Automating 4 better care

Automating 4 Better Care Forum: July Meeting

A Forum funded by BD and facilitated by Newmarket Strategy.
July 2024

Overview and Co-Chairs Initial Reflections

1. On Thursday 11th July 2024, The Automating 4 Better Care (A4BC) Forum held the second of three scheduled meetings on optimising connected medication management (CMM) automated technologies, bringing together a range of professionals to discuss the potential of the technology and discuss barriers preventing its uptake.

2. In their opening remarks, Dr Keith Ridge CBE and Lord Carter of Coles reflected on the recent political and policy changes since the April meeting. Dr Ridge discussed the Health and Social Care Select Committee's visit to the Cleveland Clinic London and the publication of the third report of their Pharmacy Inquiry. The co-chairs were pleased the report highlighted the role of automation and referenced the work of the A4BC Forum. Dr Ridge expressed his belief that the next committee is likely to accept the recommendations of the previous committee. Dr Ridge also touched on the Thirwell Inquiry, which is investigating the tragic events surrounding the murder and attempted murder of babies by former neonatal nurse Lucy Letby at the Countess of Chester Hospital. The A4BC Forum co-chairs stated they will closely follow the Inquiry's deliberations and recommendations, which may have implications for pharmacy automation, such as more stringent supply, selection and waste reduction of medicinal substances. The co-chairs also reflected on the government's publication of the UK's next five-year action plan to address antimicrobial resistance, titled "*Confronting Antimicrobial Resistance 2024 to 2029*," and the government's response to the consultation on hub and spoke dispensing. While both processes are positive steps, they will require parliamentary approval and subsequent integration into NHS contracting.

3. Regarding political changes, Lord Carter expressed his belief that we should be cautiously optimistic of the opportunities for CMM automated technology after the election of the new Labour administration. However, he noted that for the first time in 15 years, Labour will be managing the NHS winter challenges and this experience may shape the future approach. He applauded the new administration's determination to shift care away from acute settings, building on a strategy that has been attempted with various success over the last few years, and noted that demonstratable success would be needed quickly. He reflected that studies in the US show that this shift in care can be achieved with intensive management, such as in groups such as the over-65s, but this shift is often a multi-year process that involves double running costs, which Labour will need to be prepared to fund.

4. Lord Carter also welcomed the launch of Lord Darzi's 100-Day Review, but emphasised the need to balance the recognition of current issues with maintaining morale and optimism across the NHS that these issues can be resolved. He is optimistic that the requisite change can be achieved and believes that pharmacists are well positioned to drive change in there areas of expertise, as they had previously proven in response to his Efficiency Review, but he also stressed that this optimism must be tempered with caution. The group acknowledged that without additional funding, increased efficiency will be necessary; despite increased inputs to the NHS in recent years, outputs have not reflected this. Participants were encouraged by Wes Streeting's openness to working with different suppliers, and noted that they expected that the role of the private sector will grow, but funding remains a key question. The role of provider-led ICBs, and their role in leading the way with initiatives like automation would be an interesting angle to consider.

The Evidence Gaps around CMM Automated Technologies

5. The April A4BC Forum noted the need to review the evidence and identify any gaps around CMM automated technologies. Therefore, the results of a literature search of, and interpretation of available evidence by Newmarket Strategy, supported by Prof Bryony Dean, was presented to

A4BC Forum members. In general, there was good evidence around the impact of CMM technologies on medication error and resource utilisation, with mixed evidence around releasing time to care. However, there was a lack of consistency in outcome measurement as it relates specifically to medication safety. It must also be interpreted in the context of the environment in which systems were assessed, adding to greater variability of the data. In future studies, methods such as rating of potential medication errors on their propensity of causing patient harm is a better representation of the potential impact of the CMM automated technologies on patient safety.

6. There were evidence concerns about the impact of CMM automated technology and the management of controlled drugs, and their role in the current wider regulatory environment. Members of the A4BC Forum noted the need to ensure NHS sites are compliant with regulations, and suggested that the language used in guidelines to both suppliers and the NHS could be expanded to be more comprehensive.

7. It was noted that organisations are interested in how new technology could help reduce health inequalities. It is important to consider, for example, how CMM automated technology will impact a wide variety of patient groups, and how information can be provided in a supportive format, particularly considering digital solutions. There is also a need to properly consider and address digital exclusion and how certain groups such as those with learning disabilities are not disadvantaged.

8. It was also discussed that there is significant interest in front-end decision support systems; however, there is currently a lack of robust evidence to support their effectiveness. Although front-end decision support systems were not included in the focus on the review, it remains a belief that artificial intelligence could enhance clinical decision-making. More research is needed to validate its impact and better understand the associated risks. It was however noted that NIHR funded research into hospital e-prescribing had proven its safety benefits.

