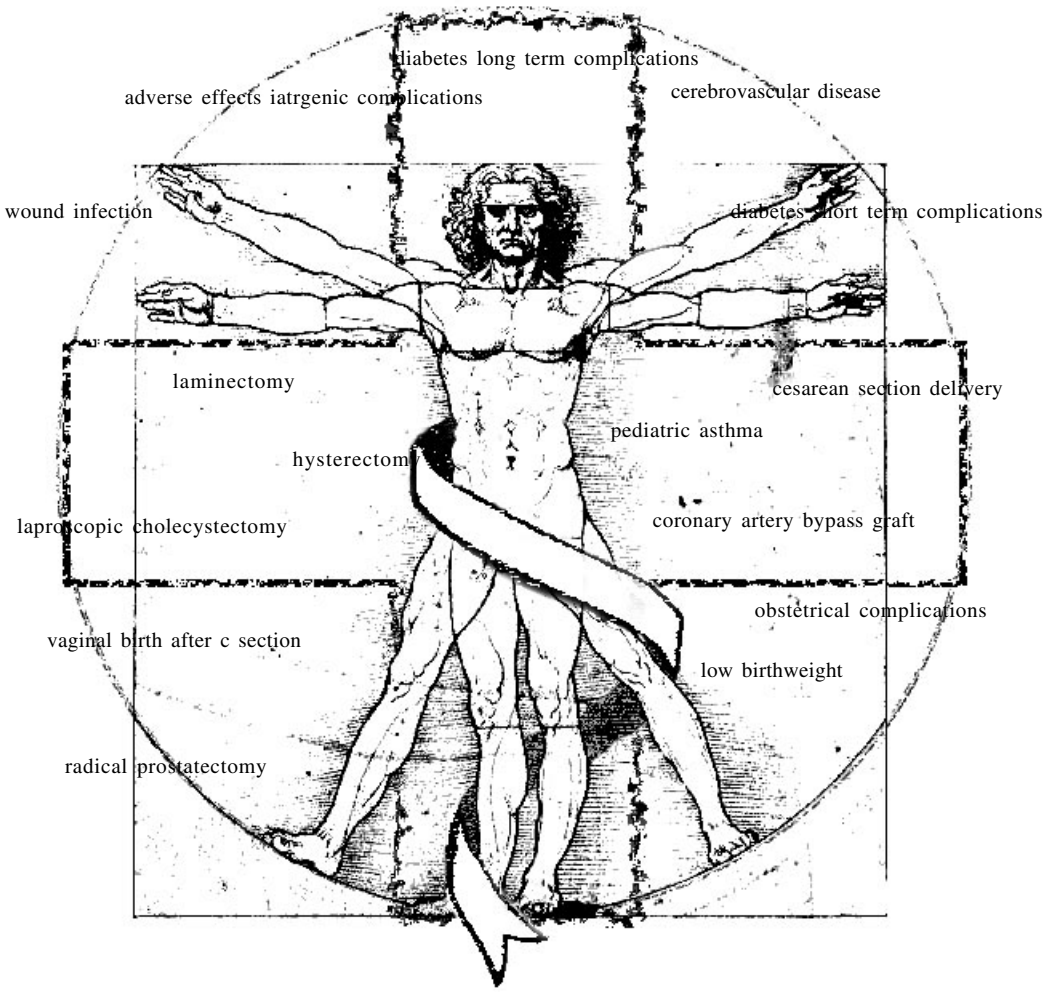
Selected Quality Indicators of Hospital Patient Care in Utah



QI-2 1998

HCUP-3 Quality Indicators for Utah Hospitals

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We are grateful to the Agency for Health Care Research and Policy for developing and making available these standardized quality indicators.

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Appendix 33

Measuring and improving the quality of care provided by Utah's hospitals is not a simple matter. It takes many individuals and organizations working together to understand the science of measurement and to design interventions that improve quality. Quality improvement occurs slowly, over time, and everyone from health professionals, to government, to the patient has a role.

- **Hospitals** need to know how they compare to other hospitals for specific measures of quality--a necessary first step to evaluating internal processes of care and seeking ways to improve these processes.

- **Physicians** make clinical decisions everyday to improve the health of individual patients they treat. But what is the cumulative effect of these individual decisions on the health of Utahns? Unless measured and compared, the physician may not know how his clinical practice is the same or different from other doctors treating similar conditions and patients.

- **Purchasers and consumers** of health care may not know that hospitals are not all performing exactly the same in all measures of quality. Simply understanding that differences do exist, that these differences are caused by many different factors, including their own overall health, and that decisions about which treatment will work best for them, requires more information than they may have had in the past.

- **Government** plays a role by leveling the playing field between competing hospitals, collecting uniform data, validating that the data are not biased, and making the data available to all of the appropriate parties.

All users need to know that no data are perfect. While attempts are made to control for differences between patients, these attempts are not perfect and not all differences can be explained. The reports provide just one piece of information and should not be used exclusively in the decision making process.

About this Report....

The purpose of this report is to provide updated measures of indicators of quality of care in Utah's hospitals in 1998. These quality indicators were developed by the Agency for Health Care Research and Quality (formerly the Agency for Health Care Policy and Research (AHCPR)) through the Health-care Cost and Utilization Project (HCUP-3).

This report includes the following information for each quality indicator (QI):

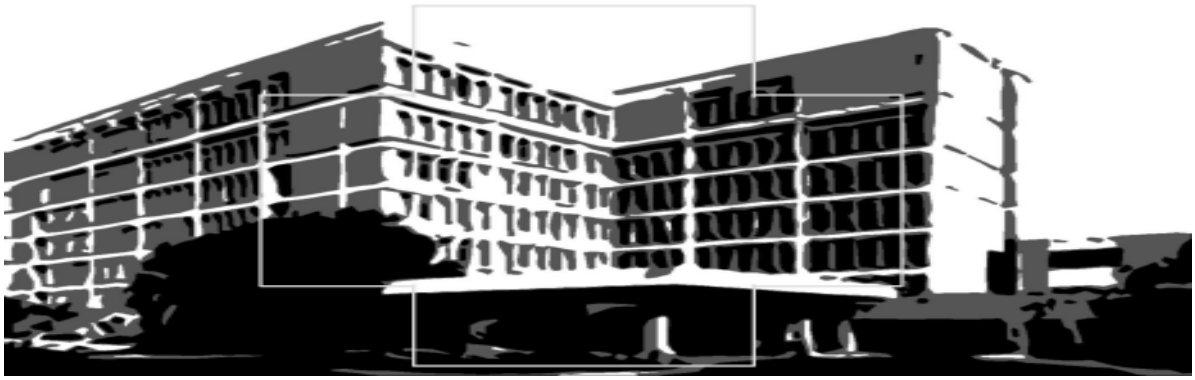
1. A summary of the measurement method. This describes the population at risk (the denominator of the calculated rate) and the outcome or measure of interest (the numerator).

2. Annual trend of QIs (Quality Indicators) for Utah from 1992 to 1998.

3. Quality indicators by hospital.

4. Quality indicators for 1996 according to characteristics of hospital (case-mix, size, location, ownership) and patient (age, sex, residence).

The Utah quality indicators were calculated from the Utah Hospital Discharge Database, 1992-1998. "Discharge data" means the consolidation of complete billing, medical, and personal information describing a patient, the services received, and charges billed for each inpatient hospital stay.



Chapter 33a, Title 26, Utah Code Annotated established the Utah Health Data Committee. The committee is composed of twelve members appointed by the Governor, representing various health care stakeholders, including two slots added by the legislature in 1995 for public health representatives. In accordance with the act, the committee's purpose is *"to direct a statewide effort to collect, analyze, and distribute health care data to facilitate the promotion and accessibility of quality and cost-effective health care and also to facilitate interaction among those with concern for health care issues"*.

The committee worked with numerous organizations and individuals to develop the Utah Health Data Plan, which defines the implementation of a statewide health data reporting system. The committee identified inpatient hospital discharge data as its priority.

Administrative Rule R428 became effective in December, 1991, and mandates all Utah licensed hospitals, both general acute care and specialty, to report information on inpatient discharges. Fifty-five Utah hospitals have submitted data since 1992, including nine psychiatric facilities, seven specialty hospitals, and the Veterans Administration Medical Center. Shriners Hospital, a charity hospital, is exempt from reporting requirements. All hospitals report "discharge data" for each inpatient served. "Discharge data" means the consolidation of complete billing, medical, and personal information describing a patient, the services received, and charges billed for each inpatient hospital stay.

Discharge data records are being submitted to the office of Health Data Analysis quarterly. The data elements are based on discharges occurring in a calendar quarter. If a patient has a bill generated during a quarter, but has not yet been discharged by the end of the quarter, data for that stay is not included in the quarter's data.

About Quality Indicators...

The HCUP Quality Indicators (QIs) were developed specifically to meet the short-term needs for information on health care quality, using standardized, user-friendly methods and existing sources of data. Records of inpatient hospital stays are the most readily available sources of health care data. The QI methods were designed to capitalize on the availability of such data to produce information about: ***outcomes*** of inpatient care, especially surgical procedures; ***utilization*** of inpatient services, which reflect physical practice patterns and physician-patient decision-making; and ***access*** to care in the community, through ambulatory care-sensitive conditions. The QI measures presented in this report were selected based on (1) the volume of the population at risk and the associated outcome in 1996, and (2) the relative magnitude of Utah's rate compared to other states.

- Obstetrical Complications
- Wound Infection
- Adverse Effects/Iatrogenic Complications
- Cesarean Section Delivery
- Vaginal Birth after C-Section
- Laminectomy and/or Spinal Fusion
- Transurethral Prostatectomy
- Radical Prostatectomy
- Laparoscopic Cholecystectomy
- Coronary Artery Bypass Graft
- Low Birthweight
- Pediatric Asthma
- Diabetes Long-term Complications

Issues to keep in mind:

The information in this report was generated using identical methods applied to the Utah Hospital Discharge Data and HCUP-3 uniform data from the twelve states that participated in HCUP.

Most QIs are expressed as simple rates, where the numerators and denominators are restricted to reduce heterogeneity.

Other QIs - complications among surgical patients - are expressed as standardized rates, because heterogeneous populations were unavoidable. Standardization accounts for the heterogeneity of case-mix so that the variation among standardized rates reflects differences in outcomes, not differences in case-mix.

Year 2000 Targets are noted as external benchmarks when they were available and defined consistently with the QIs.

Finally, keep in mind:

There may be multiple explanations for variations observed. For example, variations may result from factors such as differential coding practices. An investigation of sources of variation for a particular QI should begin by exploring potential differences in coding.

The HCUP-3 QIs were designed to rely on data produced in the normal course of delivery of health care services. Although data on inpatient hospital services are used, the evaluation of quality is not directed solely at inpatient care provided by the hospital. Instead, the hospitals' inpatient data provide a window through which hospital care, physical practice patterns, physical-patient decision making, and availability of care in the community can be observed. Information derived from readily available data can then be used to guide, even target, further investigations.

Selected Quality Indicators

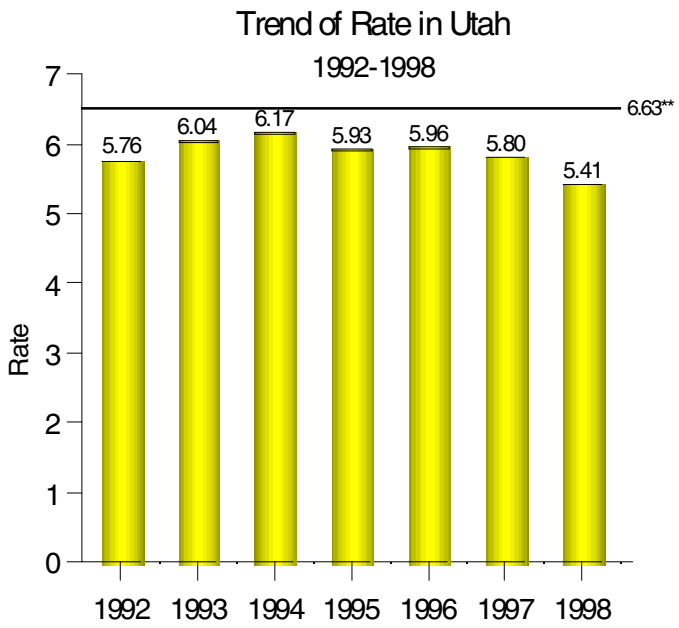
Obstetrical Complications

Obstetrical complications may contribute to maternal, fetal, and neonatal morbidity and mortality. Such complications are largely preventable through routine prenatal and appropriate obstetrical care. Year 2000 target: reduce obstetrical complications to no more than 15 complications per 100 deliveries. In 1998, almost all Utah hospitals already reported the obstetrical complication rate lower than the Healthy People 2000 target.

