



**Smoky Hill Family Medicine Residency Program \* Salina, KS**

**Program Director:** Robert S Freelove, MD  
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**No. of Residents:** 12  
**Patient Base:** Total 6,614; Children (0-3): 576  
**Reporting Period:** March 2008 – March 2009  
**Number Audited:** 113 (age 19-35 months)

**Overview**

By developing a proactive system that has open lines of communication among all of the health care team and that utilizes available technology in the EMR and patient registry to provide an efficient, positive immunization experience with some extrinsic incentives for children and parents alike, we have made significant improvements in our immunization process. The result of this process improvement has been remarkable improvement in immunization rates for our practice as a whole, and a healthier patient population.

**Programs/Processes Instituted**

***Immunization Nurse Position***

In evaluating our immunization program, the first thing we really identified is that we didn't have a true immunization program with a single leader to oversee the process. Our process was reactive and provider-driven, relying on the physicians and physicians assistants to remember to check immunizations at acute care and well child examinations, identify those in need and relay that information to the nurses. As such, the first thing we did was to create an immunization nurse position and put that person in charge of leading the development of a true immunization program and then maintaining it. Responsibilities include establishing a process to proactively identify children in need of immunizations, working with parents to create catch-up schedules for children who are behind, managing the vaccine inventory, entering patients/immunizations into our electronic immunization registry, and doing most of the day-to-day immunization administration and patient/parent teaching. Although all of our nurses, and now most of our medical assistants, are capable of and often help administer immunizations, this established a single "go-to" person to clarify lines of communication and organize the program. The immunization nurse also maintains contact with the Kansas Department of Health and Environment (KDHE), the Saline County Health Department, and other local clinics to share immunization records, best practices and updates.

### ***Proactive System to Address Immunization Status at Every Visit***

One of the initial and perhaps biggest barriers to improving our immunization rates that we identified is the transient nature of a significant portion of our patient populations. As a community health center, many of our patients are transient, subsequently limiting the opportunities we have to address their children's immunization status. We felt in order to overcome this barrier we had to develop a proactive system that addresses immunization status at every visit a child makes to the clinic, whether for an acute care problem or ongoing wellness and prevention visits.

Our process begins with our immunization nurse pulling the shot records, whether from our old paper charts or from our immunization registry, for every child being seen in our office everyday at least a half-day prior to their visit. She then identifies the children that are in need of immunizations and communicates that need to both the medical assistants and the providers and schedules immunizations for those patients. The needed immunizations are then given on that day at that visit. At that time, she also works with the parents of all children who are behind by more than one series of immunizations to develop a written plan for bringing them up-to-date. Appointments are then made for specific dates according to the plan. A copy of this catch-up schedule and appointments is then given to the parent and a copy is scanned into our electronic medical record (EMR). Our operator then calls all patients with a courtesy reminder the day before the appointment.

### ***Co Casa and Kansas Web IZ***

The above process has made our clinic more proactive about administering immunizations at the time of office visits, but does not identify the children who are seldom seen in our office and who are behind on their immunizations. We were relying on parents to remember to bring their children in at the appropriate times for their immunizations. To address this barrier, our immunization nurse attended training with the Kansas Web IZ immunization registry personnel to learn how to use the Co Casa data reporting system to actively use the information contained in the immunization registry. This has allowed our immunization nurse to export data from our on-line immunization registry and import it into the Co Casa system; allowing her to run multiple helpful reports including one that identifies patients that are behind on their immunizations. This report is generated and reviewed monthly by our immunization nurse and the patients identified as behind are contacted to make appointments to get caught-up. These appointments and charts are flagged within our EMR to ensure follow-up should the children not be brought in for their immunizations.

### ***MOBI Training***

As we made the above changes, we felt it important to ensure that all nursing staff and providers were well versed in the most recent immunization practice knowledge, so nursing staff and providers attended a training offered through the Maximizing Office Based Immunizations (MOBI) program. Education included indications and true contraindications to immunizations, updated schedules, catch up schedules, information on how many immunizations can be administered at one visit, process to streamline immunization administration within the office and strategies for engaging parents to bring their children in for immunizations.

The MOBI program has been an important part of our efforts to improve our immunization rates. Some of the things we learned in that training have been beneficial in helping us to overcome the barrier of getting parents and children to come back for their immunizations. First and foremost, we recognized the need to develop an efficient and systematic approach to make the immunization visit as short as possible and as positive an experience as possible. If the process takes too long, children begin to develop an escalating anxiety about their immunizations. This anxiety increases exponentially if the immunizations are set up in the room in front of the child. As such, we prepare everything prior to the visit outside of the room and go into the room with everything ready to quickly and efficiently administer the immunizations to not allow time for negative anticipation to build. We also use multiple nurses or a

nurse and medical assistant team when giving multiple immunizations to ensure quick administration of the immunizations. Shots are divided equally and the nurses or nurse and medical assistant each administer immunizations at the same time. All children then receive a prize after their immunizations as a reward for coming in and to make the visit less frightening. The prizes are provided to us free of charge through the Immunize to Win a Prize program offered through the KDHE. This program includes an incentive for the parents to get their child immunized. Any family whose child completes their 1 year immunization series by age 2 is entered in to a drawing for \$400 of their utility bills to be paid for them.

### Summary of Vaccination Coverage

VACCINE	U.S. Overall 2004, NIS Compliance %	Baseline Compliance Rate %	Improved Compliance Rate %	Change in Compliance Rate % (Improved-Baseline)
DTP/DTaP/DT (4 doses)	84.8 (+/-0.8)	55.00	89.00	34.00
IPV (3 doses)	91.6 (+/-0.7)	81.00	97.00	16.00
MMR (1 dose)	93.0 (+/-0.6)	75.00	99.00	24.00
Hib ( $\geq$ 3 doses)	93.5 (+/- 0.6)	82.00	90.00	8.00
Hep B ( $\geq$ 3 doses)	92.4 (+/-0.6)	80.00	99.00	19.00
PCV 7	73.2 (+/1.0)	65.00	98.00	33.00
Varicella ( $\geq$ 1 dose)	87.5 (+/-0.7)	73.00	99.00	26.00
<b>VACCINE SERIES</b>				
4 DTP+3 IPV+1 MMR	83.5 (+/-0.9)	66.00	90.00	24.00
4 DTP+3 IPV+1 MMR+3 Hib	82.5 (+/-0.9)	66.00	82.00	16.00
4 DTP+3 IPV+1 MMR+3 Hib+3 Hep B	80.9 (+/-0.9)	64.00	82.00	18.00
4 DTP+3 IPV+1 MMR+3 Hib+3 Hep B+1 Var	76.0 (+/-1.0)	49.00	80	31.00