

Utah Health Status Update: The Utah All Payer Database (APD)

July 2009

Utah Department of Health

Healthcare reform advocates on both the state and national levels are calling for increased transparency in our healthcare system. Yet, the healthcare system, as it currently exists, does not lend itself to transparency or the efficient and thorough analysis of data across disparate datasets and payers.

Sudden and dramatic reform of the healthcare system as it presently exists is probably not a realistic immediate goal. Rather, deliberate and well engineered steps toward reform are probably indicated to move the process forward in a realistic manner. The Utah All Payer Database is a very big step forward in this process.

Numerous states including Utah have been collecting inpatient hospital discharge data for several years now. While data derived from inpatient hospital discharge records remains valuable, an increasing number of states have initiated the process of compiling medical and pharmacy claims data across healthcare insurance providers (payers).

The databases and analytic processes involved in evaluating and reporting these data are commonly referred to as All Payer Databases or APDs.

On July 8, 2008 the Utah Health Data Committee (HDC) unanimously approved a health data plan outlining the creation of an APD. Funding for the APD was provided via House Bill 133, Health Care Reform (2008). The Utah Department of Health (UDOH), Office of Health Care Statistics (OHCS) is currently responsible for building and managing the APD. As previously

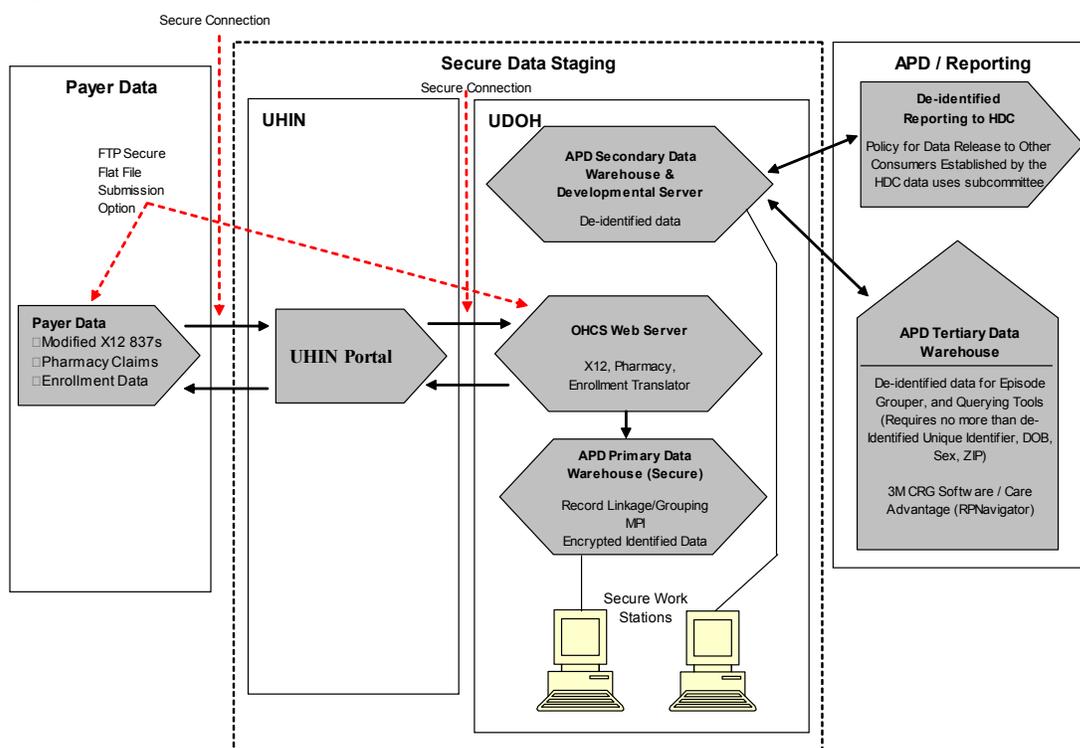
mentioned, other states have APDs; however, Utah is poised to become the first in the country to analyze episodes of care (EOC) derived from statewide health insurance claims. An EOC is defined as a complete course of care from the initial diagnosis through treatment and follow-up. For example, in the context of maternity care, the EOC would begin with the first prenatal visit and include all other visits, pharmacy claims, lab tests, special procedures, delivery of the baby, and postpartum care of the mother.