Outcome:
Diagnosis or procedure of complication of obstetrical care (fourth degree laceration; hemorrhage or transfusions; pulmonary, cardiac, central nervous system, or anesthesia complications; obstetric shock; renal failure; puerperal infection; air embolism; disruption of cesarean or perineal wound; breast abcess; other obstetric complications)

Population at risk:
All deliveries (DRGs 370-375)

Rate:
Number of complications per 100 deliveries



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

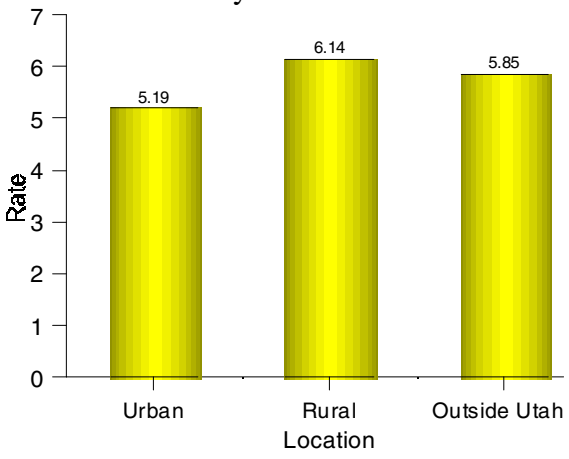
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			44,023	2,382	5.41
121	1	LDS	4,447	254	5.71
125	1	UNIVERSITY OF UTAH	2,952	273	9.25
138	2	UTAH VALLEY	3,673	143	3.89
141	2	MCKAY DEE	3,220	152	4.72
124	2	ST. MARK'S	3,113	184	5.91
120	2	SALT LAKE REGIONAL	1,369	112	8.18
137	3	MOUNTAIN VIEW	1,139	15	1.32
142	3	OGDEN REGIONAL	1,819	36	1.98
107	3	LAKEVIEW	684	24	3.51
108	3	DAVIS HOSPITAL	1,901	79	4.16
119	3	COTTONWOOD	3,481	180	5.17
126	3	PIONEER VALLEY	476	27	5.67
144	4	TIMPANOGOS REG	743	20	2.69
135	4	OREM COMMUNITY	1,386	48	3.46
118	4	ALTA VIEW	1,853	77	4.16
136	4	AMERICAN FORK	2,296	101	4.40
117	4	JORDAN VALLEY	1,448	147	10.15
103	5	BRIGHAM CITY	504	13	2.58
105	5	LOGAN REGIONAL	2,255	125	5.54
106	5	CASTLEVIEW	416	24	5.77
134	5	ASHLEY VALLEY	281	21	7.47
112	5	VALLEY VIEW	690	37	5.36
140	5	DIXIE	1,894	141	7.45
102	6	MILFORD VALLEY	20	0	0.00
133	6	TOOELE VALLEY	138	3	2.17
129	6	GUNNISON VALLEY	270	8	2.96
104	6	BEAR RIVER VALLEY	81	3	3.70
114	6	KANE COUNTY	32	2	6.25
101	6	BEAVER VALLEY	78	5	6.41
113	6	CENTRAL VALLEY	105	6	5.71
128	6	SAN JUAN	171	14	8.19
116	6	DELTA COMMUNITY	112	8	7.14
109	6	UINTAH BASIN	387	32	8.27
130	6	SANPETE VALLEY	108	9	8.33
110	6	GARFIELD MEMORIAL	38	3	7.90
115	6	FILLMORE COMMNITY	43	4	9.30
132	6	SEVIER VALLEY	220	21	9.55
111	6	ALLEN MEMORIAL	9	1	11.11
139	6	WASATCH COUNTY	171	30	17.54
122	N	PRIMARY CHILDREN'S	0	.	.

peer group key on page 34

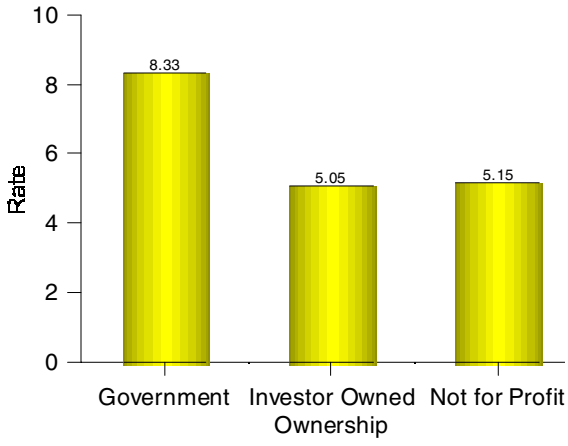
Source: Utah Hospital Discharge Database, 1992-1998.

Obstetrical Complications

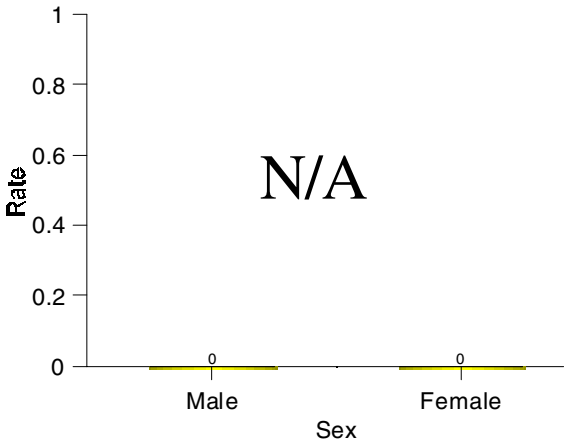
Rate by Patient Residence



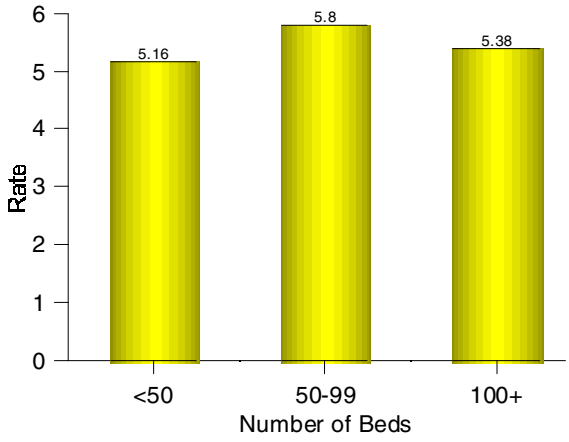
Rate by Ownership



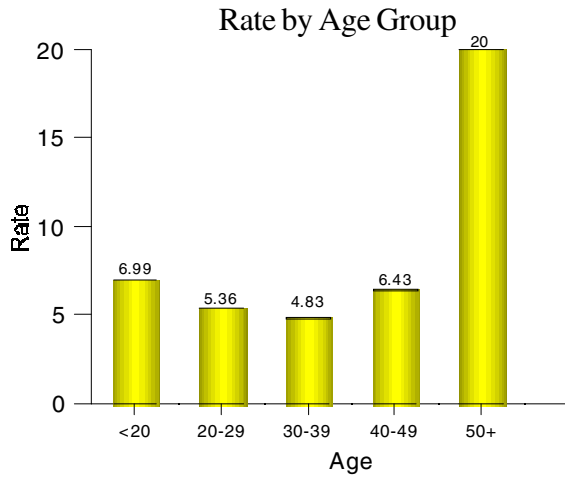
Rate by Sex



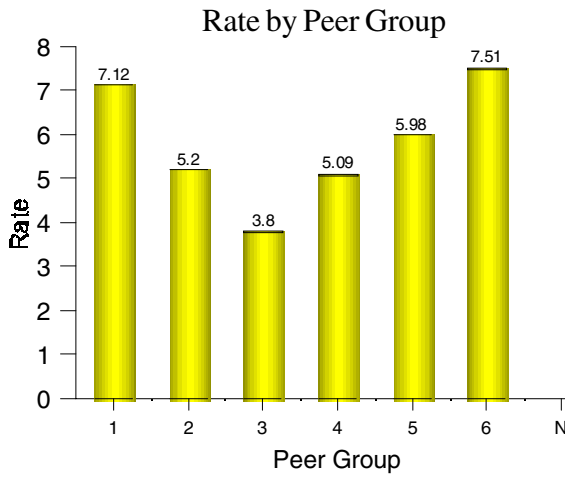
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



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Source: Utah Hospital Discharge Database, 1992-1998.

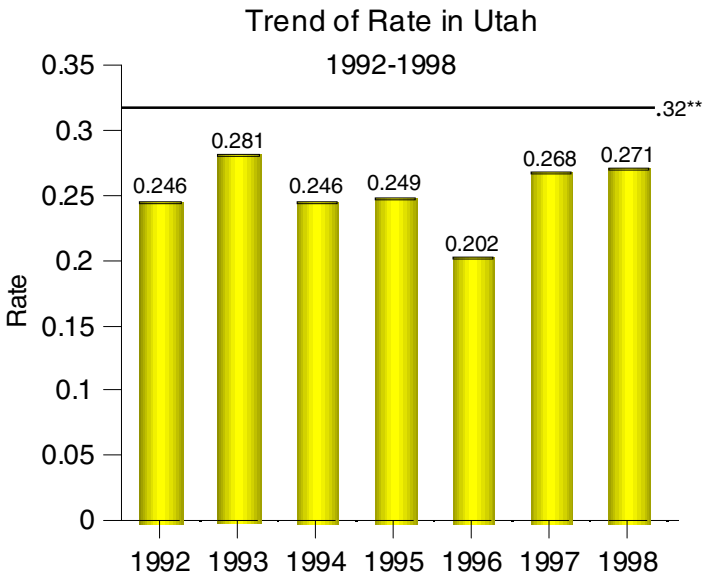
Wound Infection

Surgical and traumatic wounds are often contaminated with bacteria; however, strict surgical aseptic technique can minimize the incidence of wound infections. The Utah rate has decreased between 1993 and 1996 and showed an increase thereafter.

Outcome:
Secondary diagnosis of post-operative or post-traumatic wound infection

Population at risk:
All discharges

Rate:
Number of complications per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			232,479	629	0.27
121	1	LDS	24,698	114	0.46
125	1	UNIVERSITY OF UTAH	19,351	99	0.51
138	2	UTAH VALLEY	20,138	67	0.33
141	2	MCKAY DEE	16,219	36	0.22
124	2	ST. MARK'S	18,876	50	0.27
120	2	SALT LAKE REGIONAL	5,945	27	0.45
137	3	MOUNTAIN VIEW	5,103	14	0.27
142	3	OGDEN REGIONAL	8,313	11	0.13
107	3	LAKEVIEW	4,114	14	0.34
108	3	DAVIS HOSPITAL	7,769	12	0.15
119	3	COTTONWOOD	14,735	28	0.19
126	3	PIONEER VALLEY	3,027	6	0.20
144	4	TIMPANOGOS REGIONAL	2,629	6	0.23
135	4	OREM COMMUNITY	3,039	2	0.07
118	4	ALTA VIEW	6,636	15	0.23
136	4	AMERICAN FORK	6,960	5	0.07
117	4	JORDAN VALLEY	4,376	6	0.14
103	5	BRIGHAM CITY	1,888	4	0.21
105	5	LOGAN REGIONAL	8,831	9	0.10
106	5	CASTLEVIEW	2,627	4	0.15
134	5	ASHLEY VALLEY	1,715	9	0.53
112	5	VALLEY VIEW	2,408	2	0.08
140	5	DIXIE	10,943	34	0.31
102	6	MILFORD VALLEY	461	0	0.00
133	6	TOOELE VALLEY	1,166	2	0.17
129	6	GUNNISON VALLEY	1,216	5	0.41
104	6	BEAR RIVER VALLEY	522	2	0.38
114	6	KANE COUNTY	344	0	0.00
101	6	BEAVER VALLEY	598	1	0.17
113	6	CENTRAL VALLEY	719	3	0.42
128	6	SAN JUAN	762	0	0.00
116	6	DELTA COMMUNITY	414	0	0.00
109	6	UINTAH BASIN	2,051	2	0.10
130	6	SANPETE VALLEY	488	1	0.21
110	6	GARFIELD MEMORIAL	346	0	0.00
115	6	FILLMORE COMMUNITY	236	1	0.42
132	6	SEVIER VALLEY	1,403	4	0.29
111	6	ALLEN MEMORIAL	699	0	0.00
139	6	WASATCH COUNTY	576	1	0.17
122	N	PRIMARY CHILDREN'S	8,576	14	0.16

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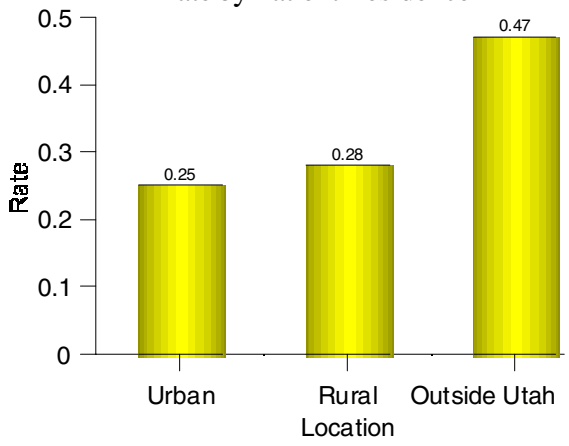
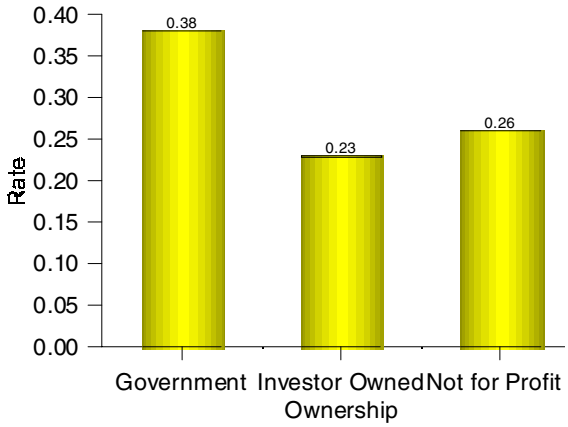
Source: Utah Hospital Discharge Database, 1992-1998.

