

Medical tablets and PCS application work together to reduce patient medication and delivery management errors within care home environments

INVATECH HEALTH

Industry: Care Homes - patient medication management and delivery systems

Application: Proactive Care System® (PCS)

Pilot Study investigation: To seek a reduction in risks of medication errors for residents living in care homes and the impact on staff time management, accountability and medication wastage.

Solution: MioCARE™ A105 mobile tablet and Invatech Health's PCS application

Invatech Health™

Invatech Health™ was established in 2014 and specialises in the creation and development of innovative healthcare solutions. Their Proactive Care System® (PCS), has already become the most widely used electronic medication management system in the UK. By the end of 2015 the system will have been deployed in over 150 care homes, used by over 1000 registered nurses and carers enabling management and delivery of 5000 administered doses to residents daily.

Invatech Health needed future proof technology and sought new handheld ergonomic tablets with larger screens to be compatible with their medical sector user base of PCS (nurses) and replace their previous Windows® Mobile rugged tablets which were more suitable for the retail or logistics sectors. MioCARE A105 tablets were seen as the best option after observing the devices in action at a local hospital. They were faster, reliable and more cost effective which has been notable by directly sample testing within a care home environment.

The Pilot Study

In September 2014 MioCARE A105 devices and the PCS application solution was introduced into Lakeview as a pilot site, a 200 bed care home in the Midlands. The focus of this pilot study was to test the upgraded technology's effectiveness in further reducing the risks of medication management errors. The secondary objective was to seek the effectiveness of consolidation and transference of medication data between users, such as care home staff, pharmacies and GP surgeries.

1000 intervention warnings flagged per week

"MiTAC were great in working closely with us to customise the MioCARE A105, allowing us to deploy our PCS application on those devices, resulting in a solution which is scaleable and future proof"

Tariq Muhammad

Managing Director, Invatech Health



Registered nurses found the mobile device and PCS solution easier, safer and faster to use during the medication rounds.

300 admins/barcode scans per day per device

What were the problems, challenges and how was the new solution implemented?

Risk to residents and providers

For many years the problems of medicines administration have caused concern, for example in 2009 the Care Home Use of Medicines Study (CHUMS) reported that 70% of residents living in care homes are at risk of medication errors that may originate anywhere in the supply chain from the prescribers hand, pharmacy dispensing to the administration in care homes.

Time Spent

Care home providers and their staff know managing medicines is extremely time consuming, chasing prescriptions, booking in medicines, dealing with returns, stock taking and of course the hours spent on medication rounds. In an averaged sized care home of 30 beds, often a full time equivalent member of staff will be lost to medication related tasks.

Accountability

Every professional and the institution in which they work need to be accountable for what they are doing. Evidencing high standards of care and quality is crucial, especially true for larger care home operators and their supplying Pharmacies. Good governance can be immensely time consuming without the correct information being readily available, leading to increased cost and frustration.

Wasted Medicines

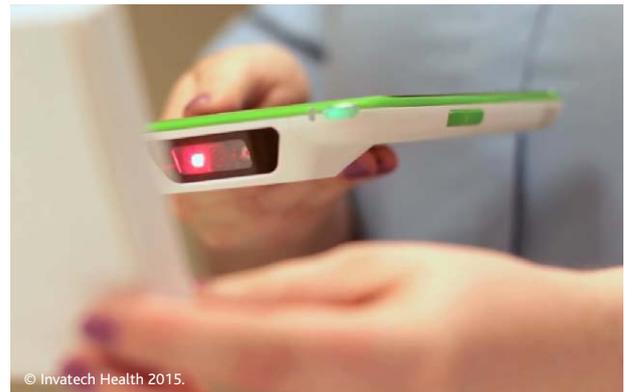
It is estimated that the NHS loses over £100m per annum through medicine waste, partly due to mismanagement and incorrect prescribing using inappropriate systems, processes and procedures. Care home residents frequently have many prescribed items which often results in disproportionately high wastage.

Hospital Admissions

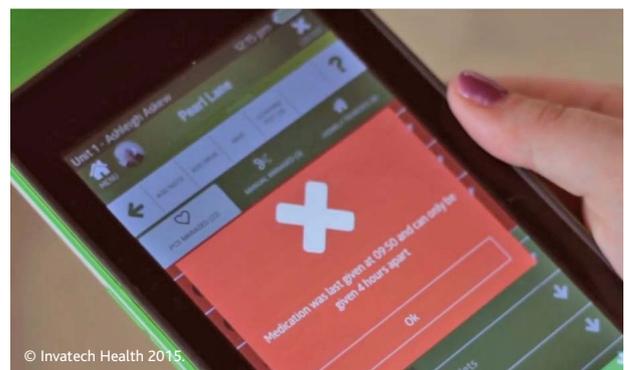
It is estimated that 1 in 15 hospital admissions are a result of avoidable harm from medicines. Poor medicines management is a contributor to this avoidable harm and the burden on the NHS estimated to exceed £1bn a year.

