



BD Rowa™ - practical clinical support document

Maximising your use of the BD Rowa™ solutions





Introduction

BD Rowa™ offers personalised, reliable, flexible pharmacy dispensing robots and supporting products & training that make the work of thousands of healthcare providers easier, and ensure that medicines are dispensed safely, efficiently and reliably.

Automating medicine supply offers users numerous benefits [see Table 1].

Table 1. Benefits of an automated robot system include:

Reduce medication errors through increased accuracy rates ¹	Time saving ²	Frees up staff for patient-facing clinical input ^{2,3}
Integrates with other systems to streamline workflow ¹	Reduction in manual workload ⁴	Improve accuracy of stock record ^{1,2}
Improved service efficiency and reliability ²	Space efficiency ³	Reduced medicines wastage and cost of expired drugs ²

This is why the BD Rowa™ Vmax system is now a more widely implemented solution to speed accurate dispensing in the UK and Ireland (UK&I), as well as further afield.

Supporting you every step of the way

BD invests in its UK&I clinical support team, ensuring clinical expertise to understand and support your individual organisational needs – at every step of the decision-making process and beyond [see Figure 1 overleaf].

In fact, BD currently looks after ~200 UK hospital sites and ~200 UK retail sites with BD Rowa™ Vmax. Figures from across Europe, Middle East and Africa show over 13,000 BD Rowa™ solution installed across hospital and retail pharmacies. The UK&I hospital sites have a wide geographical spread - from Inverness to Jersey - all receiving an equally high level of support and service from the BD Rowa™ clinical support team.

Meet the BD Rowa™ automated dispensing solution clinical support team - supporting UK&I hospitals

Jacob

Registered pharmacy technician, worked in the NHS for over 10 years; joined BD in January 2023

“I am passionate about automation, having spent my last few years in a pharmacy informatics role supporting the implementation of robotics in pharmacy and automating wards. I now work hard to ensure all your BD Rowa™ needs are met.”



Alex

Former hospital pharmacist, joined BD in 2021

“Since my pre-registration training, I was enthusiastic about using automation across pharmacy and beyond to drive efficiencies - with a focus on optimising medicines use. This passion led me to work as part of the automation roll-out operations team within University Hospital Coventry and Warwickshire before joining BD. I am excited to support your BD Rowa™ implementation and on-going needs.”