Wound Infection

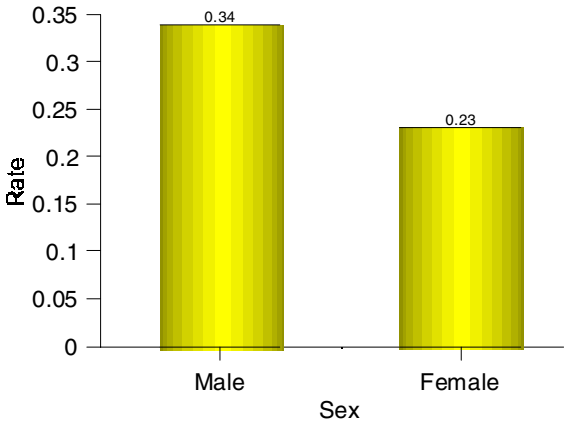
Rate by Patient Residence



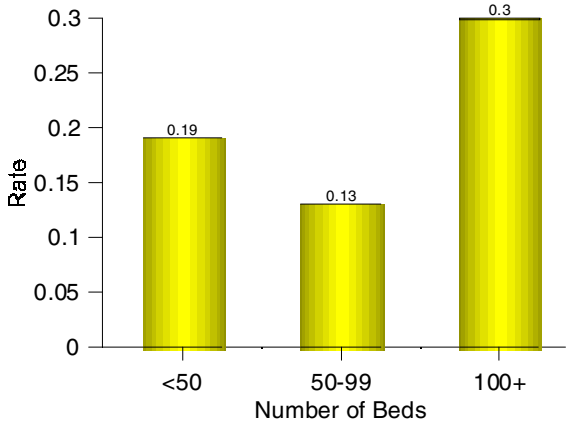
Rate by Ownership



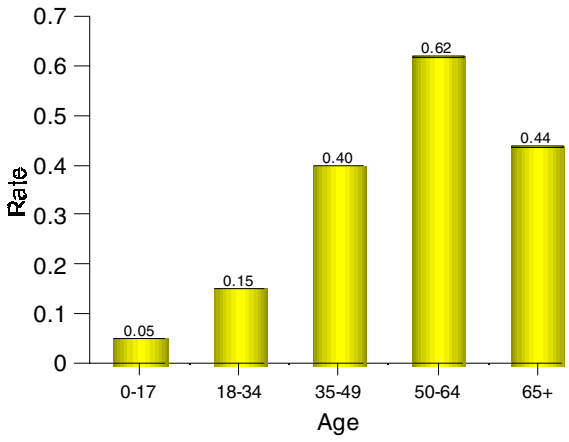
Rate by Sex



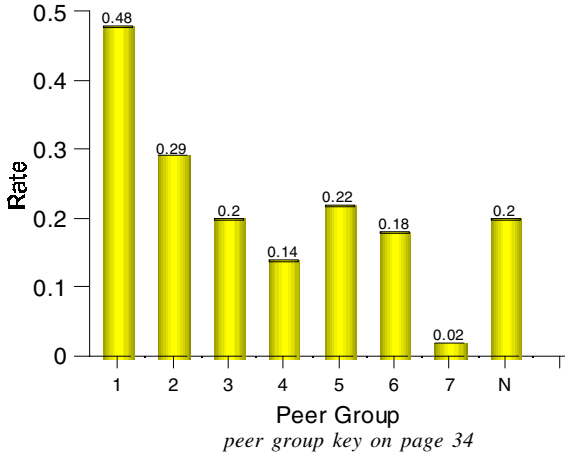
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

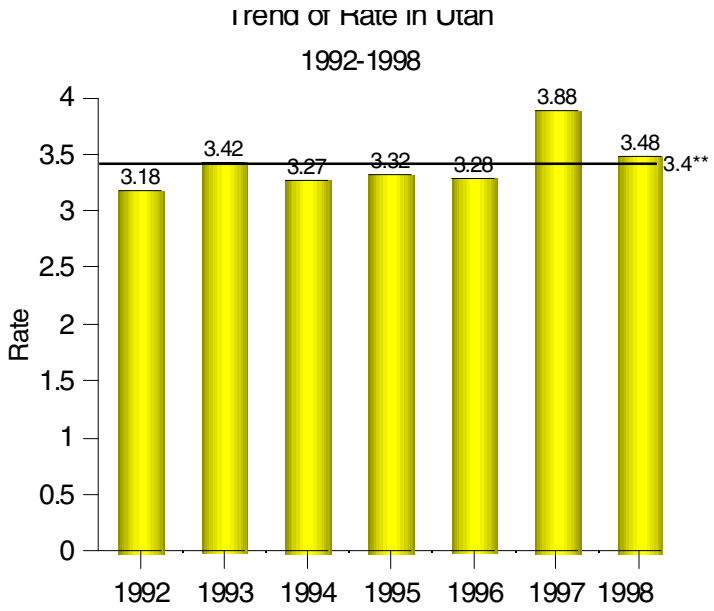
Adverse Effects/ Iatrogenic Complications

This indicator combines a wide range of conditions and procedures that denotes potentially substandard care and poor outcomes. The rate of adverse effects/ Iatrogenic complications in Utah has been quite stable until 1996; however, it experienced an increase in 1997 and a somewhat decrease during 1998. Comparison by hospital size in 1998 shows large hospitals (more than 100 beds) have a higher adverse effects/Iatrogenic complication rate.

Outcome:
Procedure to control hemorrhage or secondary diagnosis of post-operative hemorrhage or hematoma, miscellaneous post-op complication, iatrogenic complication, shock due to anesthesia, or other events such as accidental operative laceration, foreign body left during procedure, and ABO or Rh incompatibility

Population at risk:
All discharges

Rate:
Number of complications per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

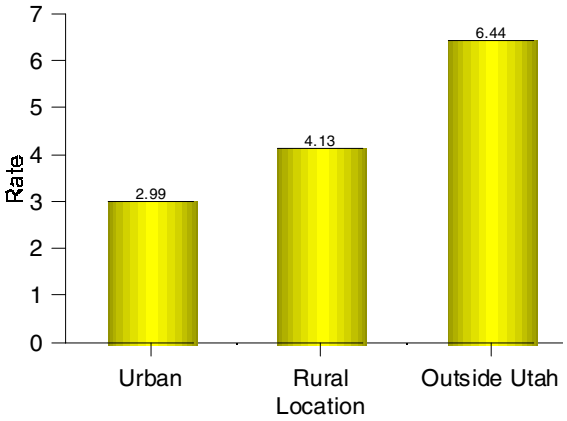
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State	Total		232,479	8,096	3.48
121	1	LDS	24,698	1,464	5.93
125	1	UNIVERSITY OF UTAH	19,351	1,209	6.25
138	2	UTAH VALLEY	20,138	1,113	5.53
141	2	MCKAY DEE	16,219	631	3.89
124	2	ST. MARK'S	18,876	425	2.25
120	2	SALT LAKE REGIONAL	5,945	349	5.87
137	3	MOUNTAIN VIEW	5,103	153	3.00
142	3	OGDEN REGIONAL	8,313	145	1.74
107	3	LAKEVIEW	4,114	130	3.16
108	3	DAVIS HOSPITAL	7,769	50	0.64
119	3	COTTONWOOD	14,735	343	2.33
126	3	PIONEER VALLEY	3,027	98	3.24
144	4	TIMPANOGOS REGIONAL	2,629	37	1.41
135	4	OREM COMMUNITY	3,039	10	0.33
118	4	ALTA VIEW	6,636	115	1.73
136	4	AMERICAN FORK	6,960	117	1.68
117	4	JORDAN VALLEY	4,376	63	1.44
103	5	BRIGHAM CITY	1,888	47	2.49
105	5	LOGAN REGIONAL	8,831	154	1.74
106	5	CASTLEVIEW	2,627	130	4.95
134	5	ASHLEY VALLEY	1,715	55	3.21
112	5	VALLEY VIEW	2,408	35	1.45
140	5	DIXIE	10,943	669	6.11
102	6	MILFORD VALLEY	461	0	0.00
133	6	TOOELE VALLEY	1,166	23	1.97
129	6	GUNNISON VALLEY	1,216	6	0.49
104	6	BEAR RIVER VALLEY	522	7	1.34
114	6	KANE COUNTY	344	0	0.00
101	6	BEAVER VALLEY	598	1	0.17
113	6	CENTRAL VALLEY	719	13	1.81
128	6	SAN JUAN	762	1	0.13
116	6	DELTA COMMUNITY	414	3	0.73
109	6	UINTAH BASIN	2,051	15	0.73
130	6	SANPETE VALLEY	488	10	2.05
110	6	GARFIELD MEMORIAL	346	6	1.73
115	6	FILLMORE COMMUNITY	236	1	0.42
132	6	SEVIER VALLEY	1,403	48	3.42
111	6	ALLEN MEMORIAL	699	4	0.57
139	6	WASATCH COUNTY	576	6	1.04
122	N	PRIMARY CHILDREN'S	8,576	204	2.38

peer group key on page 34

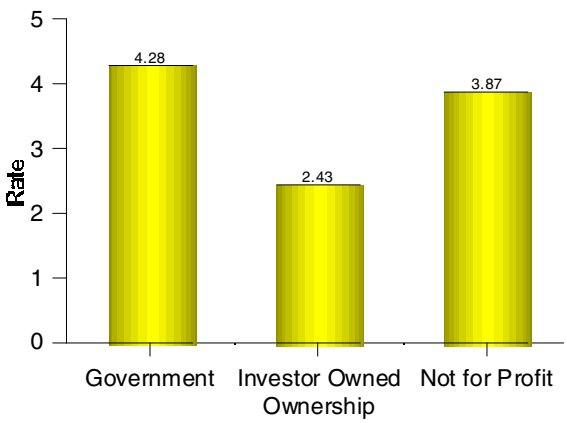
Source: Utah Hospital Discharge Database, 1992-1998.

Adverse Affects/Iatrogenic Complications

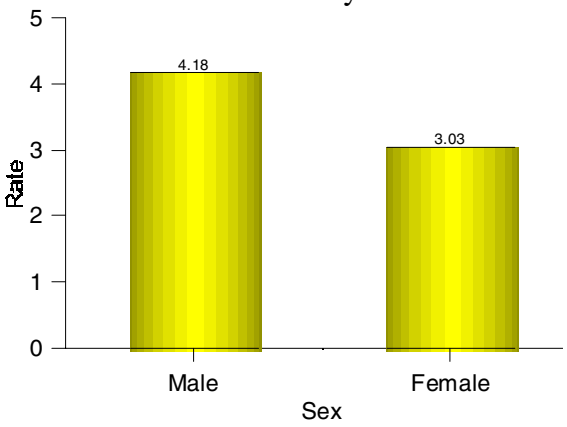
Rate by Patient Residence



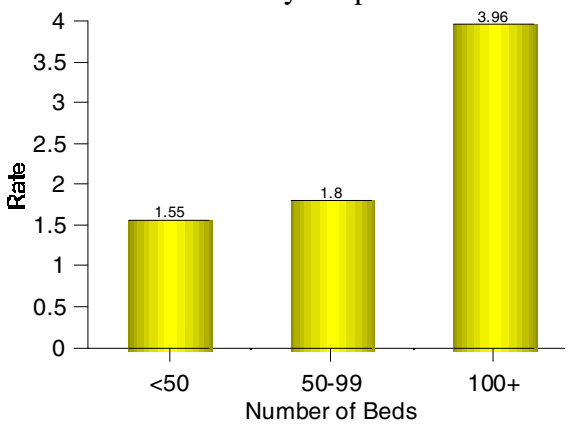
Rate by Ownership



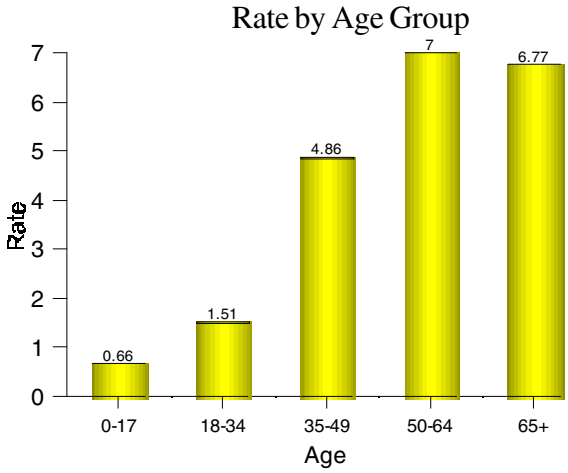
Rate by Sex



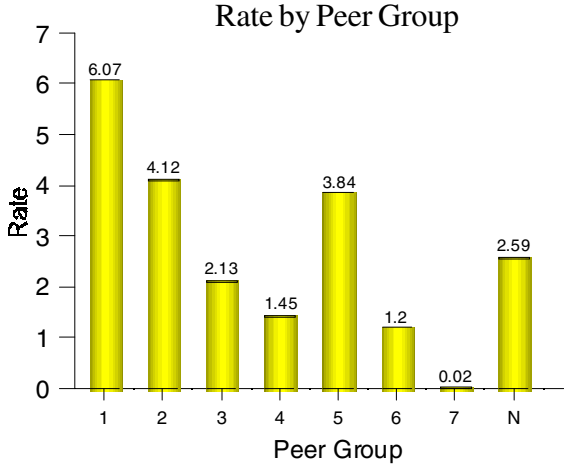
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