The Utah APD will represent a rich and deep source of healthcare data capable of answering questions such as:

- What happened?
- When and where did it happen?
- How much did it cost?
- Who paid for what (including healthcare consumer out of pocket costs)?
- What costs were not covered?
- What other influences impact outcome (disease burden, co morbidities, demographics, environmental issues, access to specialists, etc.)?
- What impact does preventive care, or lack there of, have on outcome?
- Were relevant standards of care met?

Utah All Payer Database

Figure 1. Utah All Payer Database (APD) data flowchart



The APD will assist in the comparison of healthcare cost efficiencies and effectiveness statewide from both a cross sectional as well as from a more longitudinally-based, disease progression perspective. This will be done through the application of analytic software incorporating sophisticated risk adjustment and disease progression measurement capabilities; so that the costs associated with treating a specific condition in a sicker population will not be compared to treating the same condition in a less medically compromised population. This will reduce or eliminate disparity in cost analysis and allow more accurate comparisons.

The APD will be populated with healthcare claims data from insurance providers (including Medicaid) within the state. These data shall consist of modified medical and pharmacy claims as well as healthcare enrollment data. An initial combined payer dataset, estimated at between 100–150 million medical and pharmacy claim records for 2007, 2008, and first quarter, 2009, will be submitted to the OHCS in mid to late 2009. Thereafter, the APD will receive continuous payer claim submissions, estimated at 50–65 million claims annually through the secure Utah Health Information Network (UHIN), which uses industry standard and uniform transaction formats.

Milestones and Timeline

To date, the following milestones for bringing the APD on line in Utah have been met:

- The APD flowchart organizational model completed
- All analytic software selected and integrated into the Utah APD architecture
- All vendors supporting the APD selected and under contract
- APD servers purchased and operational
- Data security plan drafted and nearing finalization
- SQL database written which will serve as the backbone for the primary data warehouse
- Submission specifications written and distributed to payers
- Data submission procedures written and distributed to payers
- Administrative Rule authored and set to be released for public comment
- APD data use/release subcommittee formed and prepared to evaluate data requests

- UHIN secure electronic data exchange tested and ready for payer-APD data transfer

The following milestones are expected to be met in accordance with the following timeline:

- Data linking and grouping software shall be online June 2009
- Test files will be submitted by payers July–August 2009
- Initial data submission shall consist of two years claims (medical and pharmacy) and enrollment data (2007, 2008, 1st quarter 2009) submitted August–September 2009
- November–December initial APD reporting to commence

The Utah APD is the first dataset of its kind requiring precise longitudinal linking of statewide healthcare data across payers. The OHCS recognizes the sensitivity associated with collecting healthcare and enrollment data on this magnitude and has taken extraordinary steps to ensure privacy is guaranteed.

The precautions and procedures established by the OHCS to protect both individual and intellectual privacy will serve as a model for other initiatives where combining large and disparate healthcare data is a necessity.

Requests for data will pass through a HDC data use subcommittee. This subcommittee will ensure healthcare consumer privacy and intellectual property are not inadvertently compromised. That is, this committee will ensure any data released cannot be reverse engineered so as to determine patient identity or details about contractual agreements between payers and providers. The data use subcommittee is comprised of HDC appointed individuals from the payer, professional, research, and consumer communities.

The Utah APD is expected to be a valuable tool which when completed will provide more complete and accurate answers to questions about healthcare costs and quality as well as other critical public health issues.

