

# Utah Health Status Update: Impact of an Immunization Registry in a Private Pediatric Clinic

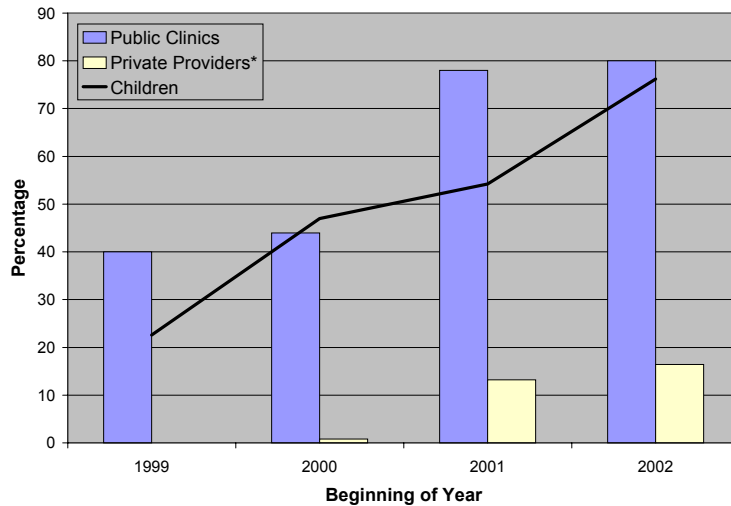
### USIIS Background

The Utah statewide Immunization Information System (USIIS) is a computerized immunization registry designed to increase childhood immunization rates in Utah. It is a tool to consolidate children's immunization records from all providers. USIIS provides on-line access and reliable immunization histories for any child, (new or current patients), even if immunizations were received at a public health clinic. This Health Status Update reviews the impact of USIIS in a private pediatrics clinic.

USIIS has existed for a decade, but for it to provide accurate information on immunization status, a sufficient number of providers needed to participate. Enrollment of providers has now reached a level high enough that it can be of practical use to private immunization providers.

### Registry Saturation & Enrollment

Figure 1. Percentage of Utah children <6 years of age with >2 vaccinations recorded in USIIS registry and percentages of public clinics and private providers enrolled in USIIS, 1999-2002.



\*Denominator for private providers is an estimate of private immunization providers developed by UDOH.

The majority of the state children have records in USIIS, but public clinics still predominate among providers enrolled in the registry.

### Purpose of This Study

To help evaluate how the USIIS registry practically affects a pediatric practice, time studies of clinic staff and patient activities were conducted before and after USIIS was installed in a private clinic. Cottonwood Pediatrics, a clinic in Murray, Utah, was selected as the test site. Results of the time studies were then evaluated using a computer simulation, which measured:

- The impact of the registry on immunization services provided to patients.
- Length of patient stay in the clinic.
- Lengths of time doctors and nurses spent with patients.

### Results of the Study

Results from Simulation. Table 1 contains measured data and the simulation data generated from the Cottonwood Pediatric clinic. The table includes 40 measurements taken before and after the registry was in place and simulated data for 1,000 observations on 50 randomly different days from the computer model.

### Results of Time Studies

Table 1. Results of time studies of immunization services.

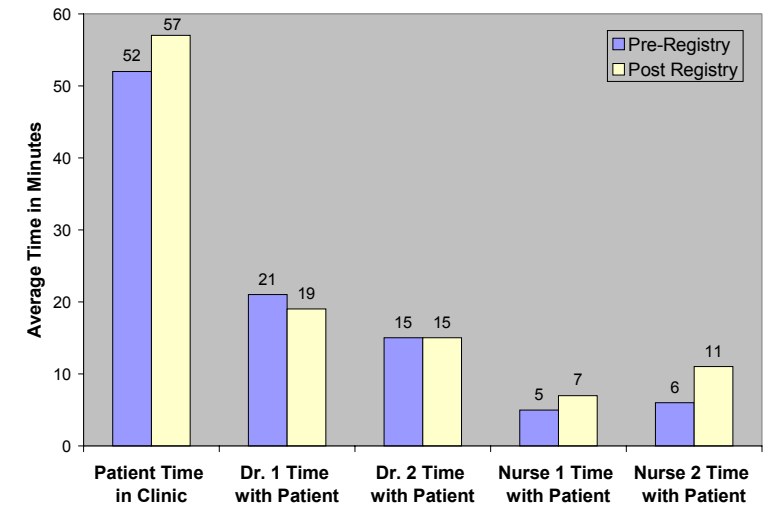
	Measured Data n . 40		Simulation Data (50 days) n . 1000	
	Pre-Registry	Post Registry	Pre-Registry	Post Registry
Patient Time in Clinic	48	54	52	57
Dr 1 Time With Patient	19	19	21	19
Dr 2 Time With Patient	17	14	15	15
Nurse 1 Time With Patient	5	7	5	7
Nurse 2 Time With Patient	6	10	6	11

- When measured and simulated data were evaluated, the time doctors and nurses spent with patients did not change significantly between measurements taken before the registry was

introduced and those after it was in place. The time patients spent in the clinic also did not change (Table 1 and Figure 2).

### Results of Simulation

Figure 2. Results of simulation of 50 days of clinic immunization services before and after introduction of the registry.



### CASA Assessment

An assessment of clinic immunization rates (4 DTP, 3 Polio, 1 MMR) at 24 months of age conducted using CDC's Clinic Assessment Software Application (CASA) method, found minimal change in the clinic's already high immunization rates (data not shown).

### Summary

USIIS is a statewide registry designed to assure that all patients and providers have complete and accurate information on each child's immunization status. It's use has increased to the point where all providers can benefit from using it. This study found that introducing USIIS into a practice resulted in minimal cost to

the clinic and didn't impair clinic patient flow or increase the time burden for doctors, nurses, or patients.

Other findings from this study that will be used to improve the registry and make it more useful and acceptable to providers include:

- Provide more training to individuals who administer USIIS in clinics.
- Provide assistance to clinic users in adjusting clinic immunization information management to make best use of USIIS.
- Assure birth records are entered into USIIS before a newborn's two-month well-child care visit.
- Develop batch search functioning for clinic medical records staff.

For more information about participating on USIIS, or for a software demonstration, please contact Nancy Pare at (801) 538-9223.

This report was adapted from the original project evaluation report by Thomas Kontuly, PhD, Michael Washington, PhD, Wu Xu, PhD, Christine Perfili, MBA, William Cosgrove, MD and Julia Brogli.

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