

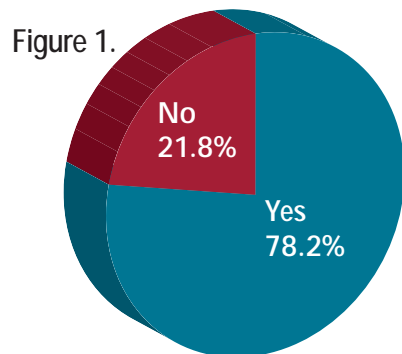


### Survey Results: The Growth of Automation Adoption ■ BY DEANNE HALVORSEN

With each monthly issue, *Pharmacy Purchasing & Products* is committed to bringing you extensive editorial coverage on the latest pharmacy automation solutions and advice on how to adopt automation in your facility to increase safety, productivity, and cost-efficiency. However, every August we realize the value of stopping and taking stock of where we are, where we have come from, and – perhaps most importantly – where we are going. Hence, we are very pleased to bring you our second annual survey on the State of Pharmacy Automation.

In the early summer of 2007, *PP&P* polled a random, nationwide sampling of health system directors of pharmacy. We asked about their facilities, their automation budgets and expertise, their current automation systems, their satisfaction with those systems, and their plans to implement additional systems in the foreseeable future. Responses were solicited via mail and e-mail, and we received a total of 325 responses, yielding a confidence interval of 5.3% (95% +/- 5.3) based on the total population of directors of pharmacy nationwide.

#### ▼ Respondents using *PP&P* to research automation purchases



Our survey results paint an interesting picture of pharmacy automation today and give a clear indication of where automation will be in five years. Starting with pharmacy automation budget data (on page 7), there is a very positive trend toward

future. Responses were solicited via mail and e-mail, and we received a total of 325 responses, yielding a confidence interval of 5.3% (95% +/- 5.3) based on the total population of directors of pharmacy nationwide.

We intentionally survey a random sampling of directors of pharmacy, not just readers of *Pharmacy Purchasing & Products*, to better capture data that reflects trends across the whole of hospital pharmacy practice. Therefore we were quite pleased to see that 78.2% of survey respondents use *PP&P* to research automation purchases (See Figure 1).

#### ▼ Pharmacy Automation Spending: The Next Three to Five Years

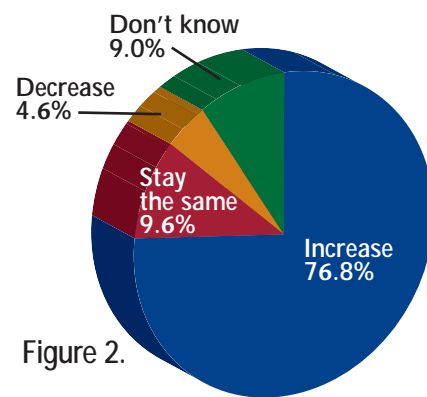


Figure 2.

automated systems to enable 24-hour pharmacy services and computerized medication carts. For smaller hospitals, the reverse was true.

Among the noteworthy trends we are happy to report is widespread implementation of wireless networks – up 25% over last year – setting the stage for roll-outs of bar code medication administration systems and smart pumps. CPOE is definitely a technology to watch over the next few years; growth in implementations was up 5.1% this year to 15.2%. Other medication order technologies on the move are automated physician order management systems and pneumatic tubes.