9. The review also noted that most literature consists of descriptive reports from individual institutions, primarily academic medical centres with ample resources. The available data, predominantly from academic centres, may not be directly relevant to the majority of hospitals nationwide. There was a noticeable lack of available multicentered studies assessing the implementation of CMM technologies across multiple institutions, including the benefits across the community. From this, we can draw two conclusions. The first is that pharmacy leaders must recognize that these implementations are not universally applicable. The second conclusion is that there is minimal information and research on best practices for implementation and realising benefits from CMM automated technologies. Key questions remain around how to implement effectively, what risks need to be mitigated, what productivity KPIs need to be set, and how to address these risks.

10. The evidence review discussion highlighted several evidence gaps that institutions like National Institute for Health Research (NIHR) or other university bodies could commission further research into. Broadly, the A4BC Forum believe these are the priorities:

    - **UK health economic evidence.** There is a need to better articulate and demonstrate the health economic benefits of CMM automated technologies in the NHS, both for a hospital and across an ICS. This should include wider metrics, such as reducing health inequalities and supporting the net zero NHS.
    - **Implementation science**. Better and easier implementation are crucial considerations to an investment decision. Key questions remain around how to implement effectively, what risks need to be mitigated, and how to address these risks. A focused review around the implementation science of CMM automated technologies would be beneficial for suppliers and the NHS.
    - **Benefits realisation in a real-world setting.** There is limited evidence on how Trusts should realise benefits of CMM. More research into the probable benefits, and how Trusts can identify, measure and realise benefits would be a valuable contribution to the adoption journey. One solution suggested to achieve this would be to perform a realist evaluation, which is a framework which enables researchers to develop theories about how their

intervention works by asking 'What works for whom, in what circumstances, in what respects, and how?'

The Procurement and Investment Challenges of CMM Automated Technologies

11. Throughout the discussions of the Forum, themes around procurement and investment considerations emerged, aided by experts in those areas which had joined the Forum. In general, the consensus belief is that ICBs are being asked to balance their budgets, often necessitating cuts. In the current financial climate, investments solely in quality, safety, and net-zero initiatives would likely exacerbate budget deficits. Therefore, while these investments are important, their financial implications must be carefully considered and justified.

12. Through the discussions some key themes emerged:

> **The NHS will prioritise technology investments that can demonstrate cash savings.** It was noted that convincing Chief Financial Officers of the benefits of new investments is challenging without tangible cash savings. Capital investments that demonstrate financial stability and self-sustainability through efficiencies are more likely to be approved. However, it is important to clarify that cash savings achieved through efficiency should not be perceived as a means to reduce staff numbers. Investments must clearly demonstrate financial benefits that free up resources to justify their implementation. Reliable evidence is necessary to support claims about the benefits of new programmes. Quantifiable data can help illustrate these benefits, and the A4BC Forum could play an important role in balancing the need for practical, actionable evidence.

> **Quality and safety benefits cannot be solely relied upon.** Investments in quality and safety, while worthwhile, do not pay for themselves as they do not result in cost savings or cash releases. This makes them more difficult to justify in the current financial climate.

> **There is no funding attached to net-zero carbon investments.** Similarly, net-zero initiatives are important but challenging due to budget constraints. Balancing cost and social value through reducing carbon emissions is necessary, but there is no dedicated funding attached to net-zero commitments. Consequently, while investments that produce less carbon are viewed favourably, cheaper investments are often prioritised due to cost considerations. The key to advancing net-zero initiatives will be in quantifying, monitoring, and reporting their contributions.

> **There is a difficulty in capturing patient benefits.** Patient benefits are important for driving traction and support, although they cannot be directly claimed in Treasury business cases. However, they play a crucial role in making a comprehensive economic argument by highlighting the broader impact on patient care, outcomes, and the cost savings associated with avoiding patient harm.

The Principles of Ward Medication Management

13. In the previous A4BC Forum the variety of different ward management practices has been discussed, and how CMM automated technologies would impact ward medication management was identified as a priority area for discussion. Dr Ridge began by recapping the original aim of 'dispensing for discharge,' which was to support discharge by ensuring timely supply of medication. One effective strategy was to increase the rates of near patient dispensing. In the late 1990s, the Department of Health committed to using patients' own medicines as part of hospital medicines management policy. This policy was subsequently endorsed by the Audit Commission's 2001 report, "A Spoonful of Sugar."
This approach requires appropriate facilities to safely and securely store patients' own medications by their bedside, adhering to national guidelines. Currently, in many Trusts patients are asked to bring their medications with them. The group had several points.

