify people they have been close to, where they have been and in what context (location, length of time etc). Alternatively if the infection is gastro it can identify the location as to where they have been, and also where subsequently other patients or staff have also been to that same location and for which there is a risk of transmission.

Contact tracing is not new – hospitals however do this manually. We have simply digitised the process but made it real time, precise, labour free and not open to flawed human memory. Being precise means we don't swamp the system with false positives which would make the data far less useful.

Instant digital contact tracing now allows IPC staff to get ahead of a pathogen spreading by identifying potentially infected individuals who are not yet infectious or symptomatic. IPC staff



can then decide on an appropriate package of interventions reducing the chances of onward transmission. The following image summarises this approach & process:



There are many expected benefits from the Proxximos Safer Care platform and we anticipate we can support trusts seeing a 25% reduction in HCAI's. By doing so a typical 1,000 bed hospital would see the following benefits:

1. 52 more beds available every day
2. 1,400 fewer patient infections per year
3. 50 fewer avoidable patient deaths per year
4. £5m in cashable savings per annum

This directly support trusts helping achieve their bed occupancy and elective care waiting list targets for improvement.

Proxximos Bed Tracking

Through NHS initiatives such as the Electronic Bed Capacity Management System, NHS Trusts are also seeking to optimise patient flow and increase productivity & efficiency.



The Proxximos solution can also help with bed tracking & management by:

1. Providing staff with the ability to locate either occupied or available beds in real time and to a high degree of accuracy. This prevents delays and saves time for treating patients.



2. Provide data insight and optimization support for patient pathways through the data provided on bed (and patient) movement
3. Integrating with and triggering workflows in Patient Administration Systems (PAS) & Electronic Patient Record (EPR) Systems. This provides links to portering services as well as other digital platforms within NHS Trusts.
4. This functionality delivers automation of clerical workloads and reduces the costs, headcount & overheads associated with this.

From feedback from trusts the Proxximos solution appears to be 25% of the cost of existing RFID solutions being installed for such deployments across the NHS.

Proxximos Medical Device Asset Tracking

It is estimated that some nurses and facilities staff can spend upwards of 20% of their time simply trying to locate pieces of medical equipment. This can include items such as wound pumps or mobile CT scanners.



The Proxximos solution can help with medical device asset tracking & management by:

1. Locating high-value equipment in real time preventing delays and saving time looking for equipment vital for time sensitive patient care
2. Real-time alerts can be provided if medical devices are removed from their expected area of use
3. Identifying if pieces of patient-contacting equipment are linked to cases of infection
4. Providing the infrastructure to allow medical device suppliers to locate & track the equipment they own in your hospital.
5. This reduces wastage, optimizes the number of assets required and can provide significant financial efficiencies for both the trust and the supplier of medical devices.

Summary

Real-time, precise tracing of patients, staff & assets creates the live-location aspect of a 'digital twin' of a hospital, supporting many digital innovations. By adopting Proxximos, real-time patient, staff & asset location data can now feed hospital IT systems & materially improve patient flow. Infection rates can be dramatically suppressed by IPC staff. And in doing so, we improve the safety & well-being of both patients & staff.

Please get in touch if you wish to find out more.

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