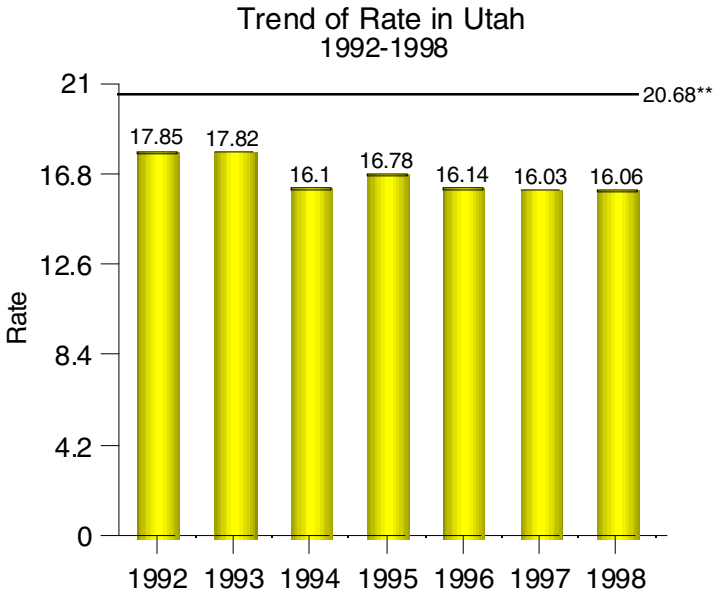
Cesarean Section Delivery

It is widely recognized that the rate of C-section in the U.S. is too high. Maternal complications such as hemorrhage, infection, and mortality are more common in women who have a C-section than in women who deliver vaginally. Although the overall C-section delivery rate cannot determine inappropriate use, it may identify areas where C-section rates can be reduced. Year 2000 target: reduce C-sections to no more than 15 C-sections per 100 deliveries. The overall C-section delivery rate in Utah has declined between 1995 and 1997. However, the trend stopped declining and showed a slight increase in 1998.

Population at risk:
All deliveries (DRGs 370-375)

Outcome:
Cesarean section delivery

Rate:
Number of C-section per 100 deliveries



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

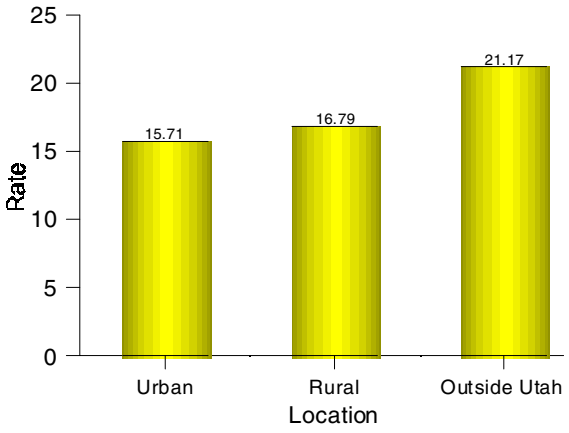
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			44,023	7,070	16.06
121	1	LDS	4,447	711	15.99
125	1	UNIVERSITY OF UTAH	2,952	556	18.84
138	2	UTAH VALLEY	3,673	513	13.97
141	2	MCKAY DEE	3,220	541	16.80
124	2	ST. MARK'S	3,113	601	19.31
120	2	SALT LAKE REGIONAL	1,369	217	15.85
137	3	MOUNTAIN VIEW	1,139	158	13.87
142	3	OGDEN REGIONAL	1,819	288	15.83
107	3	LAKEVIEW	684	142	20.76
108	3	DAVIS HOSPITAL	1,901	317	16.68
119	3	COTTONWOOD	3,481	627	18.01
126	3	PIONEER VALLEY	476	67	14.08
144	4	TIMPANOGOS REGIONAL	743	92	12.38
135	4	OREM COMMUNITY	1,386	214	15.44
118	4	ALTA VIEW	1,853	239	12.90
136	4	AMERICAN FORK	2,296	288	12.54
117	4	JORDAN VALLEY	1,448	172	11.88
103	5	BRIGHAM CITY	504	81	16.07
105	5	LOGAN REGIONAL	2,255	252	11.18
106	5	CASTLEVIEW	416	73	17.55
134	5	ASHLEY VALLEY	281	36	12.81
112	5	VALLEY VIEW	690	102	14.78
140	5	DIXIE	1,894	389	20.54
102	6	MILFORD VALLEY	20	5	25.00
133	6	TOOELE VALLEY	138	17	12.32
129	6	GUNNISON VALLEY	270	75	27.78
104	6	BEAR RIVER VALLEY	81	11	13.58
114	6	KANE COUNTY	32	2	6.25
101	6	BEAVER VALLEY	78	18	23.08
113	6	CENTRAL VALLEY	105	25	23.81
128	6	SAN JUAN	171	22	12.87
116	6	DELTA COMMUNITY	112	22	19.64
109	6	UINTAH BASIN	387	84	21.71
130	6	SANPETE VALLEY	108	24	22.22
110	6	GARFIELD MEMORIAL	38	8	21.05
115	6	FILLMORE COMMUNITY	43	5	11.63
132	6	SEVIER VALLEY	220	37	16.82
111	6	ALLEN MEMORIAL	9	1	11.11
139	6	WASATCH COUNTY	171	38	22.22
122	N	PRIMARY CHILDREN'S	0	.	.

peer group key on page 34

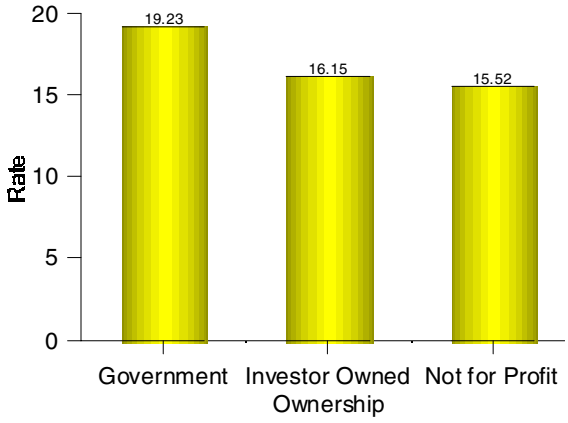
Source: Utah Hospital Discharge Database, 1992-1998.

Cesarean Section Delivery

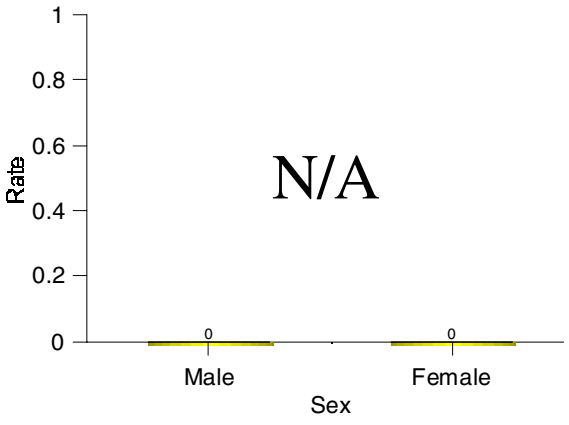
Rate by Patient Residence



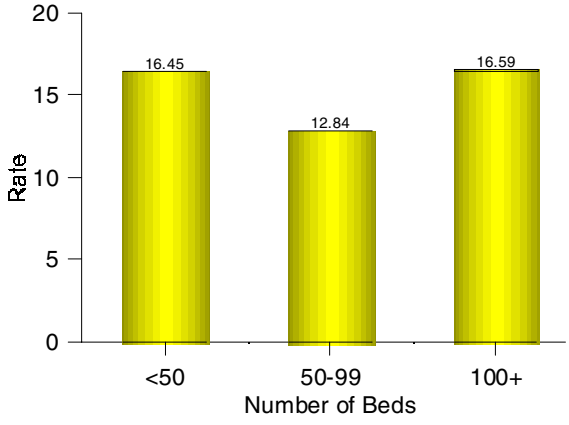
Rate by Ownership



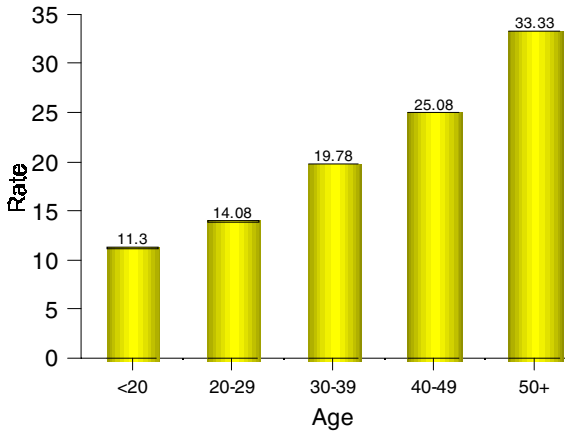
Rate by Sex



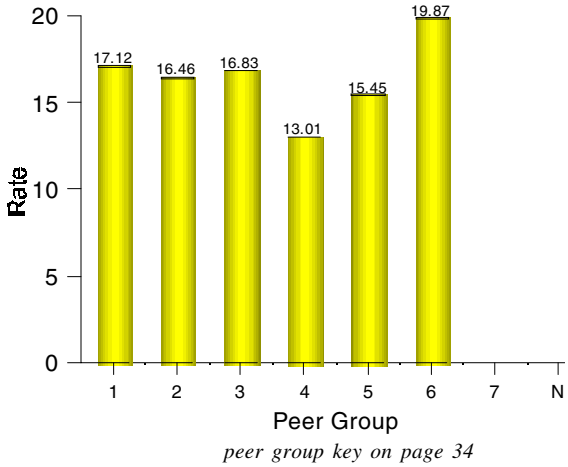
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

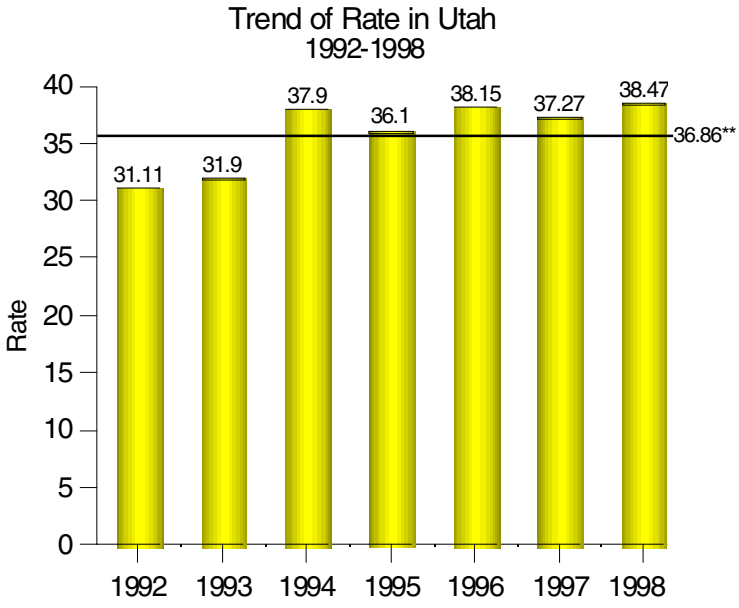
Vaginal Birth after C-Section

Although VBAC is safe and beneficial for most women with a prior Cesarean section, repeat C-sections account for a large percentage of C-section births in the U.S. A low VBAC rate cannot determine inappropriate use of C-section; however, it may identify areas where VBAC rates can be increased. Year 2000 target: reduce repeat C-sections to no more than 65 C-sections per 100 deliveries among women with previous C-sections (for a VBAC rate of at least 35 per 100). In Utah, the overall VBAC rate has continued to increase over the last five years. In fact, Utah VBAC has exceeded Year 2000 target since 1994.

