

**University of Kansas Family Medicine Residency****IMMUNIZATION PROJECT BUILDS QI COMPETENCY & COMMUNITY CONNECTIONS**

In a very personal way, Shane Austin, MD was already an ideal candidate to lead a project focused on increasing immunizations when he entered his first year of residency at the University of Kansas (KU) Family Medicine Residency Program. “My mother is a public health nurse and has been involved for many years with community immunization programs...so I already had strong feelings about this,” he said.

Jonathan Mou, MD, also in his first year of residency in Family Medicine at KU, was very much of the same mind. “I always thought vaccinations were important--it’s one of those basic preventive things you can do to significantly improve an individual’s overall health and life expectancy.” So when Drs. Austin and Mou learned that a faculty member, Kelsie Kelly, MD, had secured a 2015 Senior Immunization Grant through the American Academy of Family Physicians (AAFP) Foundation, their interest was piqued.

The Senior Immunization Awards help Family Medicine residency programs implement projects that increase influenza and pneumococcal vaccination rates in patients age 65 and older. The impetus for Dr. Kelly’s application came by way of a coworker’s tip. “My colleague had worked on previous immunization projects that had been very beneficial,” she recalls, “and I knew the grant

would be good for our residents. They are all required to do a research or quality improvement (QI) project prior to graduation, and we like for them to do it during their first year.”

An Assistant Professor in The University of Kansas Medical Center’s (KUMC’s) Department of Family Medicine, Dr. Kelly took on the additional role of grant project manager and quickly moved to recruit her resident team. “I approached Drs. Austin and Mou about taking the lead on this with me.” It was an easy sell, and also an opportunity that came along at just the right moment. “It seemed like an interesting time to do a project like this,” commented Dr. Mou, “since the new guidelines for pneumonia vaccines had recently been released and we knew many clinicians were unfamiliar with them.”

KUMC’s grant proposal defined the project’s target group to include older adults served at the University of Kansas Family Medicine Clinic (FMC), community members who attend Landon Center on Aging (LCOA) events, and homebound seniors identified by the Geriatrics Division within the KU Department of Family Medicine. Project goals anticipated increasing the number of eligible seniors served at the FMC by 15% for the influenza vaccination, 35% for the Pneumovax (PPSV23) and 50% with the (newer) Pevnar 13 (PVC13) vaccine.

The target set for the LCOA was to vaccinate 100 older adults--whether with influenza, PCV13 or PPSV23 (or a combination)--at two half-day vaccination clinics. Located on the medical center campus, LCOA houses the Geriatric Medicine Clinic and the outpatient clinics of the Department of Neurology for the FMC and also hosts free weekly and monthly classes and brownbag lunches for older adults, which are open to the community. Finally, a total of 20 homebound patients would be vaccinated with the influenza, PCV13 or PPSV23 vaccine during community visits; this number was later adjusted to target 15 individuals.

As lead residents and immunization champions for the project, Drs. Austin and Mou worked closely with the Family Medicine Clinic (FMC) vaccine nurse who helped coordinate logistics of the FMC system and homebound program, ordered vaccines and put together a traveling vaccine kit for the homebound program. All 27 residents and clinical staff participated in vaccine education and refresher training on the proper way to document vaccinations within the electronic medical record (EMR) system. In retrospect, these education sessions proved key to success in boosting the FMC's senior vaccination rates. "It took time to show staff how they should properly document vaccinations under the "Health Maintenance" and "Immunization" tabs and to review MyChart features," said Dr. Austin, "but it was time well spent." MyChart, a web portal offered by the FMC, allows patients access to their medical records and provides convenient self-service functions such as managing appointments, communicating with clinic staff, etc.

According to Dr. Mou, "The friendly competition we set up between the three clinic teams plus our Midwest clinic over vaccination rates really helped reduce the high rate of missed chances here at the clinic." Rivalry was encouraged by monthly patient reports broken down by individual clinic teams. "The reports are known to the entire residency, so we try to outdo each other," Dr. Austin acknowledged. And indeed demand—especially for the influenza vaccine—shot through the roof starting in September 2015 and continued through the end of the year. Lamentably, momentum significantly slowed when the clinic ran out of influenza vaccine in January 2016. As to why this happened, Dr. Austin could only speculate. "Perhaps the estimate we had from the previous year was not a good predictor of our supply needs for this year, especially given this project and our more aggressive administration efforts."

Another well-intended (although admittedly less successful) strategy for boosting senior immunization rates included phone calls from a research assistant to the 207 patients turning 65 years old during the 2015 flu season. The outreach reminded patients that they were due for an influenza vaccine and also needed the PVC13. If the patient was signed up for MyChart, they received an email message as well.

The phone calls were made during the second half of October 2015, with only 35 patients responding. At the end of the conversation none of these patients wanted to be transferred to scheduling to set up an appointment. "This was disappointing, but still useful information," commented Dr. Mou. "It showed us that

reminder phone calls are not a very worthwhile place for us to put resources or effort.”