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For additional information about this topic, contact Mark Gaskill, MFT, APD Program Manager, Office of Health Care Statistics, Utah Department of Health, Box 144004, Salt Lake City, UT 84114-4004, (801) 538-6482, FAX (801) 538-9916, email: MGaskill@utah.gov, or the Office of Public Health Assessment, Utah Department of Health, Box 142101, Salt Lake City, UT 84114-2101, (801) 538-6108, FAX (801) 538-9346, email: chdata@utah.gov

Breaking News, June 2009

Repeat Births Among Adolescents

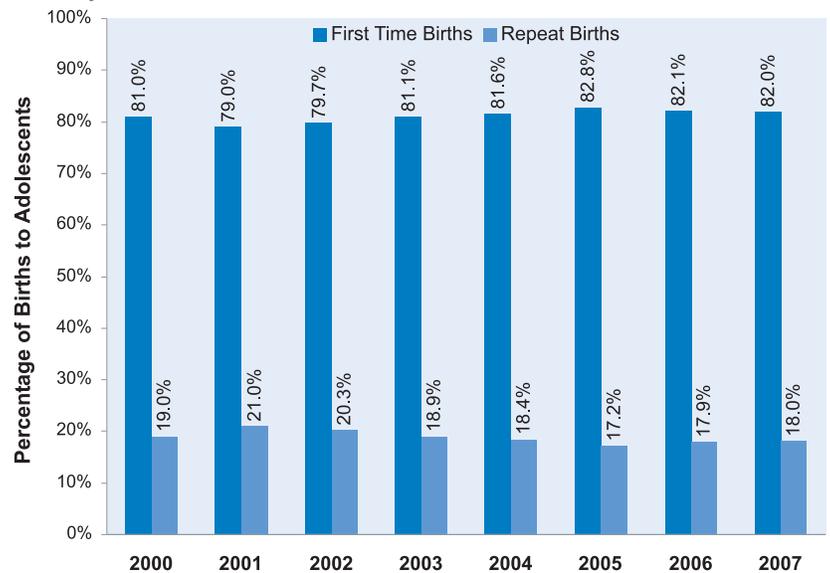
This brief article provides information on trends in repeat teen childbearing. Repeat teen childbearing or births refers to births to teens who already have a child. Research has shown that teen mothers tend to be from disadvantaged backgrounds, and they and their children face greater adverse educational, economic, health, and developmental outcomes compared to women who delay childbearing beyond their teen years.¹ Repeat birth compounds problems resulting from a first teen birth. Nationally, based on preliminary data, adolescents aged 15–19 had 445,045 births in 2007.² This represents 10.3% of all total births in U.S. The majority of births (80.2%) to teens were first births. However, 19.8% were repeat births (second, third, or higher order births). In other words, one-fifth of U.S. teen births were repeat births. For Utah, in 2007, 6.8% of all births (55,063) were attributed to teen births. Of that 82.0% were first births and remaining 18.0% were repeat births. Even though the percent of births attributed to adolescents aged 15–19 had declined since 2000 (8.8% to 6.8%), the proportion of repeat births among this group remained unchanged (see Figure). Factors such as delaying first sexual intercourse, using contraceptives, and staying in school have been shown to decrease chances of having another birth.¹

1. Child Trends (2007). *Repeat Teen Childbearing: Differences Across States and by Race and Ethnicity*. Research Brief, Publication #2007-23. www.childtrends.org

2. NVSS (2009). *Births: Preliminary Data for 2007*.

National Vital Statistics Reports, Volume 57, Number 12, NCHS http://www.cdc.gov/nchs/data/nvsr/nvsr57/nvsr57_12.pdf

Percentage of Births to Adolescents (15–19) That Were First Time vs. Repeat Births, Utah, 2000–2007