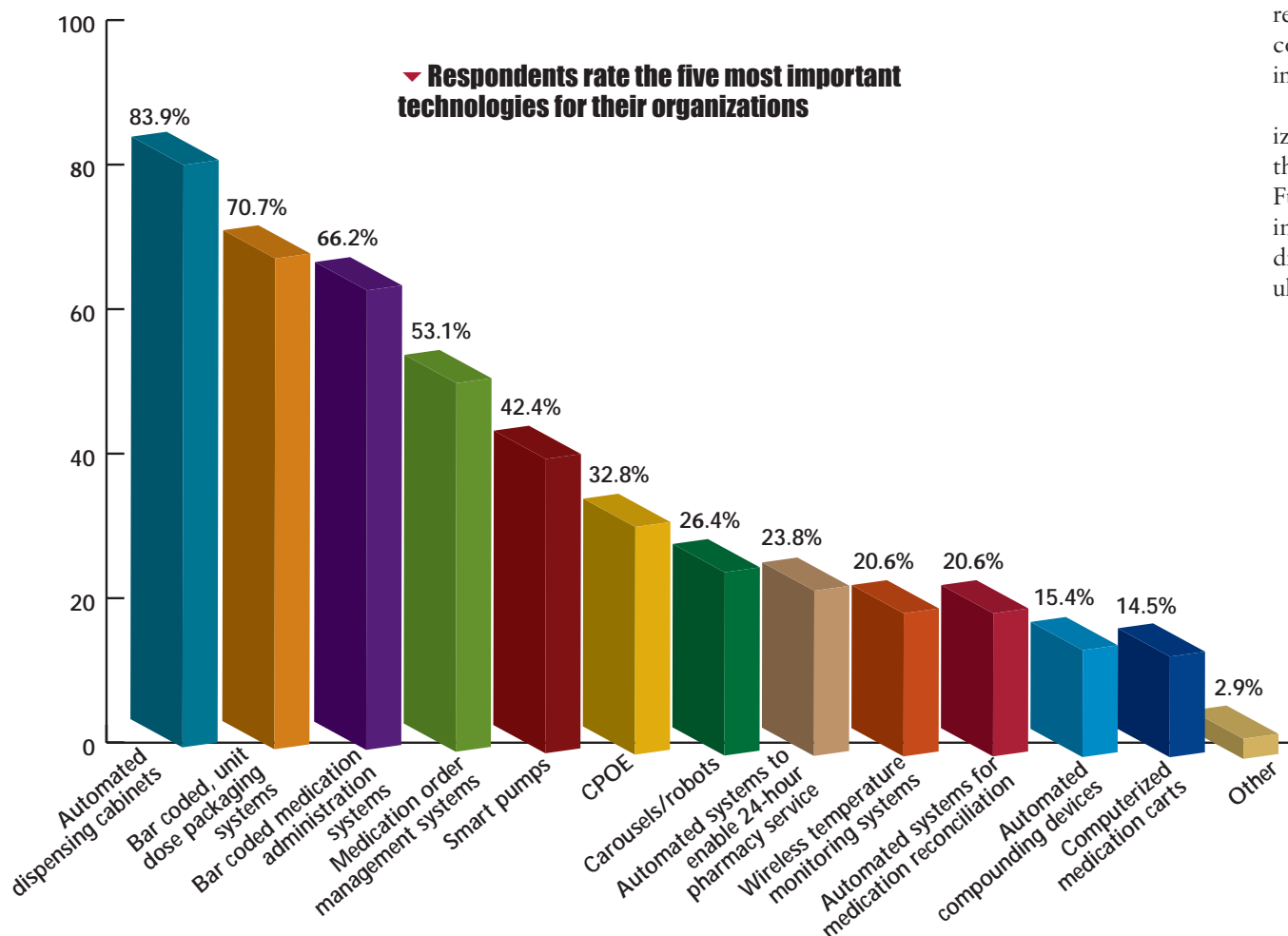
Facilities packaging their medications in bar coded unit dose are now the majority, and we expect that number to continue to grow. Interestingly, many DoPs do not want to continue with their own packaging operations and predict that outsourcing will become more popular. Directors of pharmacy also report on the availability of bar coded, unit dose generic line items on page 19.

Another area in which we are predicting growth is the automation of medication reconciliation, as higher levels of dissatisfaction correlate with a lack of automated solutions implemented.

For medication distribution, while a centralized model is currently the most common, the move toward a hybrid model continues. Furthermore, there has been an overall growth in the number of devices used in medication distribution. The devices, in order of their popularity, are:

1. ADMs
2. Medication carts
3. Pneumatic tubes
4. COWs
5. In-room medication cabinets
6. Computerized medication carts

#### ▼ Respondents rate the five most important technologies for their organizations



growth (see Figure 2).

We asked our respondents to rate the five most important technologies for their institution (see Figure 3). Their responses were very consistent

even when broken out by hospital bed size among the top six technologies. It was later in the list of priorities where size began to matter. For larger hospitals, carousels/robots, automated compounding devices, and wireless temperature monitoring systems outpolled

Big news in bar coded medication administration (BCMA) is the increase in implementation to 21.1% of all facilities, with 301- to 400-bed hospitals most likely to be performing BCMA, followed by 201- to 300-bed hospitals. A vast majority of those without BCMA plan to implement shortly. Furthermore, pharmacy involvement in purchasing and implementation of these systems is trending upward, with the most involved pharmacy departments reporting the highest satisfaction with their systems. The top devices in use at the bedside, in order of their popularity, are:

1. Scanner/reader
2. COW
3. Handheld computer/PDA
4. In-room PC
5. Computerized med cart

A striking result throughout the survey was pharmacies' marked satisfaction with many of their automation solutions. We compared satisfaction rates for each class of automation products and are happy to report that the top four product classes DoPs are most satisfied with are:

1. Wireless Temperature Monitoring Systems
2. Automated Drug Storage and Retrieval Systems
3. Automated Compounding Devices
4. Smart Pumps

Interestingly, each of these product classes is early in the adoption phase (with fewer than 45% of facilities reporting implementation of any class), yet most of these are also reporting very high projected rates of adoption over the next few years. If you are looking to implement any of the systems or devices listed above, you can move ahead with confidence that you can find a very satisfactory option.

The correlation between pharmacy involvement and system satisfaction is strong in every category for which it was measured. So our advice is: Get involved! Sign up for committees, take the lead on evaluating new products, and stay involved throughout the implementation. And of course, keep reading *PP&P* for our helpful product reviews, purchasing checklists, and case studies.

Lots of change is underway, many new technology implementations and switches to automated systems are predicted on the pages that follow. Our final overall prediction is 2008 will be a very busy year in pharmacy automation. As you prioritize your automation spending, use *PP&P* as a resource for research and [www.findit.pppmag.com](http://www.findit.pppmag.com) as a tool to identify your choices, start your product investigations, and reach out to vendors for further information. ■



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