Drs. Austin and Mou also sent individual MyChart messages to 236 active users who were in need of the PCV13, and data was gathered on how many have since received the vaccine. Effectiveness of the emails remains murky, according to Dr. Kelly. “Through our data collection, it was clear that MyChart users had a higher vaccination rate than non-MyChart users, but we were unable to confirm statistical significance. What we can show as statistically significant is that those who don’t use MyChart are less likely,” she added.

The grant team also developed and printed vaccination reminders targeting MyChart users who had not responded within six weeks of receiving the MyChart email. Available in English, Spanish, Bhutanese and Nepali, the mailers also invited the patient to report previously-administered PCV13 or PPSV23 vaccines; a research assistant tracking the responses then updated the EMR. “We ordered the mailers after a long process of designing and trying to determine how to make them returnable without having private health information visible,” said Dr. Kelly. When the FMC ran out of the influenza vaccine, use of the mailers was scrapped. “The mailers are probably still a good idea,” Dr. Kelly maintains, “and now we have them available to use next year.”

The two half-day vaccination clinics held at the Landon Center on Aging (LCOA) also fell short of expectations. Advertising was completed as planned—at various free lunch seminars, classes and at the LCOA fitness center, with outreach to 1,000 to 1,200 older adults and

another 200 flyers made available at the LCOA activities. But at the end of the day, “Only 23 older adults were vaccinated for influenza and PCV13 when we’d anticipated 100,” said Dr. Kelly. She attributes the low numbers to a cumbersome process requiring seniors to be patients within the KU systems and to schedule appointments so the visits could be billed through insurance. “It turned into a lot of steps that turned away a lot of people.” All three lead physicians agreed that, if money were no object, they would love to see a truly “free” clinic where anyone could just come in or drive through to get vaccinated. This had been provided by the University of Kansas Hospital at some point in the past, to great success.

If one were to ask Drs. Kelly, Austin and Mou what was the most successful, and also the most rewarding outreach component, all would agree that it was the visits they made to homebound individuals in the community. Fifteen adults were identified as needing PCV13 vaccine through the Geriatric Division within the KU Family Medicine Department, and eight ultimately accepted.

“Eye-opening,” was the term Dr. Austin used to describe his visits. “You get a completely different view—you see their surroundings, their day-to-day struggles.” He recalls visiting a frail woman who had been suffering a lot of falls. “All her furniture was bunched up at the door,” he said, “and I could see where making small changes—moving the couches a bit further apart, for example—could help a lot to prevent those falls.” Dr. Kelly recounts finding a patient living in complete isolation and near darkness; the drapes in her room had been pulled tightly closed. “And the four patients we visited at the independent living facility had

down-sized their personal belongings to fit inside a tiny one bedroom apartment--but they all had personal photos in every nook and cranny," she said.

From Dr. Mou's perspective, "It really helped me get out of the 'hospital' mindset. There's a distinct subset of the population who aren't able to make regular appointments to come into the clinic. This demonstrates a significant hole within our system—these individuals won't be able to receive regular healthcare—won't be able to get the help they need." Indeed, expanding the homebound visits is something Dr. Kelly feels could be both constructive and sustainable. "I think our Geriatric Division would be very welcoming if we were to send two residents out to give vaccines. It would be helpful to the program because during a typical home visit, long lists of things are often discussed besides vaccinations. Perhaps the residents could use the month-long geriatric rotation in their third year to do all the preventive measures that are so often pushed to the side when more acute issues take precedence."

In the final analysis, project results were mixed. Although goals were met for increased vaccination rates for homebound and FMC patients (and this despite running out of vaccine), the vaccine clinics offered through the LCOA fell far short of the 100 anticipated. Looking back over the project, all three physicians expressed appreciation for the opportunity, and felt that the experience had been very beneficial.

Dr. Kelly singles out closer ties with the LCOA as an outcome that holds future promise. "This project definitely caused me to re-establish the relationship. I was amazed at how easy it was for the event coordinator to access patients with ListServe and mailers. Thanks to this project, I discovered a really great group of people."

For Dr. Austin, the most valuable take-away simply affirmed the unique connection doctors have with their patients. "As much as we rely on technology, the buck stops with us. The EMR is a great tool for generating reminders, but when it comes to getting the vaccine *into* the person, it's really the one-on-one relationship with the patient that matters most—there's really no comparison. In spite of all the things we tried, it turns out that a good old-fashioned office visit is the way to go."

Dr. Mou sees great value in being able to try various strategies—even those that seemed like stumbling blocks—and expresses hope that the project will provide groundwork for other QI projects within the FMRP. "It would be interesting if this sort of thing could be picked up in the future to strengthen our data collection and the process improvements we've already made. I guess what I'm saying is that I feel that we've put a lot of stepping stones in place leading to future improvements," Dr. Mou adds. "This just seems like a very good start."