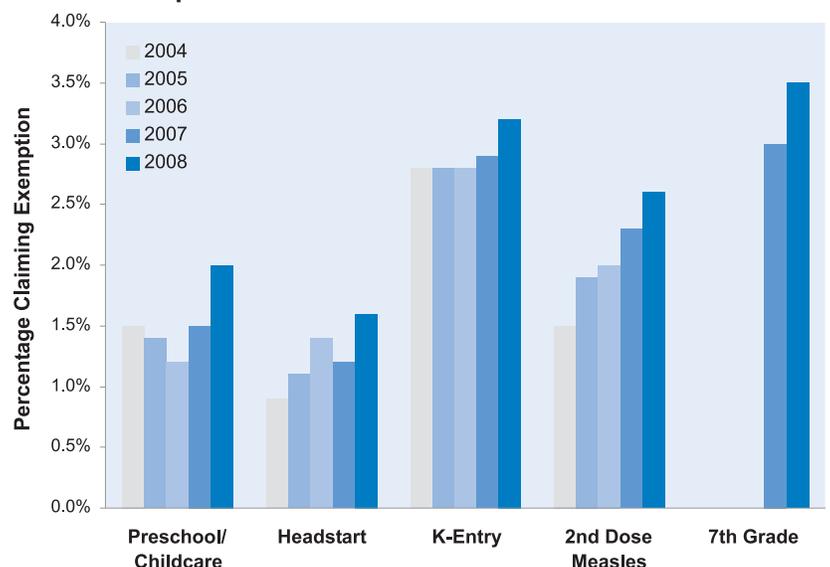
Source: Birth Certificate Database, Office of Vital Records and Statistics, Utah Department of Health

Community Health Indicators Spotlight, June 2009

Exemptions From School Immunization Requirements

Children entering childcare/preschool, Headstart, and kindergarten through 12th grade are required to meet specific immunization requirements outlined in the Utah Immunization Rule for Students (R396-100). Parents can visit a local health department to claim an exemption from this rule for personal, medical, or religious reasons. In spite of this liberal exemption policy, coverage levels for this rule remain high. Coverage ranges from 86% for Headstart to as high as 97% for 2nd Dose Measles, while exemptions range from 1.6% for Headstart to 2.5% for 7th grade entry. Among the three reasons for exemptions, parents are most likely to claim an exemption for personal reasons (range from 78% to 94%). Many of these personal exemptions may be classified as “convenience” exemptions, meaning that it is more convenient for a parent to claim an exemption than to have their child immunized. With the exception of Headstart, religious exemptions accounted for fewer than 2% of all exemptions claimed in each grade category. Exemption levels have increased slightly since 2004 in each grade category (see Figure). Data for 7th grade entry has only been required since 2007. More investigation is necessary to determine why exemption levels have increased.

School Exemptions: 5 Year Trend



Monthly Health Indicators Report

(Data Through May 2009)

Monthly Report of Notifiable Diseases, May 2009	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis (Campylobacter)	33	20	93	98	1.0
Enterotoxigenic Escherichia coli (E. coli)	7	4	15	16	1.0
Hepatitis A (infectious hepatitis)	0	1	3	10	0.3
Hepatitis B (serum hepatitis)	0	2	4	11	0.4
Influenza†	Weekly updates at http://health.utah.gov/epi/diseases/flu				
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	0	1	1	5	0.2
Norovirus	1	1	6	9	0.7
Pertussis (Whooping Cough)	5	35	88	180	0.5
Salmonellosis (Salmonella)	25	41	102	115	0.9
Shigellosis (Shigella)	2	3	12	14	0.9
Varicella (Chickenpox)	50	76	315	428	0.7
Viral Meningitis	0	7	10	25	0.4

Notifiable Diseases Reported Quarterly, 1st Qtr 2009	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	22	21	22	21	1.1
AIDS	13	10	13	10	1.3
Chlamydia	1,654	1,267	1,654	1,267	1.3
Gonorrhea	82	179	82	179	0.5
Tuberculosis	9	9	9	9	1.0

