



## SMARTER, SAFER, FASTER:

# AUDIOVISUAL TRAINING FOR PHARMACY TECHNICIANS USING AUTOMATED DISPENSING CABINETS

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### BACKGROUND AND IMPORTANCE

Automated Dispensing Systems (ADS) are being progressively adopted into hospitals to reinforce safety, increase efficiency and simplify pharmacy task management. Their success depends not only on the technology but also on the ability of pharmacy technicians. Audiovisual resources provide a dynamic, accessible approach that can improve understanding, reinforce correct procedures, and facilitate safer and autonomous use of these systems.

### AIM AND OBJECTIVES

To assess the impact of audiovisual resources on pharmacy technicians' knowledge, safety perception, autonomy, and usability when using ADS.

### MATERIAL AND METHODS

A survey was conducted among pharmacy technicians including these variables: age, sex and previous experience with automated dispensing systems.



Audiovisual training

After viewing audiovisual materials, they rated on a five-point scale, the difficulty of tasks:

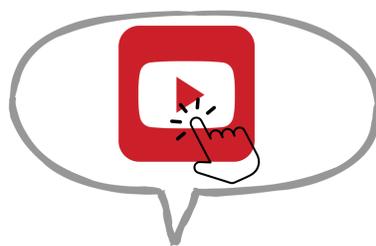
- Restocking
- Adding new medications
- Stock control
- Medication reallocation
- Medication removal
- Expiration control
- System restart



The same 1–5 scale was also applied to assess their perceptions of safety, autonomy, intuitiveness/ease and efficiency.

### RESULTS

31 pharmacy technicians completed the survey. Most participants were between 18-44 years old (83.9%). Overall, 93.5% had prior ADS experience, and 27 had received previous training. 45.2% had 1–5 years of previous experience.



Perceptions improved significantly: 61.3% reported feeling very safe and 29% safe, while 64.5% rated themselves very autonomous and 25.8% autonomous using ADS. Intuitiveness and ease of use were highly rated (58.1% very intuitive/easy), and efficiency received positive ratings from 35.5% as very efficient and 51.6% as efficient

Following audiovisual resources, most tasks were rated easy/very easy: restocking (96.8%), expirations (96.8%), medication removal (90.3%) and stock adjustment (83.9%).

Adding new medications, reallocation, and system restart were slightly more challenging but still rated manageable.



Older pharmacy technicians (≥45 years, n=5) reported equal or higher confidence than younger staff, and technicians without prior ADS experience (n=2) showed similar improvements after watching the videos.

### CONCLUSIONS AND RELEVANCE

- ✓ Audiovisual resources significantly improved pharmacy technicians' perception of safety, autonomy, ease of use and efficiency when handling ADS.
- ✓ These findings highlight the relevance of audiovisual resources as a practical complement to traditional training, promoting safer and more autonomous system management.
- ✓ Broader implementation may further optimize professional performance, reduce errors, and enhance the integration of ADS into clinical practice.