

Automation rollout across Trust reduces medication errors and patient harm and frees up valuable time for medicines optimisation

Customer profile

Northumberland Tyne and Wear Trust provides mental health, learning disability and neuro rehabilitation services across North East England. The Trust is a Global Digital Exemplar and recently consolidated its three pharmacy departments into a single dispensing hub. The Trust uses Omnicell's automated medication dispensing cabinets in many of its wards and an Omnicell VBM 200F to fill its medication adherence packs.



Goals of implementation:

- Release nursing time back into face to face patient care.
- Enhance productivity to make the best use of limited pharmacy resource.
- Enhance patient outcomes by expanding the reach of the clinical pharmacy service.
- Save money and develop the commercial potential of the Trust.

“Automating the dispensing of monitored dosage systems reduced the frequency of errors and the risk of harm for patients. Automation reduced both the time taken to dispense monitored dosage systems and the number of pharmacy staff required in the dispensing. This enables pharmacy staff to spend more time in clinical roles which also contributed to patient safety.”

Ewan Maule, Deputy Chief Pharmacist,
NTW Mental Health NHS Foundation Trust

Benefits of installing VBM 200F for medication adherence packs

The Trust has commissioned Newcastle University to do an independent evaluation of the benefits but so far automation has:

Reduced time taken to dispense medication adherence packs and number of staff required in the dispensing process.

Prior to implementing the VBM, it took on average 20 minutes to manually prepare one pack. Post automation this was reduced significantly to just 3 minutes per pack. As a result the pharmacy estimate that 2-3 WTE staff roles have been saved by the installation of the VBM. This has allowed staff to pursue more clinical roles including:

- continued development of optimisation strategies to improve patient outcomes and cost effectiveness of medicines
- advising patients on their medication and working as part of a multi-disciplinary team to educate patients on important steps to improve and maintain their health.

Significantly reduced medication error rates for dispensing patient adherence packs.

Non-automated error rate prior to installation was 0.69%*. However post implementation no errors (0%) were associated with the VBM automated dispensing system itself after a three month period. This meant that machine itself provided 100% accuracy throughout the dispensing process.

While using the automated system, a small element of human interaction is still required and this did result in a minimal number of errors within the 3 month period (0.17%) either before or after the automated dispensing had occurred. Further staff training is helping to resolve these issues and it is thought that increasing the number of prescriptions dispensed by the VBM could reduce the risk of any potential human error even further. As a result, six months after implementation the pharmacy is so confident with the accuracy provided by the system that they are now planning to remove the second pharmacy check completely.



Developing the commercial potential of the Trust

The academic study and process validation will enable the Trust to approach neighbouring Acute Trusts to offer to provide safe and reliable dispensing of their patients' medication adherence packs. This will provide NTW with a new revenue stream as well as saving the Acute Trusts money as they will no longer have to outsource to external organisations – ensuring money is kept within the NHS.

0% of errors associated with automated dispensing system	2-3 WTE staff time saving	17 minute saving per pack
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Benefits of installing Automated Dispensing Cabinets on the wards

The Trust has over 30 Omnicell cabinets installed across over half of its wards. Stock in the cabinets is managed by pharmacy teams on the sites who work directly with the wards. This means that nursing staff are freed up from medicines management and can spend more time with patients, further improving patient safety. Since installation CQC have inspected the wards with Omnicell cabinets and are complementary about improvements to the quality of care they facilitate. The cabinets have reduced the risk of concerns in relation to safe and secure management of medications.

“We’ve had really positive experiences with Omnicell technology. It’s now clear that the VBM will allow us to almost eliminate pharmacy dispensing errors in medication adherence packs. I believe as much as what can be done around improving the human element of pharmacy processes has been done, so I can’t think of any other intervention that will allow us to make a step change around patient safety other than technology.”

Ewan Maule, Deputy Chief Pharmacist,
 NTW Mental Health NHS Foundation Trust



99.75%

medicines available for administration when and where needed

0.4 WTE

nurse time released per wards

10-15%

drug spend savings

29%

reduction in overall medicines supply transactions

64%

reduction in incidents relating to controlled or misusable medicines

* based on six months of data. Error rate was determined by number of errors observed divided by the opportunities for errors and multiplied by 100.



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