

I'm trying to decide whether to install an automated counting system or a robotic counting system. Which would you recommend and why?

All pharmacy automation provides 2 major benefits: Time savings and reduced errors. In order to decide which automation makes most sense in your specific facility you need to understand how each potential product will impact those 2 areas.

We have argued elsewhere¹ that all pharmacies should have 3 basic pieces of automation: An IVR system to answer all non-essential phone calls; an automated water dispenser for use on all reconstitutables; and a combination electronic pharmacy balance and tablet/capsule counter with stock bottle verification.

It can also be argued that before adding any additional counting or dispensing automation a pharmacy should consider workflow software (with re-grouping capabilities). Both workflow software and counting automation save time and reduce potential errors, but the former addresses 100% of your pharmacy's prescriptions vs. only a portion.

Once workflow software is added to the initial 3 basic technologies, your question becomes crucial. Do you choose a product that automatically stores and counts your highest volume oral solids for you – but requires technician involvement, or do you install a robotic system that will choose and label the vial, count the (high volume) medication into the vial, and provide it to the pharmacist for checking (or the technician for patient grouping)?

To answer the question we need to understand the proper application of

automation. It is a common misconception that counting automation (always restricted to only a portion of all dispensed products) should handle the maximum number of prescriptions. Also wrong is the similar belief that automation should handle the maximum volume of tablets/capsules. The truth is, automation properly utilized should save your pharmacy the maximum amount of time. Discovering this time savings value requires a calculation that incorporates both the number of prescriptions and the quantity of tablets/capsules dispensed per product.

With robotics this calculation gets much more difficult because a robot should be viewed as an additional technician.² In the case of robotics you are not concerned with choosing your products based on maximum time saved, but on gaining the maximum potential out of the robot, without slowing down your "other" staff members.

Robotics therefore are best suited to situations where other counting technologies already exist (vs. as a standalone solution).

We would therefore recommend you begin with an automated counting system and only add robotics once your prescription volumes require additional support. Remember however that once you do decide to add robotics to existing counting technologies; your selection of which products go into each system will be crucial to gaining maximum efficiencies from all your technologies and all your staff.

¹ Caverly W. Automation Timesavers. The Canadian Pharmaceutical Journal Sept 2002;40-41

² Caverly W. Automating With Intelligence. The Canadian Pharmaceutical Journal May 2003;12-15