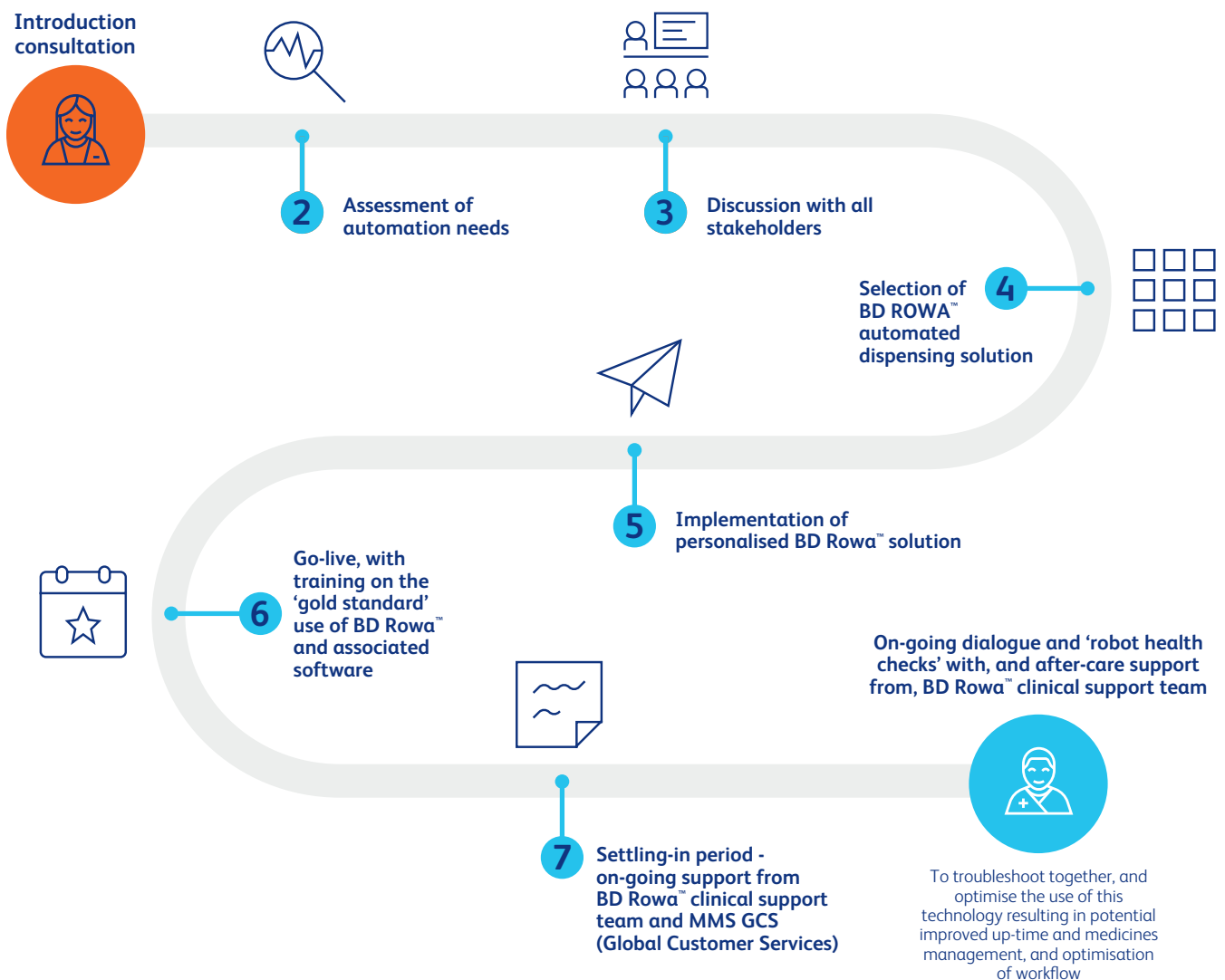


Journey into pharmacy robot automation with BD Rowa™

from consultation to implementation and beyond

This article considers the journey from planning and introduction to post-implementation BD support from the perspective of several customers of a BD Rowa™ automated dispensing solution.

Figure 1. Process flow journey into pharmacy robot automation with BD Rowa™ - from consultation to implementation and beyond



Benefits of BD Rowa™ systems

Examples of practical aspects

Below and overleaf we share some specific parameters that our customers evaluate with our BD Rowa™ clinical support team, together with their benefits to pharmacy efficiencies:



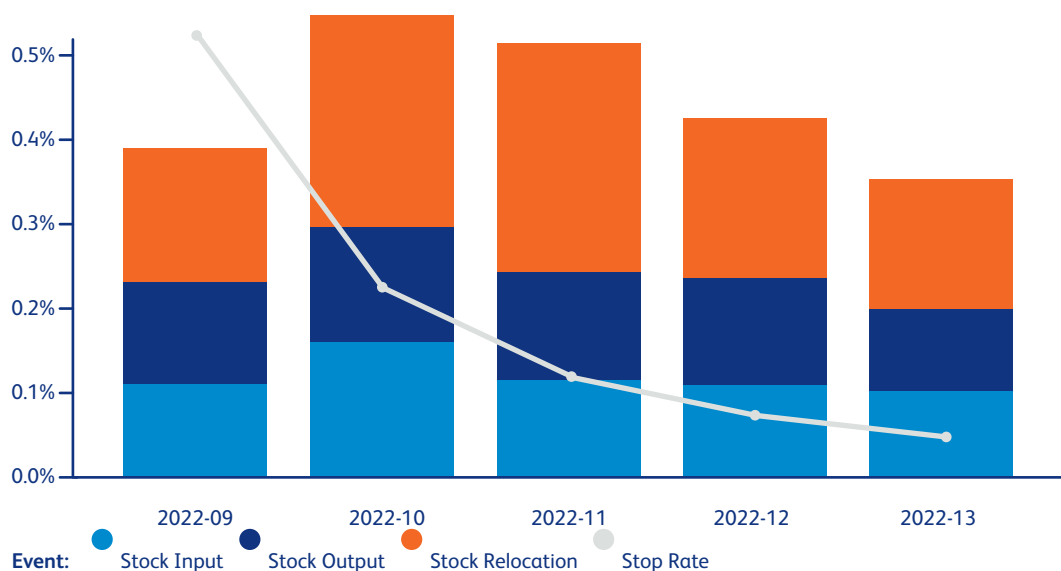
Benefits of training in BD Rowa™ ‘stop-rate’ data analysis as part of regular ‘robot health checks’

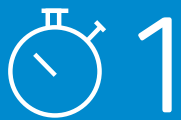
Routine auto-analysis of BD Rowa™ system performance allows the rapid identification of any issues, including sites exceeding the threshold of acceptable ‘stop rates’.

‘Stop-rate’ data analysis allows users to identify any reason why the robot has stopped working, thereby preventing this and ensuring pharmacy operations continue uninterrupted. The BD Rowa™ clinical support team will work closely with users on the data analysis and interpretation.

