

Nursing staff opinions on the implementation of automated dispensing cabinets

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Background

In September 2017 site-wide implementation of Automated Dispensing Cabinets (ADCs) was undertaken at the Royal Adelaide Hospital. The key rationale for ADC implementation was patient safety, process efficiency and financial savings.

Description

In evaluating the implementation of ADCs a satisfaction survey was developed to assess the end user experience. The survey was designed to inform our outcome reporting, influence further education strategies and support optimal use of the ADCs.

Action

The survey was developed in collaboration with pharmacy, the multidisciplinary automation governance committee and the automation vendor. The survey contained 11 questions and was designed to be completed by nursing and medical end users. The survey was conducted in July/August 2018 using the Survey Monkey platform.

Survey Design

7 questions posed to the end users required selection of a response on a 5 point scale between Strongly Agree through to Strongly Disagree:

- ▶ ADCs allow me to do my job more efficiently
- ▶ ADCs allow me to do my job more safely
- ▶ I spend less time looking for medication than I did before ADCs were installed
- ▶ I can easily find a medication located in another ward in the event our ADC is out of stock (or does not stock) the medication I need
- ▶ I am confident using the ADCs
- ▶ I am confident in how to manage/resolve Drugs of Dependence discrepancies on the ADCs
- ▶ I know who to go to for training and support on ADCs within my organisation.

4 questions allowed free text responses

- ▶ What ADC functionality would you like additional training for?
- ▶ What do you like best about the ADCs?
- ▶ What do you like least about the ADCs?
- ▶ What could we do to improve our utilisation of the ADCs?

Evaluation

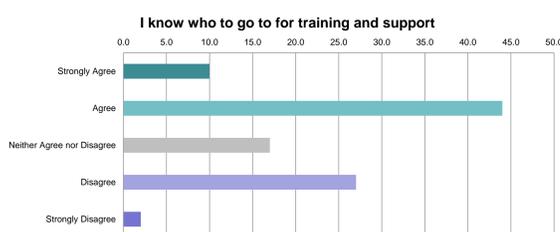
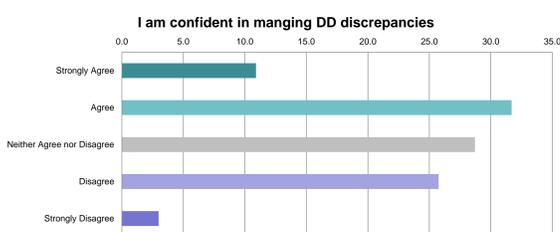
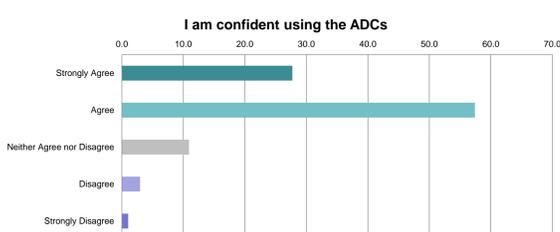
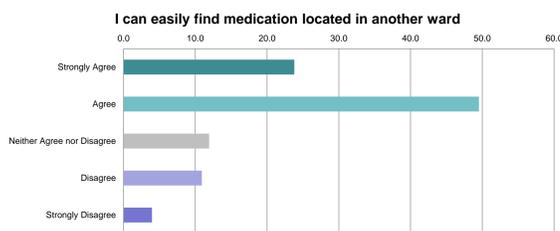
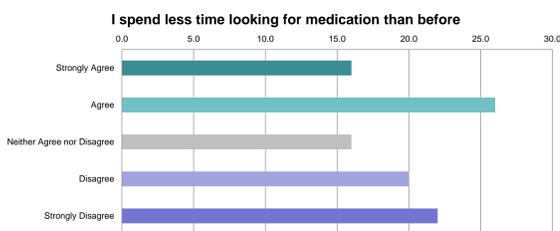
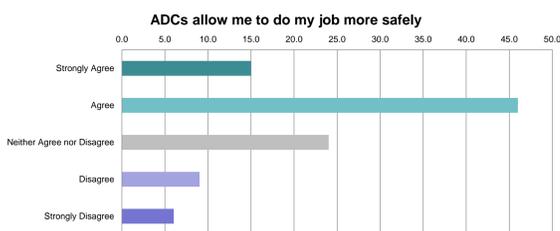
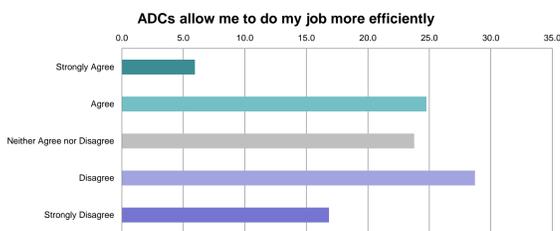
Strongly Agree to Strongly Disagree

The results provided valuable feedback on the implementation of ADCs. 101 responses were evaluated. Participants had the option to skip questions if they chose to.

Key points

87% of respondents were confident using the ADCs and 61% agreed that ADCs allowed them to do their job more safely. 46% of participants disagreed that ADCs allowed them to do their job more efficiently although 74% of respondents agreed finding medications for their patients was easy with the ADCs.

Strongly Agree to Strongly Disagree Responses



Free Text Responses

Free text responses were analysed to identify themes. The most common area identified for additional training was resolving controlled medication discrepancies. The most common positive feedback was the convenience the ADCs provided and the most common complaint was the requirement to queue for access to medications. A summary of themes identified from free text responses is provided in Table 1.

Table 1

	Additional Training (n = 17)	Like best (n = 101)	Like least (n = 127)	Utilisation suggestions (n = 94)
1 st theme	Resolving discrepancies (52%)	Convenient (16.8%)	Queueing (23.6%)	Strategies to address inventory (20.2%)
2 nd theme	Managing Patient's Own Medications (6%)	Knowledge of what is in other ADCs (13.9%)	Stock outs (11.8%)	Strategies to address queueing (13.8%)
3 rd theme	Nomination of ADC champions (6%)	Quicker (12.9%)	Range of medications differs (11.1%)	Functionality suggestions (11.7%)

Implications

The results from the survey provided invaluable feedback on the ADC implementation. There were some quick fixes that could be rolled out to improve satisfaction with the ADCs, for example:

- ▶ Identification of super users in each area
- ▶ Additional training implemented for Nurse Unit Managers on resolving discrepancies
- ▶ Standardisation and review of medications held in ADCs
- ▶ More regular pharmacy engagement with the learning and development unit who provide ADC training.

Other more complicated findings from the survey have been fed back as enhancement requests to the vendor and influenced the automation governance committee priorities for optimising automation use.

- ▶ During the first half of 2019 the Royal Adelaide Hospital underwent a software upgrade from version 1.4.3 to version 1.5.1 to gain access to remote queueing software.

The findings have also added to our lessons learnt which can support other sites implementing automated dispensing cabinets in future.

Future Steps

- ▶ Continue to refine inventory optimisation for ADCs
- ▶ Develop improved communication strategies from pharmacy to end users
- ▶ Narrow survey results to particular areas or disciplines to determine if there are pockets of innovation that can be harnessed
- ▶ Expand survey to include the theatre areas and anaesthetic stations
- ▶ Repeat survey following future enhancements or implementations to support ongoing optimisation.

Contact

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