Population at risk:
All deliveries (DRGs 370-375) with diagnosis of prior C-section

Outcome:
Vaginal delivery

Rate:
Number of vaginal births per 100 deliveries with prior C-section



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

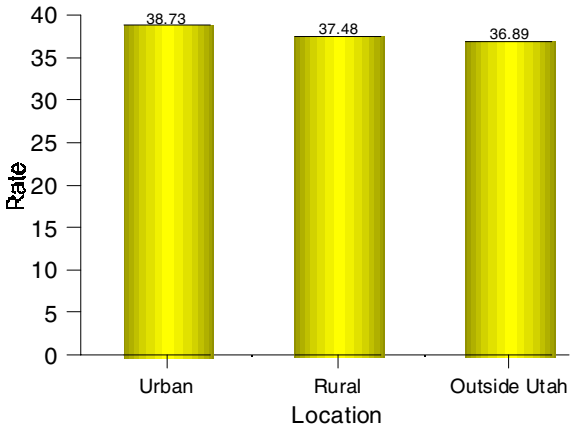
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			4,612	1,774	38.47
121	1	LDS	463	185	39.96
125	1	UNIVERSITY OF UTAH	274	120	43.80
138	2	UTAH VALLEY	374	147	39.31
141	2	MCKAY DEE	376	145	38.56
124	2	ST. MARK'S	343	114	33.24
120	2	SALT LAKE REGIONAL	120	42	35.00
137	3	MOUNTAIN VIEW	95	38	40.00
142	3	OGDEN REGIONAL	189	64	33.86
107	3	LAKEVIEW	89	18	20.23
108	3	DAVIS HOSPITAL	227	98	43.17
119	3	COTTONWOOD	393	115	29.26
126	3	PIONEER VALLEY	63	34	53.97
144	4	TIMPANOGOS REGIONAL	58	26	44.83
135	4	OREM COMMUNITY	126	39	30.95
118	4	ALTA VIEW	199	85	42.71
136	4	AMERICAN FORK	237	114	48.10
117	4	JORDAN VALLEY	138	72	52.17
103	5	BRIGHAM CITY	57	21	36.84
105	5	LOGAN REGIONAL	176	83	47.16
106	5	CASTLEVIEW	31	3	9.68
134	5	ASHLEY VALLEY	19	6	31.58
112	5	VALLEY VIEW	80	30	37.50
140	5	DIXIE	258	116	44.96
102	6	MILFORD VALLEY	0	.	.
133	6	TOOELE VALLEY	11	2	18.18
129	6	GUNNISON VALLEY	45	5	11.11
104	6	BEAR RIVER VALLEY	2	0	0.00
114	6	KANE COUNTY	1	0	0.00
101	6	BEAVER VALLEY	7	0	0.00
113	6	CENTRAL VALLEY	10	1	10.00
128	6	SAN JUAN	10	5	50.00
116	6	DELTA COMMUNITY	23	16	69.57
109	6	UINTAH BASIN	43	11	25.58
130	6	SANPETE VALLEY	14	5	35.71
110	6	GARFIELD MEMORIAL	6	1	16.67
115	6	FILLMORE COMMUNITY	5	3	60.00
132	6	SEVIER VALLEY	21	3	14.29
111	6	ALLEN MEMORIAL	0	.	.
139	6	WASATCH COUNTY	29	7	24.14
122	N	PRIMARY CHILDREN'S	0	.	.

peer group key on page 34

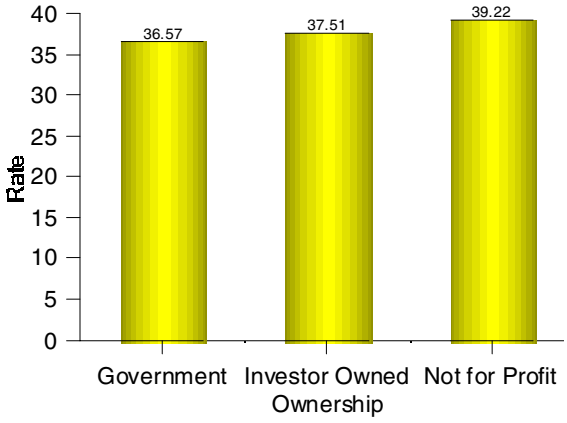
Source: Utah Hospital Discharge Database, 1992-1998.

Vaginal Birth After C-Section

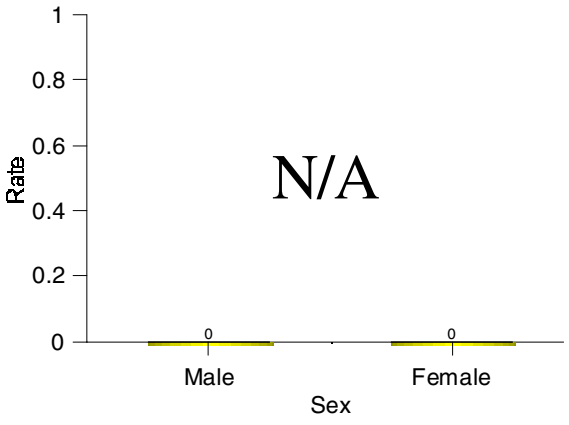
Rate by Patient Residence



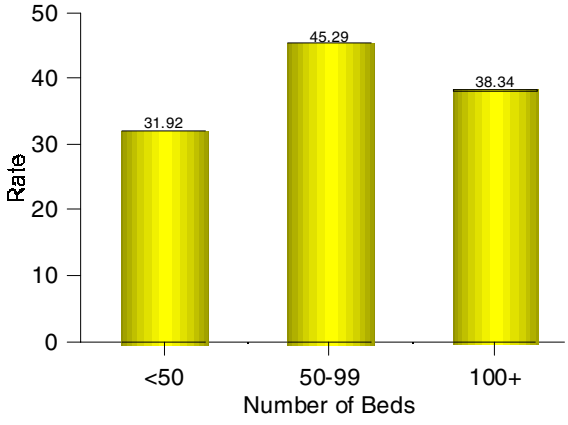
Rate by Ownership



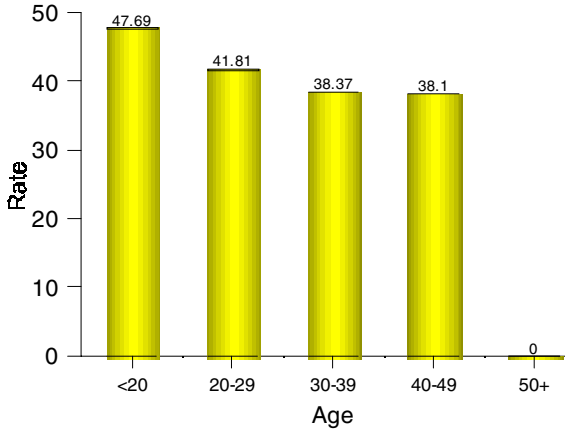
Rate by Sex



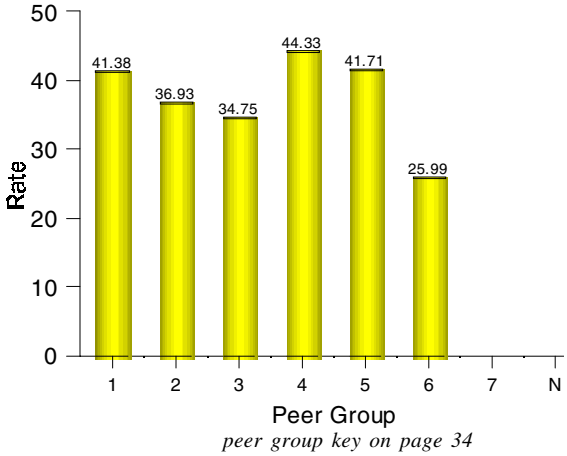
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

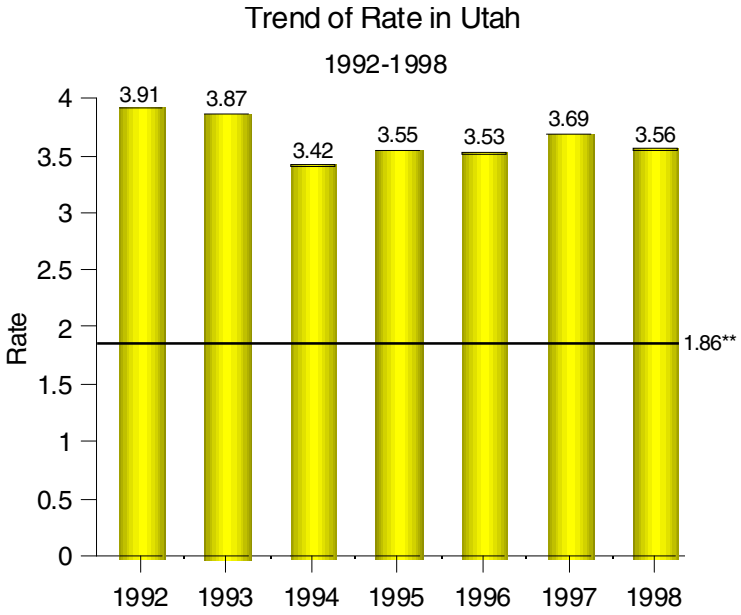
Laminectomy and/or Spinal Fusion

Studies suggest that laminectomy (removal of a portion of a vertebra) and spinal fusion (joining two or more vertebrae for stabilization) are not superior to non-surgical therapies for back pain and may, in fact, be inferior. Yet, the rates for laminectomy and spinal fusion in the U.S. have grown rapidly in recent years. Although the overall laminectomy rate cannot determine inappropriate use, it may identify areas where laminectomy rates can be reduced. The Utah rate has declined from 3.91 in 1992 to 3.56 in 1998.

Outcome:
Laminectomy, spinal exploration, excision or destruction of intervertebral disc, and/or spinal fusion

Population at risk:
Adults age 18+; exclude deliveries (DRGs 370-375)

Rate:
Number of procedures per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

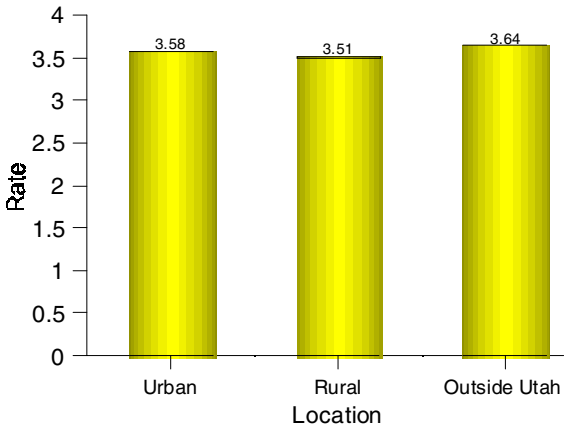
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			121,109	4,313	3.56
121	1	LDS	15,034	643	4.28
125	1	UNIVERSITY OF UTAH	12,301	483	3.93
138	2	UTAH VALLEY	10,593	952	8.99
141	2	MCKAY DEE	8,265	366	4.43
124	2	ST. MARK'S	11,985	504	4.21
120	2	SALT LAKE REGIONAL	3,142	82	2.61
137	3	MOUNTAIN VIEW	2,426	84	3.46
142	3	OGDEN REGIONAL	4,131	133	3.22
107	3	LAKEVIEW	2,581	15	0.58
108	3	DAVIS HOSPITAL	3,372	30	0.89
119	3	COTTONWOOD	7,116	725	10.19
126	3	PIONEER VALLEY	1,900	4	0.21
144	4	TIMPANOGOS REGIONAL	968	89	9.19
135	4	OREM COMMUNITY	182	0	0.00
118	4	ALTA VIEW	2,719	15	0.55
136	4	AMERICAN FORK	1,884	0	0.00
117	4	JORDAN VALLEY	1,185	0	0.00
103	5	BRIGHAM CITY	755	9	1.19
105	5	LOGAN REGIONAL	3,592	18	0.50
106	5	CASTLEVIEW	1,527	19	1.24
134	5	ASHLEY VALLEY	1,017	0	0.00
112	5	VALLEY VIEW	900	26	2.89
140	5	DIXIE	6,374	31	0.49
102	6	MILFORD VALLEY	325	0	0.00
133	6	TOOELE VALLEY	780	0	0.00
129	6	GUNNISON VALLEY	506	0	0.00
104	6	BEAR RIVER VALLEY	287	0	0.00
114	6	KANE COUNTY	228	0	0.00
101	6	BEAVER VALLEY	382	0	0.00
113	6	CENTRAL VALLEY	372	0	0.00
128	6	SAN JUAN	289	0	0.00
116	6	DELTA COMMUNITY	157	0	0.00
109	6	UINTAH BASIN	946	0	0.00
130	6	SANPETE VALLEY	222	0	0.00
110	6	GARFIELD MEMORIAL	192	0	0.00
115	6	FILLMORE COMMUNITY	122	0	0.00
132	6	SEVIER VALLEY	761	0	0.00
111	6	ALLEN MEMORIAL	513	0	0.00
139	6	WASATCH COUNTY	196	0	0.00
122	N	PRIMARY CHILDREN'S	244	12	4.92

peer group key on page 34

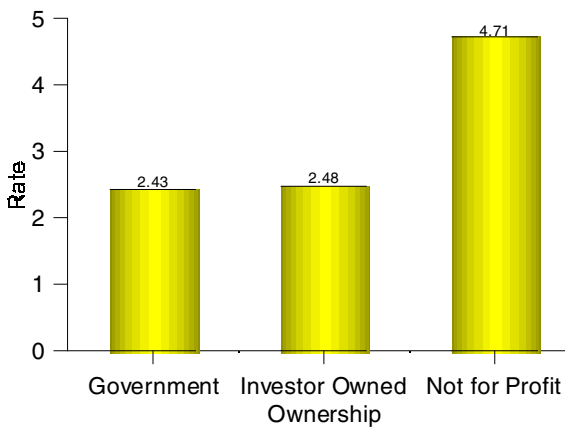
Source: Utah Hospital Discharge Database, 1992-1998.