The success of any training plan can be validated by comparing ‘stop-rates’ before and after training [see Figure 2 and Figure 3].

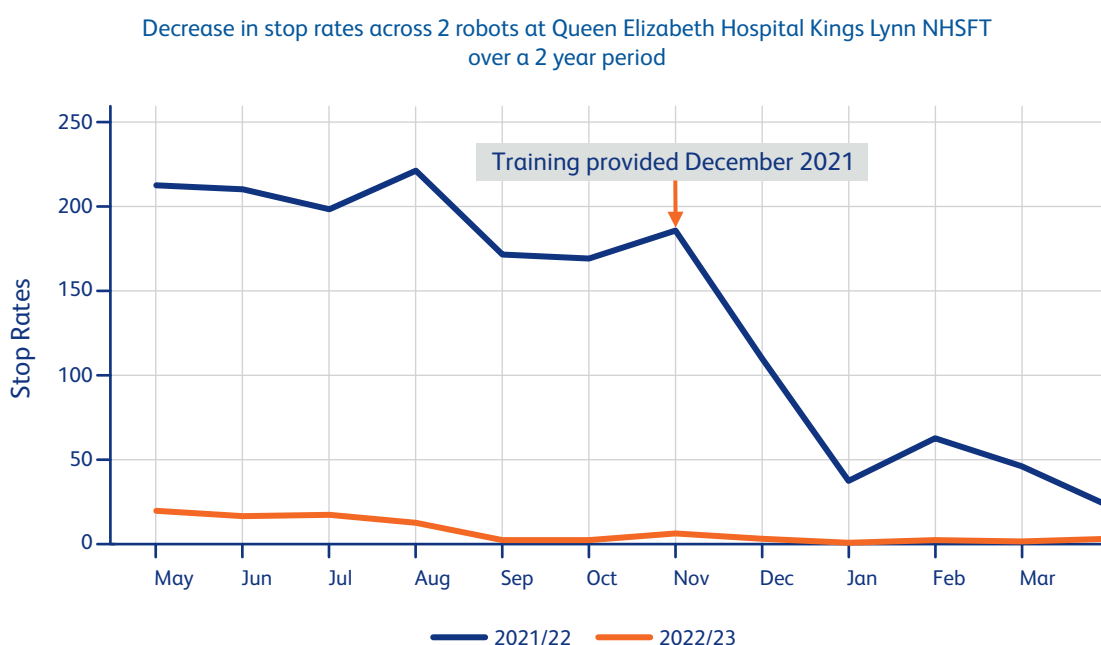
Figure 2. Immediate impact on ‘stop-rates’ over a period of four weeks post-training with BD Rowa™ clinical support team at a North West of England hospital trust with a BD Rowa™ robot (spec: Vmax 160 and two picking heads)





Benefits of training in BD Rowa™ ‘stop-rate’ data analysis as part of regular ‘robot health checks’ cont'd

Figure 3. Monthly ‘stop rates’ post installation of two BD Rowa™ Vmax160 robots and after on-going training with BD Rowa™ clinical support team at Queen Elizabeth Hospital Kings Lynn NHSFT



“Alex, our BD clinical optimisation specialist, has been a vital part of me being able to manage looking after our robot confidently. We have seen a significant decrease in the use of the emergency stop function with his input, leading to better robot up-time and he is always on-hand to support.”

Kings Lynn NHSFT



Benefits of training in BD Rowa™ EasyLoad/ProLog™ to remove overnight loading function errors

The BD Rowa™ EasyLoad and ProLog™ are automated medicines allocation mechanisms that separate, measure, scan and input all packs within a very short timeframe to the right storage location. This reduces manual workload - with the overnight automatic inputting capabilities giving round-the-clock time-saving.

Errors in this inputting - collectively known as 'ProLog™ errors' - more often tend to happen overnight when staff are not around to troubleshoot robot errors. Such errors, if they occur, halt the loading of medicines, and so stop robot efficiency.

BD is constantly striving to improve efficiency with its systems so it led a pilot assessment across ten UK NHS hospital sites to test where daily afternoon shelf-scanning within the robot identified shelf errors (e.g., missing/dislodged/defective packs). As a result, these shelves were made non-accessible for new pack allocation following ProLog™ input therefore packs could only be loaded onto accessible shelves where errors wouldn't occur. This prevented overnight automatic inputting errors, and ensured the systems continued to function efficiently.

“After the BD clinical team training sessions on the use of ProLog™, confidence increased and errors decreased. Nine months on, we have had almost no issues with our ROWA™ robot, and no issues with our ProLog™ erroring overnight so our services can continue uninterrupted.”

