

## The Brooklyn Hospital Center Family Medicine Residency

### MULTIPLE STRATEGIES & TEAMWORK LEAD TO UNPARALLELED VACCINATION SUCCESS

Perhaps destiny led Kirishanth Perinpanathan, M.D. to watch *Shark Tank* on television the night “Buzzy” was introduced as the next big benefit to preventive medicine. Buzzy is a natural pain relief device that applies vibration and ice to the skin to block out the body’s pain response. A resident in Family Medicine at The Brooklyn Hospital Center, Dr. Perinpanathan’s interest was immediately piqued. “Buzzy would be great for our patients with needle aversion,” he thought, filing the details away for possible future reference.

A year or so later, Dr. Perinpanathan and fellow resident physician Dr. Nada Al-Hashimi were approached by Sherly Abraham, MD, Program Director for The Brooklyn Hospital Center’s Family Medicine Residency Program about applying for a 2015 Senior Immunization Grant available through the American Academy of Family Physicians (AAFP) Foundation. These awards support the efforts of Family Medicine residency programs to implement projects that increase influenza and pneumococcal vaccination rates in patients age 65 and older.

Neither Dr. Perinpanathan nor Dr. Al-Hashimi had to be convinced of the importance of vaccinations, especially for elderly individuals. Their proposal outlined a multi-pronged approach to achieving the goals set for the project: increasing influenza immunization rates by 24% and pneumococcal immunization rates by 27% for patients 65 and older based on 778 seniors identified through the Family Medicine Center (FMC) Electronic Medical Records (EMR) database. Not surprisingly, the purchase of four

Buzzy devices found its way into the project budget.

Located in Kings County, NY and home to more than 2.5 million people, The Brooklyn Hospital FMC largely serves patients of African American and Hispanic descent. More than 20 percent of the population in Brooklyn is below the poverty level, and approximately 50% are supported by Medicaid. Due to the poor primary care physician-to-population ratio, Kings County is a designated Health Professional Shortage Area.

Many of The Brooklyn Hospital FMC elderly patients were unaware that they needed adult immunizations; others were fearful about the side effects or believed other common vaccination myths. Knowing that the informed participation of all FMC team members would be needed to address these issues, an education component was launched involving all 21 Family Medicine residents and the medical and front desk team members.

Drs. Perinpanathan and Al-Hashimi used weekly “Grand Rounds” as an opportunity to present details to residents on indications, contraindications, treatments, and schedules for influenza and Pneumococcal vaccines. Vaccination guidelines were shared in nurses’ huddles and in-service training sessions, and front desk staff was engaged in discussions regarding the importance and necessity of immunizations. Regular updates on FMC’s progress towards meeting project goals kept staff energized and engaged.

Video-aided training brought residents and nursing staff up-to-speed on the clinical use of Buzzy for patients frightened of needles. Drs. Perinpanathan and Al-Hashimi both praised Buzzy's effectiveness as a pain blocker for shots. Dr. Al-Hashimi explained, "My patients were always so surprised when I'd tell them, 'Okay, we're done!' They'd say, 'Really? I didn't feel a thing!'"

But in an unexpected twist, Buzzy's popularity revealed that although the device did what it did very well, that just wasn't enough to overcome patients' reluctance to accept vaccinations. "We initially thought that needle aversion was the main thing we needed to address," said Dr. Perinpanathan. "But we quickly discovered this just wasn't so--that in fact, fear of needles was often just an excuse used to mask other concerns, such as the fear of getting sick." From this experience, it became clear that training for providers also needed to delve into patient attitudes toward vaccines and help physicians and nursing staff develop skills in patient counseling and persuasion. "We all had to learn how to become salespersons," quipped Dr. Perinpanathan.

Looking back over what had become a quite robust education component, Dr. Perinpanathan noted, "This senior immunization project truly served as the catalyst for redefining our medical education surrounding vaccines." "We used lectures, case presentation, emails, grand rounds, daily huddles—we're always talking about it," added Dr. Al-Hashimi. "It's become a part of our daily work."

The project also spurred more consistent and effective use of features already available in the FMC's EMR system, and both physicians cite the "pre-visit planning" tool as the single most important factor in greatly reducing the number of missed opportunities to vaccinate patients when they visited the clinic. "It's not easy to get a senior to the clinic—transportation is an issue,

and they usually have to depend on someone else to bring them in," said Dr. Al-Hashimi, "so we don't want to miss any opportunity."