Laminectomy and/or Spinal Fusion

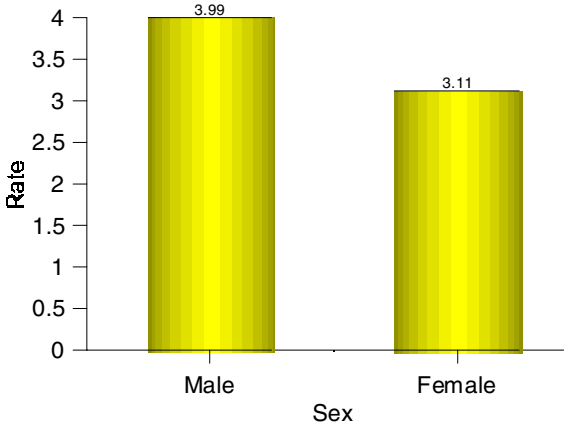
Rate by Patient Residence



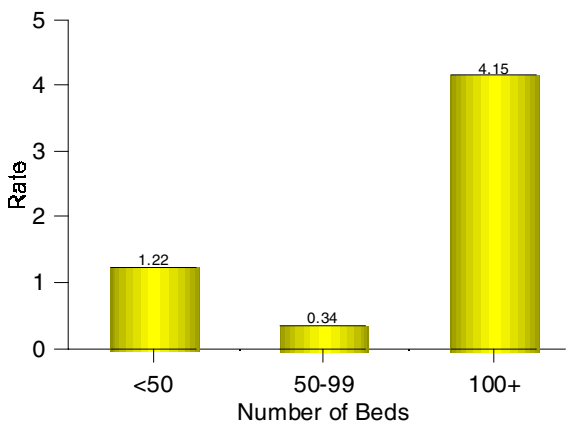
Rate by Ownership



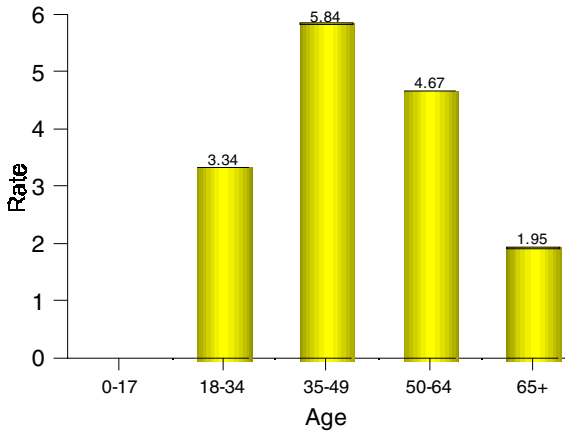
Rate by Sex



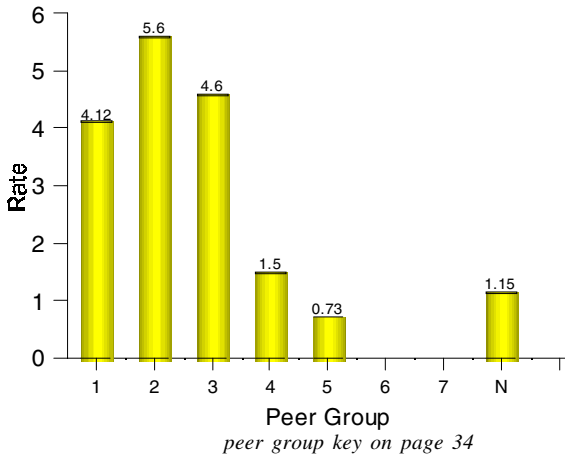
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

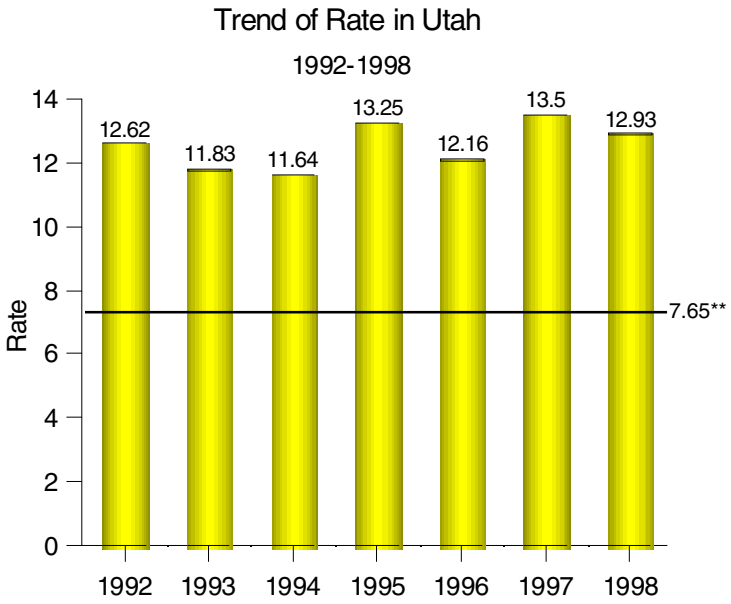
Hysterectomy

It is widely recognized that the rate of hysterectomy (surgical removal of the uterus) in the U.S. is too high and that hysterectomies are performed for inappropriate reasons. Although the overall hysterectomy rate cannot determine inappropriate use, it may identify areas where hysterectomy rates can be reduced. After an increase in 1997, Utah's overall hysterectomy rate somewhat decreased to 12.93 in 1998.

Population at risk:
Females age 18-64; exclude deliveries (DRG 370-375); exclude genital cancer and pelvic/lower abdominal trauma

Outcome:
Abdominal or vaginal hysterectomy

Rate:
Number of procedures per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

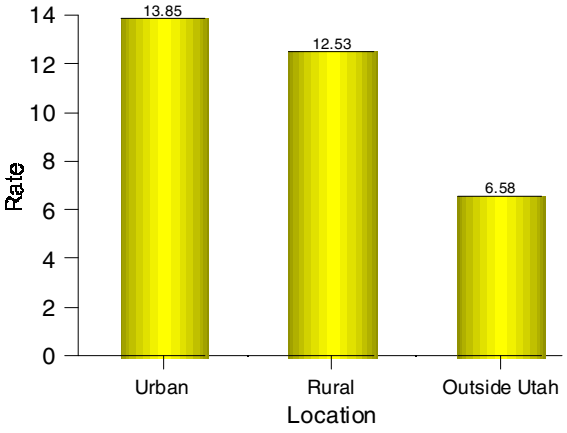
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			35,394	4,575	12.93
121	1	LDS	4,560	478	10.48
125	1	UNIVERSITY OF UTAH	3,954	133	3.36
138	2	UTAH VALLEY	3,058	153	5.00
141	2	MCKAY DEE	2,400	466	19.42
124	2	ST. MARK'S	3,493	565	16.18
120	2	SALT LAKE REGIONAL	792	135	17.05
137	3	MOUNTAIN VIEW	587	85	14.48
142	3	OGDEN REGIONAL	1,015	186	18.33
107	3	LAKEVIEW	729	173	23.73
108	3	DAVIS HOSPITAL	1,128	356	31.56
119	3	COTTONWOOD	2,577	443	17.19
126	3	PIONEER VALLEY	556	56	10.07
144	4	TIMPANOGOS REGIONAL	270	53	19.63
135	4	OREM COMMUNITY	101	28	27.72
118	4	ALTA VIEW	979	235	24.00
136	4	AMERICAN FORK	618	125	20.23
117	4	JORDAN VALLEY	550	102	18.55
103	5	BRIGHAM CITY	201	53	26.37
105	5	LOGAN REGIONAL	1,234	184	14.91
106	5	CASTLEVIEW	381	61	16.01
134	5	ASHLEY VALLEY	258	40	15.50
112	5	VALLEY VIEW	252	44	17.46
140	5	DIXIE	1,722	269	15.62
102	6	MILFORD VALLEY	107	0	0.00
133	6	TOOELE VALLEY	193	30	15.54
129	6	GUNNISON VALLEY	151	6	3.97
104	6	BEAR RIVER VALLEY	104	14	13.46
114	6	KANE COUNTY	56	9	16.07
101	6	BEAVER VALLEY	116	8	6.90
113	6	CENTRAL VALLEY	107	12	11.22
128	6	SAN JUAN	81	2	2.47
116	6	DELTA COMMUNITY	31	0	0.00
109	6	UINTAH BASIN	361	48	13.30
130	6	SANPETE VALLEY	57	4	7.02
110	6	GARFIELD MEMORIAL	47	1	2.13
115	6	FILLMORE COMMUNITY	27	0	0.00
132	6	SEVIER VALLEY	175	0	0.00
111	6	ALLEN MEMORIAL	197	6	3.05
139	6	WASATCH COUNTY	63	8	12.70
122	N	PRIMARY CHILDREN'S	109	0	0.00

peer group key on page 34

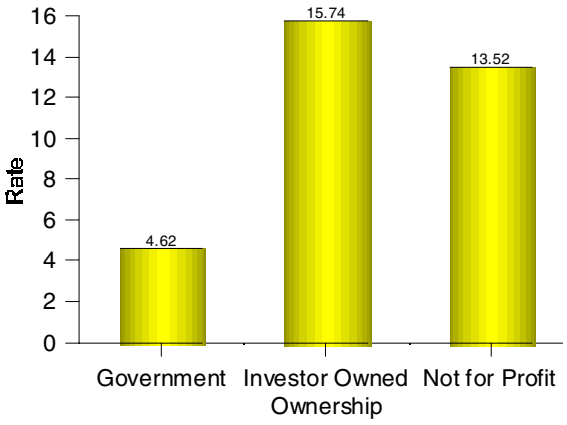
Source: Utah Hospital Discharge Database, 1992-1998.

Hysterectomy

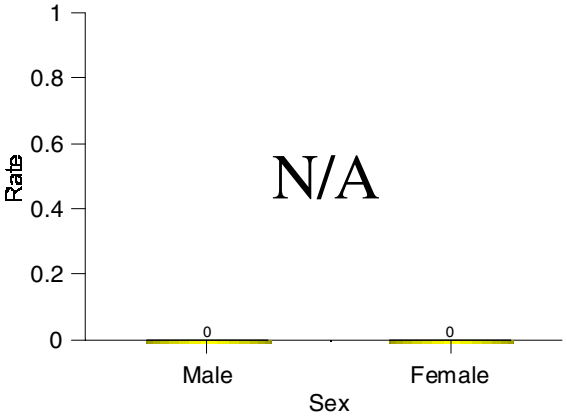
Rate by Patient Residence



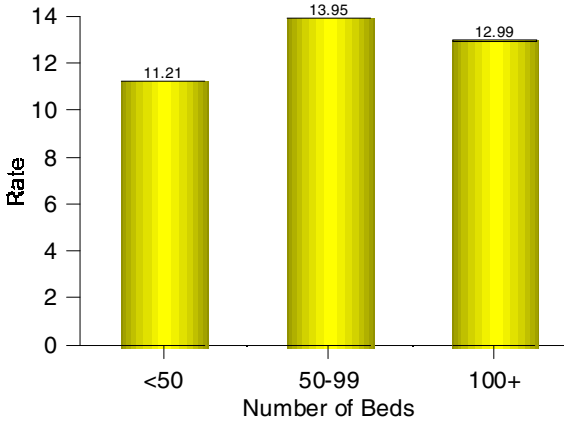
Rate by Ownership



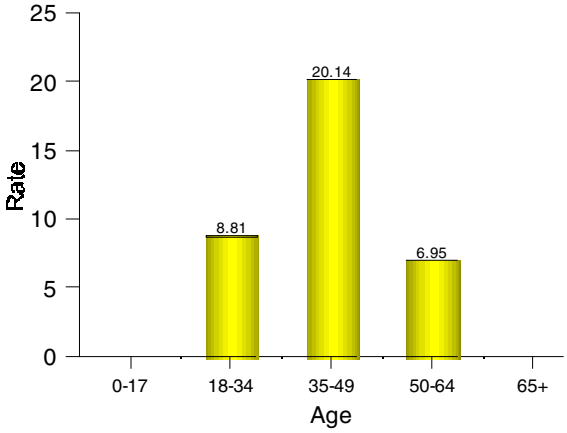
Rate by Sex



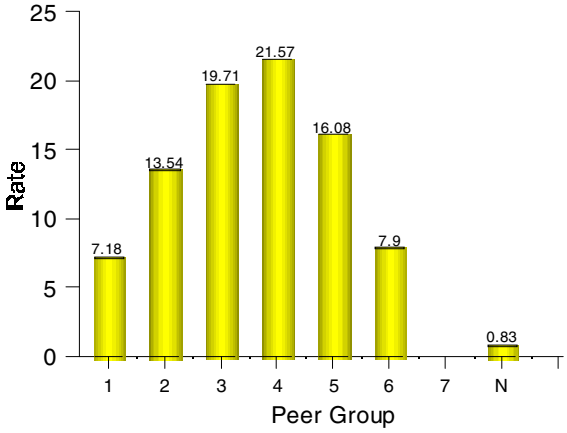
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

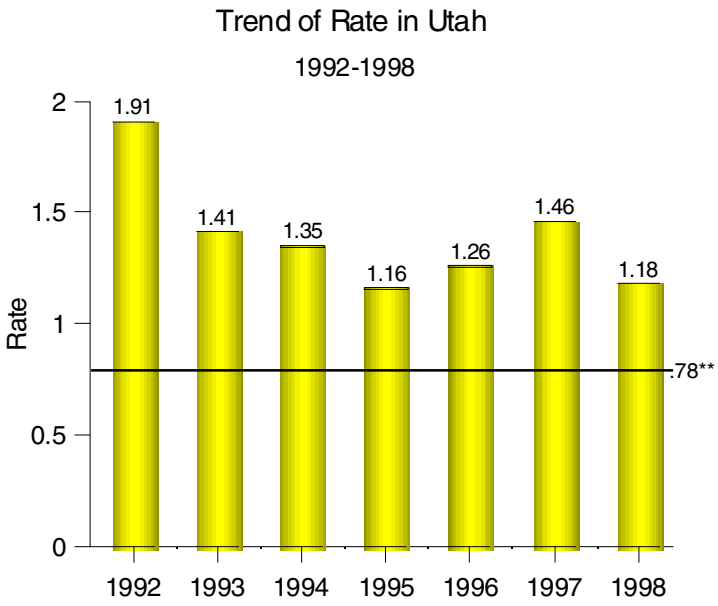
Radical Prostatectomy

Radical prostatectomy (removal of the prostate through an open incision) is a common therapy for localized prostate cancer, a very slow-growing tumor in elderly men. The probability of medical complications following surgery is high, and there is no evidence that prostatectomy is superior to less invasive therapy. Although the overall radical prostatectomy rate cannot determine inappropriate use, it may identify areas where radical prostatectomy rates can be reduced. Utah's radical prostatectomy rate has substantially decreased over the last seven years.

