



The challenge of tracking vaccines

By E.M. Gardner | October 21, 2016

October marks the start of flu season – and the time many physicians' offices take stock of the vaccines they have on hand.

It's a critical task, for patient health and for the bottom line. Depending on the type of practice, vaccine management can be one of a medical office's highest costs, after rent and payroll.

Yet in an age of digital tools, many offices are still tracking vaccines with simple spreadsheets and even manual tally sheets – and risking the loss of thousands of dollars a year from expired or spoiled vaccines, or inventory that doesn't match up with needs.

Vaccine costs vary wildly, from under \$10 for a children's flu shot to almost \$200 for a dose of Gardasil, the vaccine against human papillomavirus. A pediatric office might have \$40,000 or \$50,000 tied up in vaccine inventory at any given time, and maybe more during school physical season, says Andrea Seratte, executive vice president of TransactRx, a Coral Gables, Florida company that handles vaccine billing services for physician practices.

And managing that inventory is critical: Too many doses on hand may tie up unnecessary amounts of cash, while too few may result in missed opportunities to bill for a vaccine administration, as patients decamp to Walgreens or CVS.

"A single missing vaccine dose could cost a practice \$180," Seratte says.

But vaccine management is complex. In addition to having the right number of doses in stock, practices need to carefully monitor temperature and expiration dates. Many vaccines lose potency if they become either too cold or too warm. (The recommended temperature range is 36 to 46 degrees Fahrenheit for refrigerated vaccines and -58 to +5 for frozen ones).

The Centers for Disease Control provides an 82-page manual for handling vaccines, which includes signs that practices can put on their vaccine refrigerators and freezers, warning staff not to touch the temperature controls. Patients' medical records need to include not only which vaccines they've received, but the manufacturers and lot numbers in case of a recall.

And practices that vaccinate children must keep track of which doses are covered by private insurance and which are part of the federal Vaccines For Children program, which gives free vaccinations to children whose families can't afford the cost.

Several companies have found a business opportunity in vaccine inventory management, using barcoding, tracking software, and interfaces to electronic health records to help practices control vaccines more tightly, anticipate their needs more accurately, and get partial refunds on unused doses.

Serrate's company, a member of athenahealth's More Disruption Please program, recently introduced VaxCount, a web-based inventory management system that takes care of ordering, receiving, dispensing, and adjusting of dose counts. A barcode scanner captures details for a practice's vaccine inventory, and the program keeps track of stock and generates reorder information, flags products that are about to expire, and communicates with a practice's EHR to transfer vaccination information to the patient's health record.

VaxCare, another More Disruption Please member based in Orlando, Florida, offers VaxHub, a tablet with a barcode scanner that sits next to the office's vaccine refrigerator and receives real-time physician orders. Each time a staffer scans a vaccine, the tablet provides a real-time check of right patient/right dose, sends the vaccine information to a

practice's EHR, and automatically takes the dose out of inventory, says Robbie Riddle, VaxCare's business development director.

Practices can set the system up to reorder automatically, or they can enter orders manually. VaxHub can receive shipping information directly on new products and update inventory levels.

MinibarRx, a More Disruption Please member based in Gaithersburg, Maryland, takes inspiration from the hotel minibar – with its ability to track macadamia nuts and cans of Coke – and applies it to tracking vaccine doses and keeping them at a consistent temperature. The company provides a custom refrigerator, which staff can only access with a code. An automated tracking system can give up-to-date reports by vaccine and by patient.

The system, which integrates with a practice's EHR, has simplified life at Abdow Friendship Pediatrics in Rockville, Maryland, says office manager Holli Sloan.

"Before, I created a spreadsheet, and every week the staff would give me a count of what vaccines were left," Sloan says. "It was time-consuming and stupid."

E.M. Gardner is a technology writer based in Chicago.



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