

# Florida SHOTS™ Time Savings Study RESULTS

## OVERVIEW

Florida SHOTS staff have heard many anecdotal accounts that using the registry saves offices time in all tasks related to immunizations—from determining shots to be given to using the registry to store and print shot records. In order to quantify what actual time savings are, we timed immunization record-keeping-related tasks in participating Florida SHOTS offices.

The time savings video offers a funny but factual overview of this study's key findings. But for those of you looking for more information about how the study was conducted, we've compiled this summary to share these facts with you.

## METHODOLOGY

1. Determined steps required to generate a D.H. 680 (blue form) for offices not on Florida SHOTS and for offices on Florida SHOTS
2. Chose a participating Florida SHOTS office to conduct the manual part of the study (Manual, or traditional, users type their shots into the Web-based Florida SHOTS registry.)
3. Chose a participating Florida SHOTS data upload office to conduct the data upload part of the study (Data uploading offices have a link between their practice management or electronic medical record software and the state registry. This allows them to batch all of the shot information that they've already entered into one of these software programs and send it to Florida SHOTS. In essence, an unlimited quantity of patient data and shot records can be batched and sent at one time. Often, data uploading offices still manually enter shots into the registry if a patient is waiting to leave with a blue form that day.)
4. Set up a day at each of the chosen offices to shadow them and record data as they worked with their shot records (The data uploading office [DU] study was conducted January 6, 2009, at a pediatric practice in Ponte Vedra Beach, Florida, with office manager Kassandra. The traditional partner office [TP] study was conducted January 7, 2009, at a pediatric practice in Jacksonville, Florida, with office manager Linda. We chose actual practices serving real patients so we would have a real-world view of the challenges and processes related to administering and recording immunizations.)
5. Analyzed timed results to determine areas of time—and cost—savings

## KEY FINDINGS

1. Median time to hand write a blue form is 2½ minutes. Double that if a patient needs one for school and daycare. Updates also must be written at 2 months, 4 months, 6 months, 12 months, 15 months, 18 months, 4 years old, and 12 years old. Alternatively, you can use Florida SHOTS to search for, electronically certify, and print a 680 in less than a minute.
2. It takes 2 1/2 minutes to write out a 680 form but only 27 seconds to certify and print an accurate, up-to-date 680 form from Florida SHOTS. This saves an average of 2 minutes for each patient that needs a duplicate or updated 680.
3. Data upload allows you to batch and transmit an unlimited number of patient immunization records to the Florida SHOTS secure database in less than 4 minutes.
4. By using Florida SHOTS for a typical patient visit rather than hand writing a 680, you save on average 10 hours per 1,000 patient immunization visits. (This includes time spent using Florida SHOTS to search for the patient's immunization history, adding missing historical data, adding that day's shots, certifying, and printing records.)
  - 10 RN hours = \$247.20\*
  - 10 LPN hours = \$174.60\*
  - 10 certified nurse assistant hours = \$105.80\*
  - 10 administrative/office manager hours = \$144.40\*

\* Cost savings are calculated based on the median hourly rate by job for the state of Florida, 2/15/09 [www.payscale.com/research/US/State=Florida/Hourly\\_Rate](http://www.payscale.com/research/US/State=Florida/Hourly_Rate) and do not include overhead and benefits costs associated with staff.

## TIME-RELATED ACTIVITIES THAT WERE STUDIED

We included the following immunization-related activities that require staff time in the study:

- Entering a complete record including demographics into Florida SHOTS
- Assessing an immunization record to determine whether the patient is up-to-date and whether the shots have been given according to the proper schedule

- Requesting missing information from other providers (completion of a medical release form to request records from other providers, faxing medical release form to request the information from other providers, calling to follow up on records, entering the immunization component of the patient's record into Florida SHOTS)
- Hand writing the form the first time a 680 is needed
- Rewriting a 680 due to error
- Needing multiple copies of a form (e.g., for school and daycare)
- Hand writing the updated form each time a new shot or series of shots is given
- Entering a complete historical record including required demographics
- Adding a new shot given to an existing Florida SHOTS record
- Electronically certifying the form while in the Florida SHOTS record

## **OBSERVATIONS REGARDING THE INTEGRATION OF FLORIDA SHOTS INTO OFFICE WORKFLOW**

### **Data Uploading Office**

At the beginning of the day, this pediatric practice manually enters shots for those not in Florida SHOTS. The office uses Noteworthy EMR for data upload.

Parents of new patients must come to their first visits with a shot record. If they don't have the record, then they have to come back for any needed shots. Brittney is responsible for getting the records, and she tells parents to call the school for the records if the parents don't have them. However, if the parent can't get the record from the school, Brittney has to fax a medical release form to the previous doctor for the records. It takes 1 to 3 days to receive the information back from the other doctor's office.