Outcome:
Radical prostatectomy

Population at risk:
Males age 50 +

Rate:
Number of procedures per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

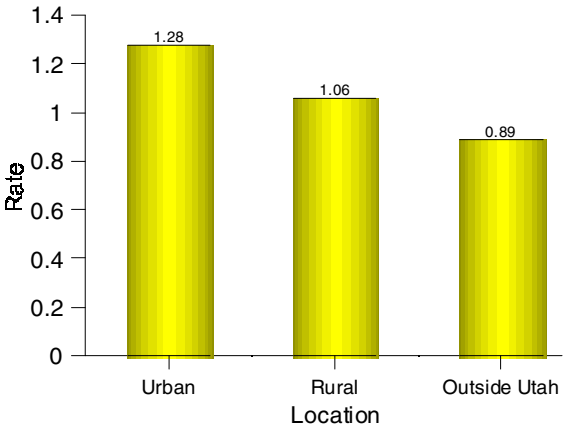
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			38,137	449	1.18
1		LDS	4,671	64	1.37
1		UNIVERSITY OF UTAH	3,354	46	1.37
2		UTAH VALLEY	3,439	31	0.90
2		MCKAY DEE	2,629	20	0.76
2		ST. MARK'S	3,640	34	0.93
2		SALT LAKE REGIONAL	1,020	28	2.75
3		MOUNTAIN VIEW	764	31	4.06
3		OGDEN REGIONAL	1,283	6	0.47
3		LAKEVIEW	744	26	3.50
3		DAVIS HOSPITAL	969	16	1.65
3		COTTONWOOD	1,790	42	2.35
3		PIONEER VALLEY	559	1	0.18
4		TIMPANOGOS REGIONAL	265	4	1.51
4		OREM COMMUNITY	19	0	0.00
4		ALTA VIEW	662	6	0.91
4		AMERICAN FORK	495	7	1.41
4		JORDAN VALLEY	200	1	0.50
5		BRIGHAM CITY	234	0	0.00
5		LOGAN REGIONAL	936	29	3.10
5		CASTLEVIEW	460	0	0.00
5		ASHLEY VALLEY	339	0	0.00
5		VALLEY VIEW	289	1	0.35
5		DIXIE	2,238	31	1.39
6		MILFORD VALLEY	72	0	0.00
6		TOOELE VALLEY	236	0	0.00
6		GUNNISON VALLEY	156	0	0.00
6		BEAR RIVER VALLEY	82	0	0.00
6		KANE COUNTY	61	0	0.00
6		BEAVER VALLEY	107	0	0.00
6		CENTRAL VALLEY	107	0	0.00
6		SAN JUAN	96	0	0.00
6		DELTA COMMUNITY	55	0	0.00
6		UINTAH BASIN	244	0	0.00
6		SANPETE VALLEY	75	0	0.00
6		GARFIELD MEMORIAL	58	0	0.00
6		FILLMORE COMMUNITY	28	0	0.00
6		SEVIER VALLEY	249	0	0.00
6		ALLEN MEMORIAL	135	0	0.00
6		WASATCH COUNTY	64	0	0.00
N		PRIMARY CHILDREN'S	0	.	.

peer group key on page 34

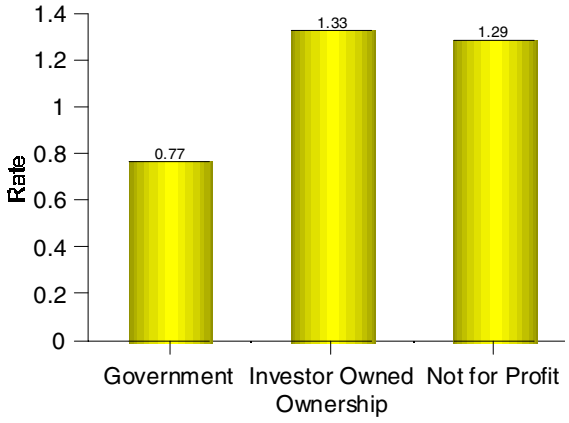
Source: Utah Hospital Discharge Database, 1992-1998.

Radical Prostatectomy

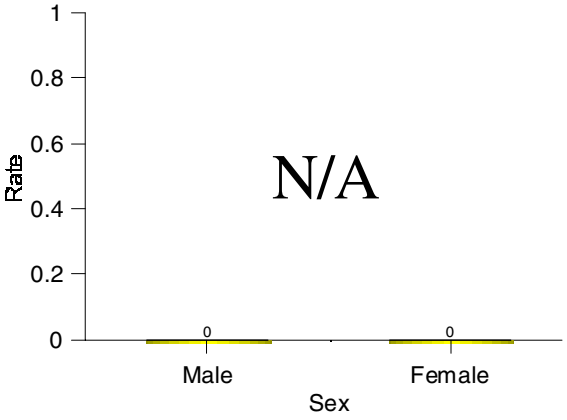
Rate by Patient Residence



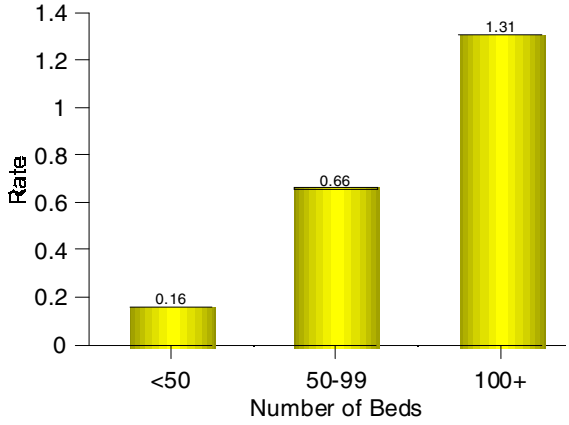
Rate by Ownership



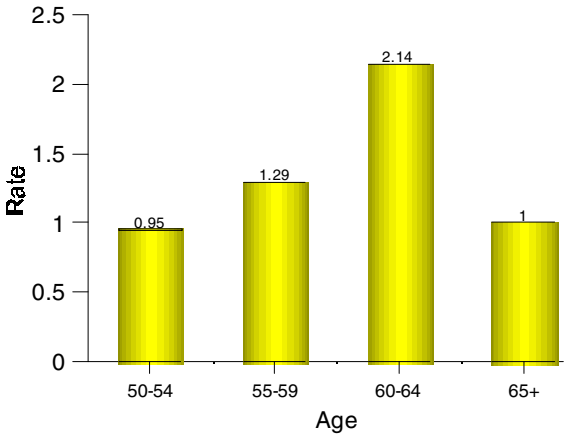
Rate by Sex



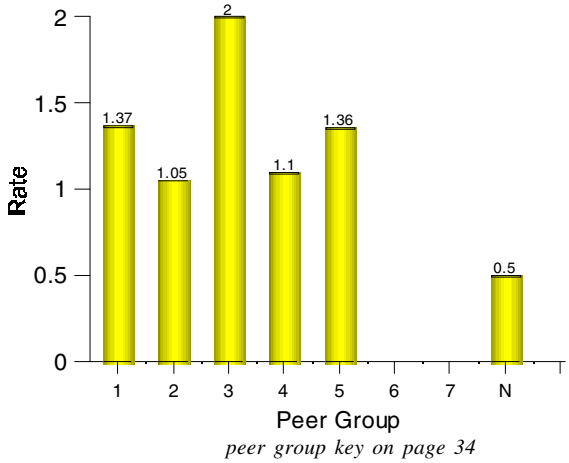
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

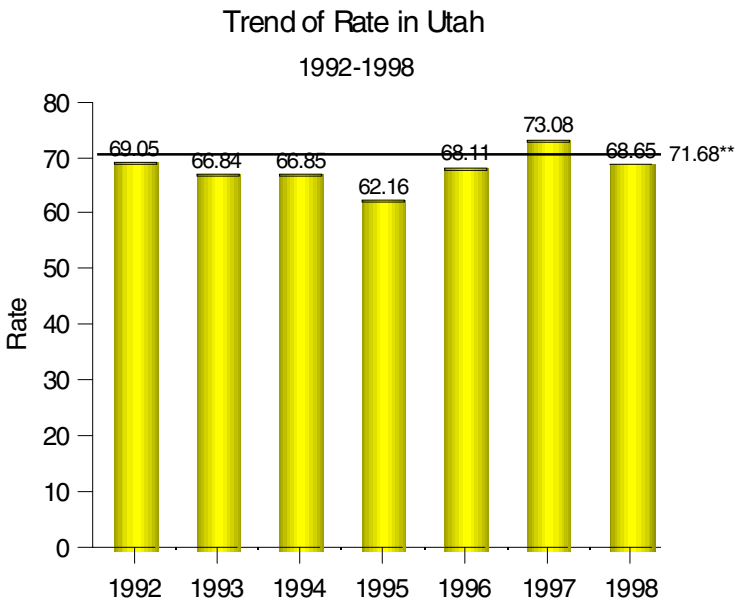
Laparoscopic Cholecystectomy

Cholecystectomy (surgical removal of the gallbladder) performed using a laparoscope has significantly lower morbidity and mortality than open cholecystectomy. This indicator demonstrates the extent to which this new, less invasive technology has been adopted. According to 1998 data, Utah hospitals in the rural areas have performed this procedure more frequently than hospitals in the urban areas.

Outcome:
Laparoscopic cholecystectomy

Population at risk:
Cholecystectomy with diagnosis of uncomplicated cholecystitis and/or cholelithiasis; adults age 18 + ; exclude deliveries (DRGs 370-375)

Rate:
Number of laparoscopic procedures per 100 cholecystectomies



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

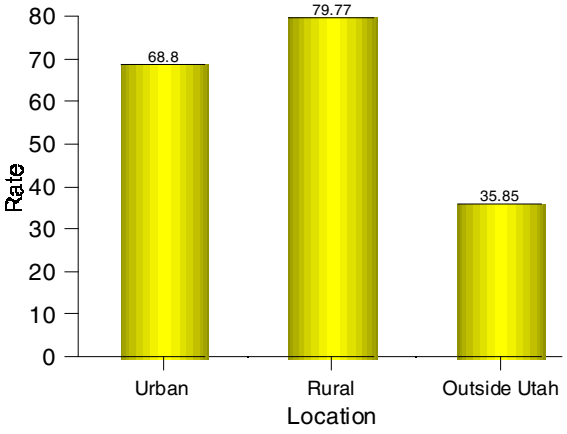
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			2,054	1,410	68.65
121	1	LDS	243	150	61.73
125	1	UNIVERSITY OF UTAH	50	39	78.00
138	2	UTAH VALLEY	220	185	84.09
141	2	MCKAY DEE	121	85	70.25
124	2	ST. MARK'S	393	102	25.95
120	2	SALT LAKE REGIONAL	33	20	60.61
137	3	MOUNTAIN VIEW	30	24	80.00
142	3	OGDEN REGIONAL	36	24	66.67
107	3	LAKEVIEW	26	22	84.62
108	3	DAVIS HOSPITAL	54	45	83.33
119	3	COTTONWOOD	123	95	77.24
126	3	PIONEER VALLEY	39	30	76.92
144	4	TIMPANOGOS REGIONAL	13	9	69.23
135	4	OREM COMMUNITY	0	.	.
118	4	ALTA VIEW	61	56	91.80
136	4	AMERICAN FORK	22	18	81.82
117	4	JORDAN VALLEY	16	10	62.50
103	5	BRIGHAM CITY	32	26	81.25
105	5	LOGAN REGIONAL	103	88	85.44
106	5	CASTLEVIEW	37	36	97.30
134	5	ASHLEY VALLEY	15	12	80.00
112	5	VALLEY VIEW	15	8	53.33
140	5	DIXIE	198	182	91.92
102	6	MILFORD VALLEY	0	.	.
133	6	TOOELE VALLEY	29	25	86.21
129	6	GUNNISON VALLEY	7	5	71.43
104	6	BEAR RIVER VALLEY	6	3	50.00
114	6	KANE COUNTY	0	.	.
101	6	BEAVER VALLEY	0	.	.
113	6	CENTRAL VALLEY	8	8	100.00
128	6	SAN JUAN	11	10	90.91
116	6	DELTA COMMUNITY	0	.	.
109	6	UINTAH BASIN	55	54	98.18
130	6	SANPETE VALLEY	7	6	85.71
110	6	GARFIELD MEMORIAL	0	.	.
115	6	FILLMORE COMMUNITY	1	1	100.00
132	6	SEVIER VALLEY	8	7	87.50
111	6	ALLEN MEMORIAL	6	4	66.67
139	6	WASATCH COUNTY	10	7	70.00
122	N	PRIMARY CHILDREN'S	3	1	33.33

peer group key on page 34

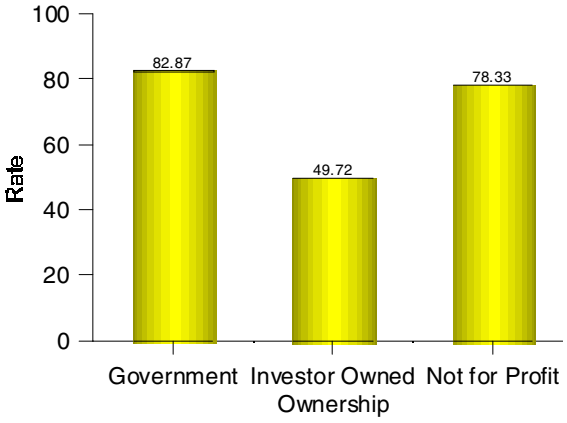
Source: Utah Hospital Discharge Database, 1992-1998.