Program Enrollment for the Month of May 2009	Current Month	Previous Month	% Change ^s From Previous Month	1 Year Ago	% Change ^s From 1 Year Ago
Medicaid	193,426	191,114	+1.2%	163,838	+18.1%
PCN (Primary Care Network)	22,453	18,556	+21.0%	18,898	+18.8%
CHIP (Children's Health Ins. Plan)	39,960	38,687	+3.3%	34,445	+16.0%

Medicaid Expenditures (in Millions) for the Month of May 2009	Current Month	Expected/Budgeted for Month [§]	Fiscal YTD	Budgeted Fiscal YTD [§]	Variance - over (under) budget [§]
Capitated Mental Health	\$ 12.8	N/A	\$ 97.4	N/A	N/A
Inpatient Hospital	\$ 24.9	N/A	\$ 203.9	N/A	N/A
Outpatient Hospital	\$ 11.5	N/A	\$ 89.2	N/A	N/A
Long Term Care	\$ 16.7	N/A	\$ 164.9	N/A	N/A
Pharmacy	\$ 13.2	N/A	\$ 116.3	N/A	N/A
Physician/Osteo Services [‡]	\$ 10.4	N/A	\$ 73.2	N/A	N/A
TOTAL HCF MEDICAID	\$ 194.6	N/A	\$ 1,451.0	N/A	N/A

Health Care System Measures	Number of Events	Rate per 100 Population	% Change ^s From Previous Year	Total Charges in Millions	% Change ^s From Previous Year
Overall Hospitalizations (2007)	278,952	9.7%	-0.7%	\$ 4,265.9	+10.1%
Non-maternity Hospitalizations (2007)	164,659	5.6%	-0.9%	\$ 3,554.6	+9.9%
Emergency Department Encounters (2007)	682,122	24.0%	-1.3%	\$ 781.0	+17.1%
Outpatient Surgery (2007)	296,596	10.5%	-5.7%	\$ 1,109.0	+8.6%

Annual Community Health Measures	Current Data Year	Population at Risk	Number Affected	Percent/Rate	% Change ^s From Previous Year
Overweight and Obesity (Adults 18+)	2008	1,924,274	1,119,500	58.2%	+0.5%
Cigarette Smoking (Adults 18+)	2008	1,924,274	179,200	9.3%	-20.4%
Influenza Immunization (Adults 65+)	2008	237,275	173,900	73.3%	-3.8%
Health Insurance Coverage (Uninsured)	2008	2,781,954	298,200	10.7%	+0.7%
Motor Vehicle Crash Injury Deaths	2007	2,699,554	269	10.0 / 100,000	-12.0%
Suicide Deaths	2007	2,699,554	368	13.6 / 100,000	-0.1%
Diabetes Prevalence	2008	2,781,954	129,500	4.7%	-1.0%
Coronary Heart Disease Deaths	2007	2,699,554	1,531	56.7 / 100,000	-5.1%
All Cancer Deaths	2007	2,699,554	2,547	94.3 / 100,000	-5.1%
Births to Adolescents (Ages 15-17)	2007	61,060	1,133	18.6 / 1,000	+13.5%
Early Prenatal Care	2007	55,063	43,728	79.4%	+0.5%
Infant Mortality	2007	55,063	284	5.2 / 1,000	+2.5%
Childhood Immunization (4:3:1:3:3:1)	2007	51,449	40,200	78.1%	+14.7%

† Influenza activity is widespread in Utah. Influenza-like illness activity is above baseline statewide. As of June 17, 2009, 250 seasonal influenza-associated hospitalizations and 130 novel influenza-associated hospitalizations have been reported to the UDOH. More information can be found at <http://health.utah.gov/epi/diseases/flu>.

§ % Change could be due to random variation.

¶ The April budget amounts and budgeted fiscal YTD numbers are still under review due to changes involved with the 2nd Special Session budget changes and the FY 2009 incentive unemployment assumptions.

‡ Medicaid payments reported under Physician/Osteo Services do not include enhanced physician payments.

Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile virus has ended until the 2009 season.