"Early in the flu season, our pre-visit care coordinator completed standardized pre-visit encounter forms to outline the required immunizations and input standing orders for upcoming clinic visits," Dr. Perinpanathan explained. Provider staff could then access the EMRs of scheduled patients to determine the status of their immunizations on Health Manager, a built-in reminder system in the FMC's software for immunizations and other preventive care services. "We can also put a note in the EMR for any physician who sees the patient, no matter why the patient is coming in," adds Dr. Al-Hashimi. "Pre-visit planning will let every physician or medical assistant (MA) see the note and know what's missing. That way, the vaccine can be given even if I'm not there. It also pops a red immunization alert into the physician notes," she adds, "and won't allow us to save the note unless the pending flu vaccine has been addressed."

Drs. Perinpanathan and Al-Hashimi confronted the problem of patient awareness head-on. An array of promotional materials, developed in English and Spanish, sought to attract and educate unvaccinated seniors. "Many didn't know there was a vaccine (especially in the case of pneumonia)—didn't know they needed it," confirmed Dr. Al-Hashimi. "The posters piqued patients' curiosity, prompted dialogue with the MA or physician and opened the door for sharing more information about vaccinations."

Posters displayed in the FMC and surrounding areas also promoted three "immunization only" clinics held in September and November 2015 and January 2016. Buzzy and the availability of raffle tickets for \$25 gift cards were offered as "carrots" although ultimately, "the gift cards helped and people were happy for the incentive, but the impact was not as great as we'd hoped," admitted Dr. Perinpanathan. "We

saw our best turnout in September, with participation tapering off from there.”

In an additional (and successful) outreach effort, two MAs made personal phone calls to eligible seniors identified through FMC’s EagleView scheduling and billing database as needing flu and/or pneumonia shots. These contacts provided yet another opportunity to inform patients about the vaccines and encourage them to come in for their vaccinations and/or annual exams. According to Dr. Perinpanathan, “The phone calls were helpful in identifying patients who were resistant to immunizations, and in some cases allowed us to talk them through their aversion.” Calls were reinforced with follow-up letters and informational pamphlets mailed to the patient’s home. FMC staff also reached out to individuals in senior day care centers and nursing homes. “We didn’t have vaccines with us but we did do short presentations, trying to educate and motivate them to come in,” said Dr. Perinpanathan.

By employing multiple strategies and a collaborative process, The Brooklyn Hospital FMC was able to achieve outstanding results in increasing the number of seniors who were immunized against flu and pneumonia. By project’s end, influenza vaccine was given to 62 percent or a total of 568 eligible patients (up from 28 percent the prior year). Pneumococcal vaccine was given to 65 percent or a total of 594 eligible patients (up from 36 percent the prior year). Drs. Perinpanathan and Al-Hashimi both stressed the importance of teamwork in achieving such successful outcomes, citing strong support from Program Director Sherly Abraham and the multi-disciplinary patient care

model employed at The Brooklyn Hospital Center as important factors.

Dr. Perinpanathan singles out a heightened appreciation for the special relationship between doctor and patient as his most important personal take-away, and the realization of just how effective and persuasive providers can be in changing patients’ attitudes towards immunizations. “I now have in the back of my mind, ‘immunizations first’ before other things,” he said. “Giving advice is simply not enough. I need to find out what the barriers are that lead the patient to refuse vaccination. I realize the importance of communicating with my patients about risks and benefits—of really addressing the underlying concerns and barriers. That’s the most important thing.”

Echoing the “vaccination first” philosophy, Dr. Al-Hashimi recalled the heart-breaking experience of seeing elderly patients fall victim to complications from flu and pneumonia, only to wind up very sick and in the hospital. “We know to what extent flu and pneumonia can be a threat, know how debilitating an overlooked vaccine can be. If you follow it all the way to the beginning, the single most important step is a patient missing that pneumonia shot.”

“I feel when I treat older patients, that this could be my father or my mother—they are both elderly, so they have low immunity,” she adds. “If I don’t offer and educate, I would never forgive myself. Now, I will never miss asking any patient I meet, ‘Why don’t you take this vaccine to protect yourself? You might end up in the hospital and become exposed to other terrible illnesses.’ As much as I can, I want to protect them.”