Challenges

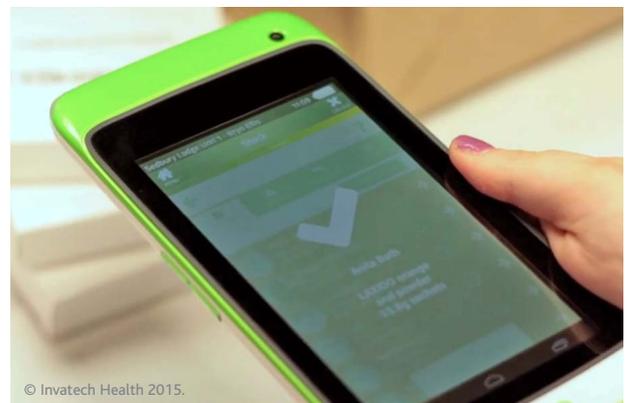
Invatech Health's previous version of PCSWindows® Mobile application was completely re-written and re-modelled to be integrated onto the **MioCARE A105** device. The revision has generated a capability for the software to be used by local pharmacies, both independent and national chains. The technology upgrade has also enabled effortless scalability and future proofing.



The barcode on each medication box is scanned for each individual patient.



If the wrong medication is selected for a particular patient an error message appears on screen allowing the carer to reselect the correct medication.



When medication allocation per patient is correct confirmation details appears on screen.

"Administering medication is integral in the day to day management of a care home, therefore systems and processes are required to ensure the safe and effective use of medication is maintained. The PCS System is easy to use and provides data evidence of safe administration of medication."

Caroline Wood

Director of Operations/Head of Care for Lakeview

Implementation

Software upload and testing

- Each device was set up at Invatech, where PCS is loaded along with SOTI mobiControl (Mobile device management)
- The implementation process was simple, with straight replacements of **MioCARE** devices into the care homes
- Staff were trained through an eLearning course prior to using the devices which covered the basic steps of barcoding, resetting and using the PCS application
- Using **MioCARE A105** devices enabled a shift to Android™ allowing the latest 3rd party applications to provide crash reports and analysis data

Benefits and Outcomes

- Ergonomic design better suited for carers and nurses, combined with the user-friendly PCS application to offer a complete future proof solution
- A larger screen provided better legibility of patient medication details and on-screen error warnings
- Charging cradle for device docking, ready charged to handle heavy usage e.g. 300 administrations/barcode scans per day per device
- Enabled for a more secure and seamless medication management process
- A substantial reduction in record keeping errors and missing entries on paper based administration charts
- 1000 safety alerts have been flagged per week
- Has enabled synchronization and much improved communication between pharmacists, GP surgeries and care homes throughout the process
- Provision of more indepth and relevant statistics and reports to support higher levels of care
- The technology advances now incorporated into the care homes allows carers more time to provide quality care for its elderly residents

MioCARE™ and PCS The complete solution successes

Since the early adopter pilot at Lakeview in 2014, the MioCARE Invatech PCS solution has gone on from strength to strength. In early 2015, the system was deployed into 50 care homes as part of the Welsh Governments Healthcare Technology and Telehealth Fund (HTTF). This has become one of the largest government funded technology projects within care homes with active research being carried out by University of Cardiff. The findings will shed light on how such innovative solutions such as PCS can dramatically reduce NHS costs and improve patient care.

Meanwhile, PCS is rapidly gaining commercial momentum with active orders being placed by all types and sizes of care home operators in the UK. Invatech now has an active pipeline of implementations stretching throughout the remainder of 2015. Together with MioCARE, Invatech hopes to influence and change the way care is provided to elderly patients in care homes.

"The Proactive Care System, provided by Invatech Health... links the pharmacy to the care home and enables a greater level of clinical, safety and accuracy checks to be carried out by a Pharmacist. All the features enable Lakeview to deliver better resident care and improved compliance."

Caroline Wood

Director of Operations/Head of Care for Lakeview



The complete solution from Invatech Health and MioCARE enables carers more quality time to actually care for residents.

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