14. **Discharge is a complex process.** Members highlighted that determining the optimal time to dispense medications for patients being discharged is a complex task that requires specific skills, experience, and judgement. If not managed properly, there is a significant risk of increased waste.

15. **Increased patient data is an opportunity for a different approach.** Given the comprehensive data held about patients, there is an argument for the NHS to adopt a different approach, potentially moving away from traditional near-patient discharge processes. One chief pharmacist noted that correctly managing dispensing for discharge represents a significant opportunity. Currently, many prescribing errors are identified at the point of (i) admission and (ii) screening drugs for discharge in readiness to dispense TTAs. All this needs staffing and staff needs to have the right skills to identify errors and challenge/review with prescribers. Automation could potentially improve the dispensing for discharge process. Locally in one Trust, discussions have focused on using technology to enhance safety, allowing changes to the workforce model. This includes using unregistered staff in different roles, such as bedside assistance, which could help reduce errors in the discharge process.

16. **Change will have implications around assurance and budgets.** Any changes to the dispensing for discharge process come with budgetary implications that need careful consideration. Chief pharmacists and clinical staff also need to determine the necessary level of information to confidently discharge patients, and ensure there is consistency in this process. Addressing the significant amount of medication waste in patients' homes should also be a priority.

17. **Crucially, technology should enhance workflow rather than hinder it.** From a supplier's perspective, the focus should be on creating processes that can become standard best practices. There is a significant opportunity to get this right by researching different delivery models. It is important to consider how these processes fit within the overall system and distribution network. Moving towards standardised processes is essential, but the standard must be high to effectively deliver the best outcomes. The patients' perspectives on dispensing for discharge are particularly important and varied. A one-size-fits-all approach will not work; processes should aim to be timely, safe, and empowering for patients. The current implementation of dispensing for discharge by many has introduced new risks and increased waste, highlighting the need for a standardised process that addresses these issues effectively. The A4BC Forum could help with sharing the implementation journeys that will involve automation in the context of dispensing for discharge to help spread knowledge.

The Need for Exemplar Sites

18. Finally, the A4BC Forum members had a discussion around what good would look like for an exemplar site in the NHS.

19. **Innovative financing arrangements should be considered.** Convincing Trusts to be amongst the first to adopt new technology is often aided by innovative, risk-shared approached to financing. One finance lead reflected on an initiative at their Trust, which is trialling a new genomics technology within the NHS. They have entered a risk-sharing model based on price per test with the supplier. They have also explored options for obtaining equity in the supplier, which would be triggered by the volume of NHS sales in the future. Such innovative commercial arrangements could be replicated or adapted. A supplier representative suggested that that approach could be attractive, but would require commitments from other suppliers. Other members reflected that outcomes-based contracting must be flexible to account for emergencies yet robust, with clear baselines and quantifiable financial performance indicators to account for success.

20. **The lack of interoperability presents a significant barrier to developing exemplar sites.** A key frustration identified is the cost and complexity involved in creating user interfaces between different components of a supplier's systems. A principal concern is the NHS's lack of confidence in suppliers' ability to fulfil their commitments, based on past experience with different suppliers. Building trust in the industry is essential and could be achieved through engagement with NHS England and other key stakeholders. Demonstrating successful exemplar sites and providing tangible evidence of suppliers' capabilities could help overcome this challenge. A former regional

procurement lead has emphasised the importance of a national perspective on electronic health record implementation to eliminate duplication and streamline efforts.

21. **It is crucial to improve the implementation process**. A chief pharmacist member stressed the need to conduct an academically driven benefits realisation analysis in conjunction with the development of exemplar sites. This analysis should start at the very beginning of the implementation process and maintain a strong focus on outcomes. While the necessary implementation work is underway, comprehensive studies would be needed to validate efforts and ensure that the intended benefits are being realised. This approach not only supports the immediate goals of the implementation but also provides a robust framework for assessing long-term success and sustainability. By integrating rigorous academic analysis with practical implementation, we can better understand the implementation science, identify best practices, and support Trusts to make informed decisions.

22. **Further engagement with nursing leaders is critical**. Nursing engagement would be critical to any exemplar site. Engaging with the nursing digital team at NHS England was identified as an achievable next step, and one member reflected that the nursing directorate currently feels underrepresented in this area.

23. **Standardisation of business cases**. Lord Carter inquired about the existence of a template for a flexible, robust business case. Members and suppliers discussed that at the Trust level, there is no standard business case. The NHS as a whole would benefit from more standardised business cases.

24. The A4BC Forum concluded that developing exemplar sites requires ongoing dialogue with companies, and that it is crucial to avoid delays between defining outcomes and establishing these sites, as the NHS and new government would be keen to see early success.