South Warwickshire University NHS Foundation Trust



3

Benefits of training in storage capacity monitoring and optimisation of inventory with the BD Rowa™ Vmax

The BD Rowa™ Vmax is available in a variety of designs to fit your space. A key decision when selecting one is its medicines pack holding storage capacity.



The BD solution team specialising in BD Rowa™ Vmax discuss this in detail with you before any purchase - and support you with inventory optimisation training. This ensures you have the stock you need to allow for a smooth medicines supply.

Figure 4 demonstrates a randomly selected snapshot of requested versus actual capacity at ten BD Rowa™ Vmax hospital installs showing that, in all cases, this was successfully achieved after close work with the BD Rowa™ clinical support team.

Figure 4. Requested versus actual capacity at ten BD Rowa™ Vmax hospital installs between 2021-2023

Site (New robot installations 2021-2023)	Previous ROWA capacity (0 if new customer)	Requested capacity by customer	Actual capacity	Capacity Achieved
Hospital 1	0	20,000 – 22,000	24,242	Yes
Hospital 2	12,000	15,000 – 18,000	17,787	Yes
Hospital 3	26,000	33,000 – 35,000	34,066	Yes
Hospital 4	17,500	>17,500	28,462	Yes
Hospital 5	0	>20,000	25,235	Yes
Hospital 6	0	>30,000	34,663	Yes
Hospital 7	0	>15,000	17,474	Yes
Hospital 8	25,000	32,000 – 34,000	33,958	Yes
Hospital 9	26,000	>30,000	32,985	Yes
Hospital 10	22,000	>40,000	41,669	Yes



4

Benefits of training in BD Rowa™ stock optimisation reporting on effective inventory management

Stock optimisation supports improvements in inventory management within central pharmacy or distribution hubs.

Stock optimisation involves utilising the BD Rowa™ 'stock days report' to identify potential medicine over- or under-stocking and so help identify where cost implications negatively impact the inventory, especially with high-cost medicines.

Our BD Rowa™ clinical support team come onsite to instruct your team on how best to apply the 'stock days report' to improve your inventory management, drive cost-savings and support safe medicines management, where applicable.

An example from one hospital included an investigation into apparent unusual activity involving analgesics. Multiple sources of data were used as part of the investigation, including input and output data from the BD Rowa™ Guided User Interface (GUI), log data and BD Rowa™ interfacing software. This allowed a trace of the associated movements of the analgesic packs, review of staff involved and timing of events which, in turn, ensured a prompt internal investigation and resolution of the issue.

“Automation can provide a robust audit trail which minimises opportunity for any diversion. The BD Rowa™ clinical specialist supported us with various functionalities, helping to maximise stock traceability, which proved to be time-saving for our busy department and will make future routine investigations a less daunting task.”