This office uses Florida SHOTS to get other providers' records, add their records in (from shots given at their office), and print blue forms. If the child is up-to-date for their shots, they will go ahead and certify the record in Florida SHOTS, because it takes no additional time to certify it.

They try to upload files at least every 2 weeks. Even though they are in the registry daily, data upload still saves them time.

Parents sometimes need multiple copies of shot records. Additionally, if someone makes a mistake hand writing the 680, the whole form has to be rewritten.

### **Traditional Partner Office**

As part of their new patient process, office staff access Florida SHOTS and print the patient's immunization history to be part of the chart (even if the history is empty). Patients get entered into Florida SHOTS on their first visit. The doctor wants to know if they're in the registry and whether they have shots in there. According to Linda, "Dr. Berger trusts Florida SHOTS over any records the patients bring."

Office staff keep the charts to the side until the end of the day and then enter all shots that were given that day. If a patient needs to take an updated shot card with them, the shots are entered while the patient is there so that they don't have to return for the 680.

Staff assess Florida SHOTS and the vaccine administration record in the chart to determine what shots have been given. If a parent says that the child went to the health department for a shot, staff look in the registry for that prior to giving any shots.

If a patient comes in without a record, staff look in Florida SHOTS first. If the patient is not in the system, staff have to contact the other doctor for the shots. The doctor won't give shots without a shot record.

They see an average of 40 to 50 patients per day, and about 50% of them get shots.

Staff refer to the registry all the time to see what shots patients are due for or what's overdue.

At triage, if a patient is behind on his or her shots on the chart and the mom says that the child got shots at the health department, then they print the Florida SHOTS immunization history page. They transfer that information to the office shot record.

About 20% of patients need multiple copies of their 680s, e.g., for school and daycare. Additionally, children need an updated blue form at 2 months, 4 months, 6 months, 12 months, 15 months, 18 months, 4 years old, and 12 years old. They also need a blue form once per year for daycare.

Staff always certify the records when they put them in.

According to Linda, the computer makes you more astute with details because it catches mistakes. For example, if you misspell a name, you won't find it in the system. If you have an incorrect date of birth, the VIS date is incorrect, or the wrong date is on a shot, the computer won't accept it, so it makes staff much more accurate. (For example, it highlighted their patient that day that missed a booster, so when she comes back in, they will give it to her.) Humans often make mistakes that the computer won't allow to be made, so Florida SHOTS is more accurate.

## DATA SUMMARY

Specific times by patient are shared in the following charts.

**(DU) Data Uploading Office:** Test conducted of files transmitted via data upload as well as those entered manually into Florida SHOTS.

### MANUAL UPLOAD FACTOR STUDIED (TIME IN SECONDS)

**(TP) Traditional Partner Office:** Test conducted of files entered manually into Florida SHOTS.

Patient	Record Search	Evaluate Historical Info	Add Historical Info	Add Single Shot	Total from Shots Given That Day	Certify 680	Certify and Print 680 (Total)	Print 680 Only	Print Immunization History for Chart	Total of Manual Entry Tasks to Create 680	Comparison: Hand Write Form
DU1*	15.75										
DU2	13.75		180				34.09			228.44	123.78
DU3	23.56		120.19	10.24	37.82						136.13
				27.58							
TP1	27.65				30.6			29.06		58.25	157.16
TP2	30.1		63.22						12.69		
TP3	28.13		44.63		233.52	23	27.18	4.18		333.46	139.22
TP4	27.12			59.56	153.13	7.82	18.23	10.41		198.48	143.75
				32.17							
				28.81							
				32.59							
TP5	39.81								14.5		
TP6	21.97		55.22	31.87		22.33	34.97	12.64		112.16	163.09
TP7	33.9	19.22	101.83			10.18	26.1	15.92		161.88	157.53
TP8	25.47					7.48	26.81	19.33		52.28	184.15
TP9	22.75			28.28			32.63			55.38	149.97
TP10	18.41	32.5	22.91	24.68		8.1	22.69	14.59		64.01	164.44
TP11	20.31	46.43		43.6	82.21	15.32	30.59	15.27		133.11	203.12
				21.3							
				17.31							
Median	24.52	32.50	63.22	28.55	82.21	10.18	27.18	14.93	13.60	122.64	157.16

\* Only patient found without a record on Florida SHOTS. This patient was 18 years old. All other patients were found with a record.

**(DU) Data Uploading Office:** Test conducted of files transmitted via data upload as well as those entered manually into Florida SHOTS.

### DATA UPLOAD FILES TRANSMITTED 1/6/09

Seconds to Log In, Create Batch, and Transmit Records	Dates Covered	Number of Clients in Upload	Number of Shot Records in Upload	Number of Shot Records Added	New Clients Added	Existing Clients Found
230.09	11/29/08 to 1/5/09	207	391	370	21	185

Cumulatively, this data uploading office has sent 116,255 shot records covering 27,128 patients. Of those records sent, 45% resulted in new shots records added to the registry and 8,497 new patients added to the registry.