Next Steps

25. **An A4BC Forum Summit.** The group considered the feasibility and benefits of hosting an A4BC Forum Summit. The consensus was that organising such a summit, ideally in partnership with a national leadership organisation such as NHS England would provide valuable insight for individual suppliers and demonstrate proactive and collective engagement on the subject. Acting as part of a wider strategy makes commercial initiatives easier to execute, and a summit could provide and drive that strategic impetus.

26. Another benefit of hosting a summit is that it could highlight variations among suppliers and establish a basic view of contracting specifications. It is important that these specifications are updated to reflect changes and establish a new baseline. Previous issues with EPR suppliers inhibiting the full implementation of other services underscore the need for reliable integration.

Actions

27. There were several actions that arose from the discussion. These included:

Diagram Actions

- To further refine the CMM diagram based on comments in the discussion
- Develop a layperson's version of the CMM diagram.

A4BC Forum Structure Actions

- Include lay representation in future Forum discussions.
- Publish A4BC Forum papers on the new A4BC Forum website.

Addressing Evidence Gaps.

- Address the lack of evidence on the benefits of CMM on resource use by researching best practices for implementation.

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Ongoing Engagement Actions

- Expand engagement with the NHS England Nursing Directorate.
- Engage with NHS England and suppliers about the summit and collective strategic initiatives.

About BD and Newmarket Strategy

BD has been at the forefront of healthcare safety and technology leadership for over a century. Leveraging their extensive experience and global presence, BD is a pioneer in ensuring the safety of patients and healthcare workers. Additionally, they excel in developing technologies that support medical research and enhance clinical laboratory capabilities.

Newmarket Strategy are a bespoke consultancy whose expertise spans across all the key sectors in healthcare, life sciences and health-tech. They offer the full spectrum of strategic advice and technical support to clients across the whole innovation value-chain.

For the avoidance of doubt, BD is supporting and funding the development of the A4BC Forum and has commissioned Newmarket Strategy to provide secretariat and guidance. However, the objective of the A4BC Forum is to seek independent views and advice, ensuring an unbiased and inclusive platform for discussion and decision-making.

Contact information

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- For more information from Newmarket Strategy, please contact Ed Jones, Senior Partner, and co- founder: ed.jones@newmarket-strategy.com

Attendees

	Name	Role	Organisation
1	Lord Carter of Coles	Co-Chair	House of Lords
2	Dr Keith Ridge CBE	Co-Chair	Former Chief Pharmaceutical Officer for NHS England
3	Ed Jones	Senior Partner	Newmarket Strategy
4	Dr David Webb	Chief Pharmaceutical Officer	NHS England
5	Dr Rahul Singal	Chief Pharmacy & Medicines Information Officer & Senior Responsible Owner for Digital Medicines	NHS England
6	Sue Ladds	Hospital Pharmacy Modernisation Lead	NHS England
7	Dr Raliat Onatade	Chief Pharmacist – Director of Medicines and Pharmacy	NHS North East London and Bards Health NHS Trust
8	Rob Duncombe	Chief Pharmacist	The Royal Marsden NHS Foundation Trust
9	Will Johnson	Head of Strategic Finance	The Royal Marsden NHS Foundation Trust
10	Pippa Roberts	Chief Pharmacist, Clinical Director for Medicines Optimisation	Liverpool University Hospitals NHS Foundation Trust
11	Michael Pace	Managing Director (formally managing director of NHS London Procurement Partnership)	ZCJ Consulting
12	Professor Bryony Dean Franklin	Executive Lead Pharmacist Research & Director, Centre for	Imperial College Healthcare NHS Trust & Co-Editor-in-Chief, BMJ

		Medication Safety and Service Quality	Quality and Safety
13	Nancy West	Northern Europe Hub Director – Medication Management Solutions	BD
14	Andy Platten	Senior Market Access Manager	BD
15	Dipak Duggal	Director of Medical Affairs International	BD
16	Tanya Serebryanska	Market Development and Access Pharmacist - MMS	BD
17	Matt Robinson	Senior Manager	Newmarket Strategy

Apologies

1	David Campbell	Clinical Director of Medicines Optimisation	Northumbria Healthcare NHS Foundation Trust
2	Anne Slee	Health IT and ePrescribing Specialist	PSC Health Ltd
3	Dr Vinodh Kumar	Chief Pharmacist	St George’s NHS Foundation Trust
4	Rose Gallagher MBE	Professional Lead Infection Prevention and Control	Royal College of Nursing

Observers

1	Patrick Wilkinson	Health IT and ePrescribing Specialist	BD
2	Tom Ward	Head of Sales	BD
3	Donna Atkins	Marketing Manager MMS	BD
4	Will Knight	Consultant	Newmarket Strategy