Deputy Chief Pharmacist – North London Trust



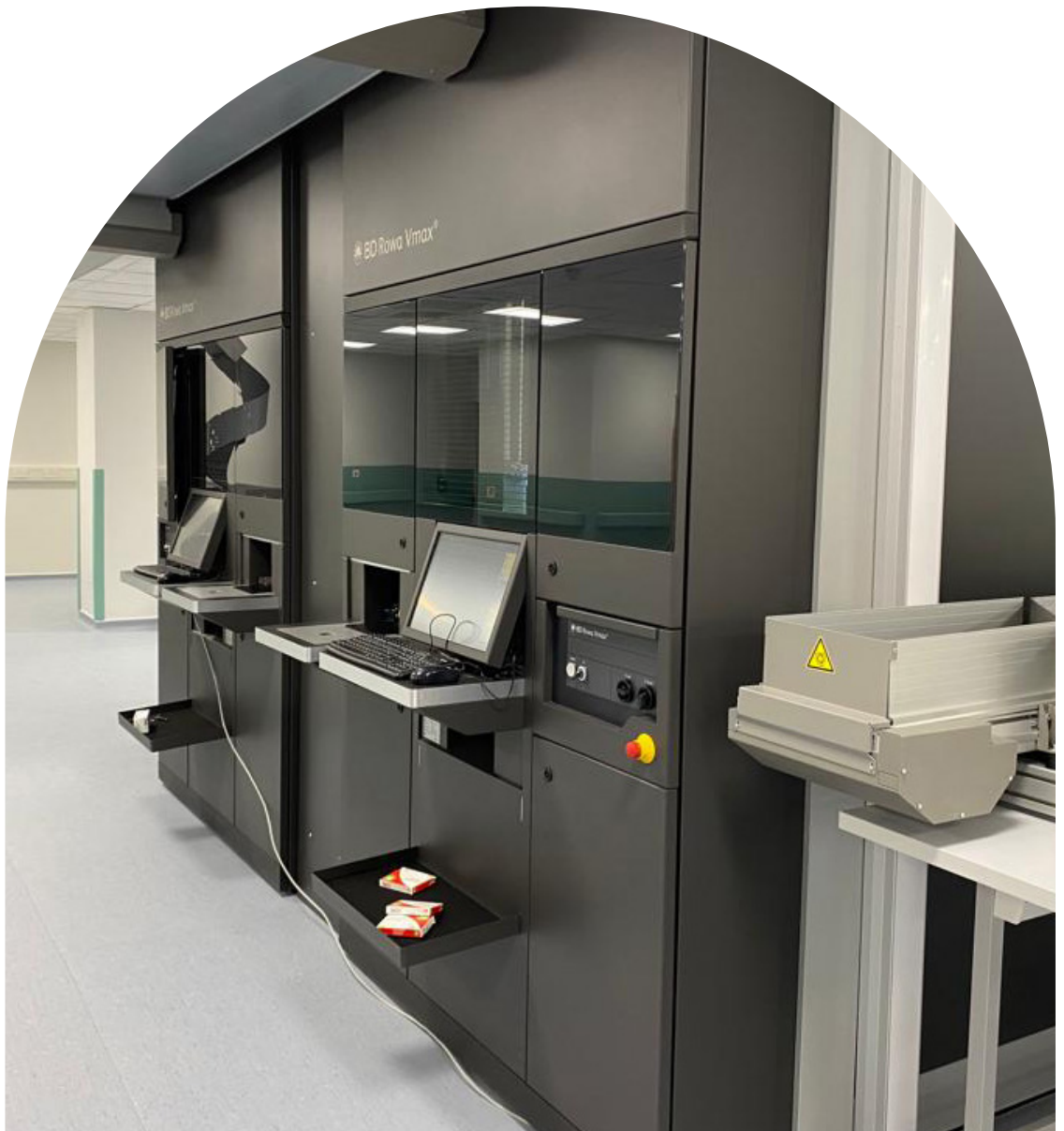


5

Benefits of training in BD Rowa™ to support workload optimisation and staff efficiencies

BD Rowa™ workload optimisation support involves working with the BD Rowa™ clinical support team to analyse 'workload reports', including out-of-hours activity, to identify the busiest vs. quietest days/hours to better understand activity peaks and troughs and correlate this to staffing rotas, numbers and activity/workload distribution across the week.

For example, one BD Rowa™ hospital site in Scotland identified their quietest mornings to be Mondays, Tuesdays and Fridays with under 50 packs dispensed before lunchtime. This allowed two members of staff to be released for ward-based clinical activities. On the contrary, Tuesday and Wednesday afternoons were the busiest and resulted in prolonged late-duties. The 'peak' activity data allowed for re-adjustment of staffing levels in the dispensary, so more checkers were made available earlier, cutting late duties on these days by a couple of hours, based on hospital's re-audit data.



Summary

Be confident that choosing BD Rowa™ pharmacy robot automation opens the door to improved efficiency and safety, and on-going support

- BD Rowa™ : personalised, reliable, flexible pharmacy dispensing robots and supporting products & training
- Improved patient safety and multiple efficiencies
- Flexible partnership with experienced and skilled BD Rowa™ clinical support team
- Taster support for users/super users [see QR code below]



References

1. Rodriguez-Gonzalez CG, et al. Robotic dispensing improves patient safety, inventory management, and staff satisfaction in an outpatient hospital pharmacy. *J Eval Clin Pract* 2019;25(1):28-35.
2. Lehnborn EC, et al. Evidence briefings on interventions to improve medication safety. Centre for Health Systems and Safety Research Australian Institute of Health Innovation, University of New South Wales. Volume 1, Issue 2: June 2013.
3. Glasgow case study. Centralising Medication Distribution. BD, 2023.
4. Case study. Advancing medication management into the future. hospitalpharmacyeurope.com. Issue 88, December 2017.

Disclaimer on data used: All data and testimonials in this case study were provided by the advisors and have not been validated by BD. All views and opinions expressed are those of the advisors.

Becton, Dickinson U.K. Limited, 1030 Eskdale Road,
Winnersh Triangle, Wokingham, Berkshire RG41 5TS

bd.com/en-uk

©2024 BD. BD, the BD Logo and all other trademarks are property of Becton, Dickinson and Company. All rights reserved.
BD-109077 Issue 1. Date of preparation: January 2024.

