RFID technology applications in health and social care

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Current Climate

• NHS providers and commissioners ended 2015/16 with a **deficit** of £1.85 billion – the largest aggregate deficit in NHS history

• NHS Trusts may shut emergency departments at night because of **staffing “crisis”**

• Individuals and their carers would benefit from a much simpler path through the whole **system** of health and social care that is designed to reflect changing levels of need

• Reduce unwarranted variation in **productivity and efficiency** across every area in the hospital to save the NHS £5 billion each year by 2020 to 2021

• There are significant **opportunities** for the NHS to deliver better value care, but these cannot be achieved at the pace or scale needed to deliver £22 billion of efficiency savings by 2020/21

2 [http://www.bmj.com/content/354/bmj.j4414](http://www.bmj.com/content/354/bmj.j4414) - Last viewed 16/08/2016
Opportunity – Leveraging investments made to Hospital Wi-Fi networks

- Although the NHS does not have a national contract for Wi-Fi purchasing and concerns remain around security and budgetary constraints are still here today, deployments are still increasing.

- Although 65% of Trusts do not allow Wi-Fi access to patients/visitors, the internal infrastructure exist at most Trusts.

- The opportunity is to maximise this investment and consider compatible technologies/innovations designed for supporting the challenges within the NHS.

- Technologies which do not associate with the Network and reduces burden on the network – less drain.
Passive & Active RFID Solutions

1. Passive RFID - Bar Code technology, hand scanners or doorway sensing

Applications - Stock management (consumables), medicines & issues you want to audit but not track

2. Active RFID – Real Time Location Systems

Applications – Patient Flow, Asset Tracking, Environmental Monitoring, Hygiene Compliance & Infant/Patient Security

- Both systems support Product Recall situations
- To maximise fully functionality and system potential a blended solution using both the Passive and Active RFID option is recommended
Visibility & Analytics Platform

Data Sources/Triggers
- Asset Location
- Medical Device Operational Status
- Infant Leaving Ward
- Patient Wandering
- Patient/Staff Room Entrance
- Duress/Assist Call
- Supplies Received/Consumed
- Temperature, Humidity
- Patient Out of Bed

Visibility Platform
- Visual Controls
- Analytics
- Integration

Applications

Security & Protection
- Infant Protection
- Patient Security
- Staff Security
- Facility Security

Patient Safety
- Fall Management
- Hand Hygiene Monitoring

Clinical Ops. & Workflow
- Patient Flow
- Staff Workflow
- Nurse Call Integration

Environmental Monitoring
- Temperature Monitoring
- Humidity Monitoring

Supply Chain & Asset Mgt.
- Asset Management
- Inventory Management
Patient Flow

Monitors Status and Location of People and Resources in Real-Time

- Reduce patient wait time
- Improve communication, search time and throughput
- Reduce response time to patient assistance requests
- Improve processes and operational decision-making
Automated Asset Tracking and Management

Proactively Manage Location, Status and Condition of Assets in Real-Time

- Reduce care process variability by reducing care delivery equipment wait-times
- Reduce capital expenses, rentals and rental fees/penalties
- Enable timely recall management and on-time completion of preventive maintenance
- Increase operational efficiency
Automated Environmental Monitoring

24x7 Monitoring and Reporting of Temperature, Humidity and Voltage

- Ensure safe storage and prevent loss of valuable inventories, equipment and infrastructure
- Reduce costs by eliminating need for staff to spend hours on manual monitoring
- Reduce financial exposure with rapid notification of events
- Improve regulatory compliance
Hand Hygiene Compliance Monitoring
24x7, Automatic Monitoring of Hand Hygiene Events & Opportunities

- Reduce likelihood of healthcare-associated infections (HAIs) for patients and staff
- Eliminate manual observation
- Better understand compliance; target problems
- Provide peace of mind for family and patient
Infant and Patient Security

*Individual 24x7 Protection Against Elopement and Abduction*

- Reduce need for manual monitoring
- Reduce need for calls to ask for status update – always know where a patient is located
- Provides peace of mind and tangible proof that infant is protected from the risk of abduction and nursing by the wrong mother
- Ensures advanced security
Visual Control

• Keep staff informed while on the go
• Automatic audio alert & popup

• Navigate between alerts
• Document corrective actions directly from the screen
• Supported on Window/PC platforms
Analytics Provides Advanced Business Intelligence

Visualisation and Interactive Dashboards

Par Level Real-time Status

Par Level Status (Click a Par Level Status Circle to view the par level detail)

Below Par 6 3
Above Par
At Par

Par Level Detail (Click a Category name to view the assets detail)

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Summary

• In a changing environment of challenges to provide “more with less”, products are available today to support workflow efficiencies providing real solutions

• Opportunities to leverage investments made with local Wi-Fi infrastructures combined with available technologies

• Providing data, analytics and reports to help the NHS understand day to day current practices/processes and compliance. Allowing for improved decision making and supporting shaping strategies

• Improving the deliverance of patient care, improve moral with staff and help drive efficiencies
Thank you