Laparoscopic Cholecystectomy

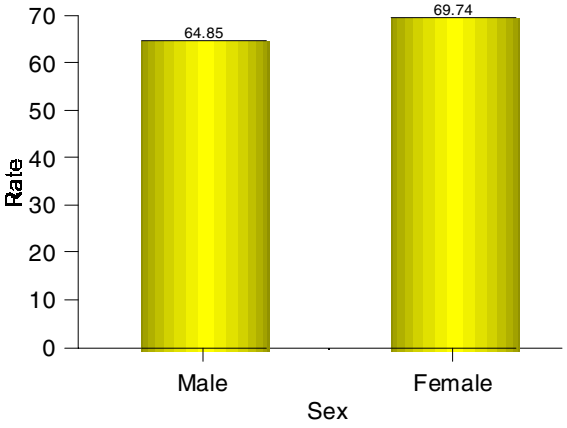
Rate by Patient Residence



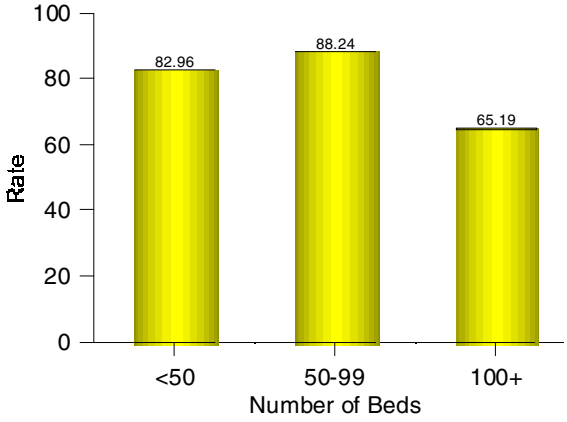
Rate by Ownership



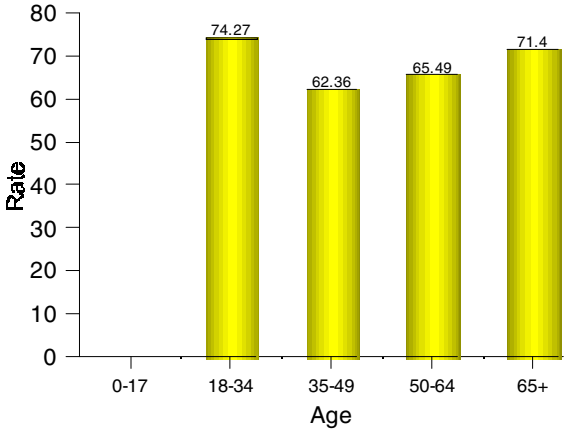
Rate by Sex



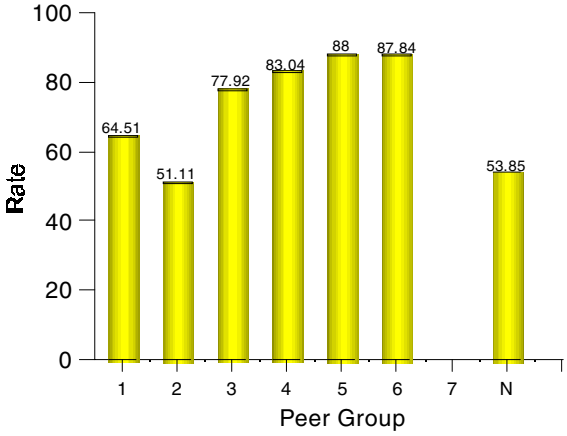
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

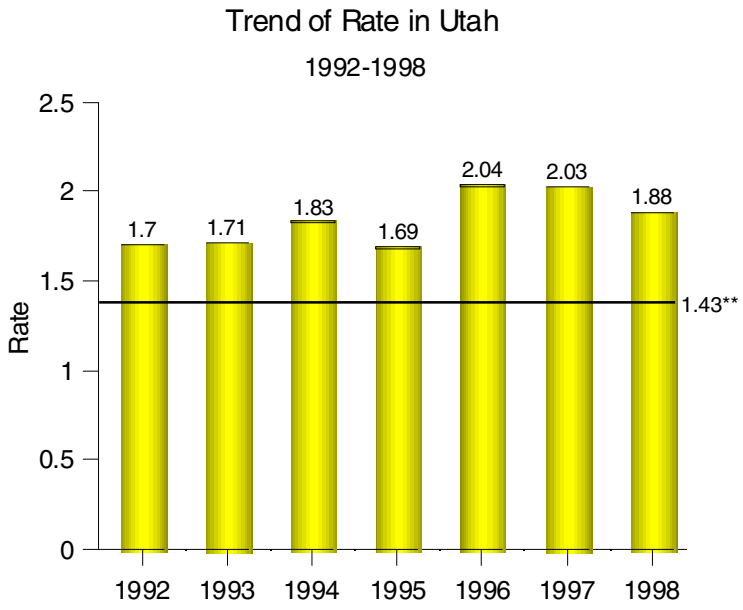
Coronary Artery Bypass Graft

CABG (surgical restoration of blood flow to the coronary arteries) is a common therapy for coronary artery disease. It is known that the outcomes from CABG are better at institutions that perform more CABGs, but it is also known that many CABGs may be unnecessary. Although the overall CABG rate cannot determine inappropriate use, it may identify areas where CABG rates can be reduced or where too few procedures are performed. After an increase in 1996, Utah's overall CABG rate showed a decrease between 1996 and 1998.

Outcome:
CABG with or without cardiac catheterization

Population at risk:
Adults age 40 + ; exclude deliveries (DRGs 370-375); exclude transfers from another institution

Rate:
Number of procedures per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

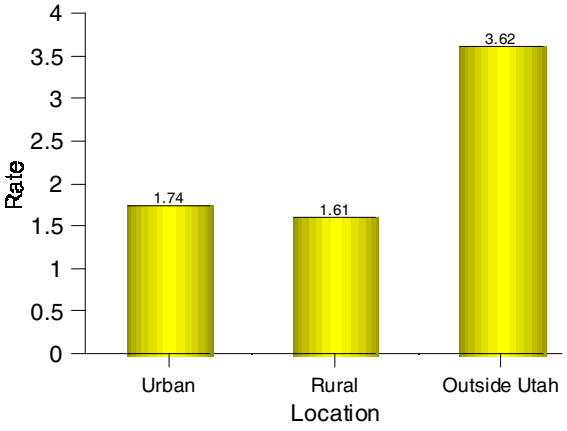
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			95,268	1,795	1.88
121	1	LDS	11,756	569	4.84
125	1	UNIVERSITY OF UTAH	8,742	137	1.57
138	2	UTAH VALLEY	8,192	213	2.60
141	2	MCKAY DEE	6,629	243	3.67
124	2	ST. MARK'S	10,062	315	3.13
120	2	SALT LAKE REGIONAL	2,734	88	3.22
137	3	MOUNTAIN VIEW	2,026	0	0.00
142	3	OGDEN REGIONAL	3,376	106	3.14
107	3	LAKEVIEW	2,131	0	0.00
108	3	DAVIS HOSPITAL	2,739	0	0.00
119	3	COTTONWOOD	5,468	0	0.00
126	3	PIONEER VALLEY	1,596	0	0.00
144	4	TIMPANOGOS REGIONAL	785	0	0.00
135	4	OREM COMMUNITY	101	0	0.00
118	4	ALTA VIEW	2,044	0	0.00
136	4	AMERICAN FORK	1,483	0	0.00
117	4	JORDAN VALLEY	769	0	0.00
103	5	BRIGHAM CITY	619	0	0.00
105	5	LOGAN REGIONAL	2,680	0	0.00
106	5	CASTLEVIEW	1,256	0	0.00
134	5	ASHLEY VALLEY	870	0	0.00
112	5	VALLEY VIEW	755	0	0.00
140	5	DIXIE	5,307	0	0.00
102	6	MILFORD VALLEY	241	0	0.00
133	6	TOOELE VALLEY	646	0	0.00
129	6	GUNNISON VALLEY	416	0	0.00
104	6	BEAR RIVER VALLEY	208	0	0.00
114	6	KANE COUNTY	195	0	0.00
101	6	BEAVER VALLEY	304	0	0.00
113	6	CENTRAL VALLEY	316	0	0.00
128	6	SAN JUAN	220	0	0.00
116	6	DELTA COMMUNITY	142	0	0.00
109	6	UINTAH BASIN	695	0	0.00
130	6	SANPETE VALLEY	188	0	0.00
110	6	GARFIELD MEMORIAL	147	0	0.00
115	6	FILLMORE COMMUNITY	105	0	0.00
132	6	SEVIER VALLEY	658	0	0.00
111	6	ALLEN MEMORIAL	343	0	0.00
139	6	WASATCH COUNTY	160	0	0.00
122	N	PRIMARY CHILDREN'S	2	0	0.00

peer group key on page 34

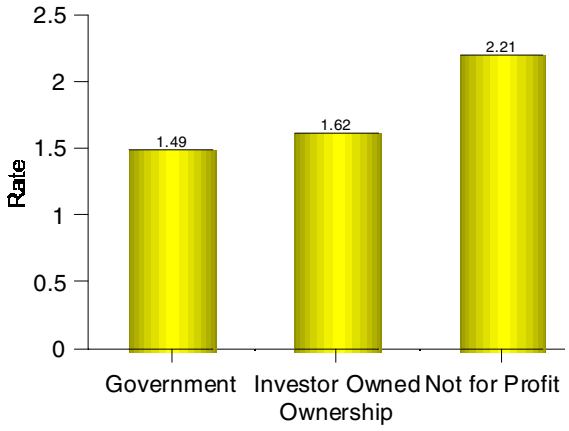
Source: Utah Hospital Discharge Database, 1992-1998.

Coronary Artery Bypass Graft

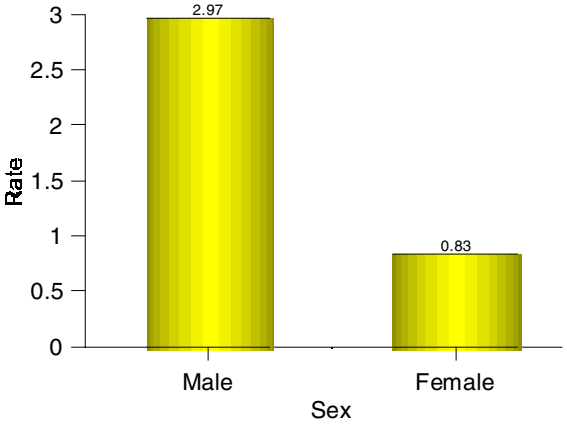
Rate by Patient Residence



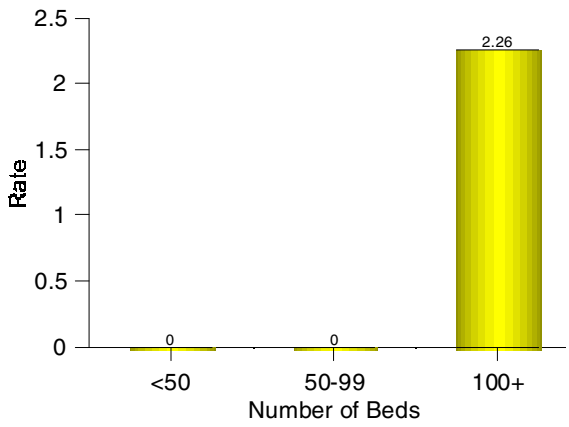
Rate by Ownership



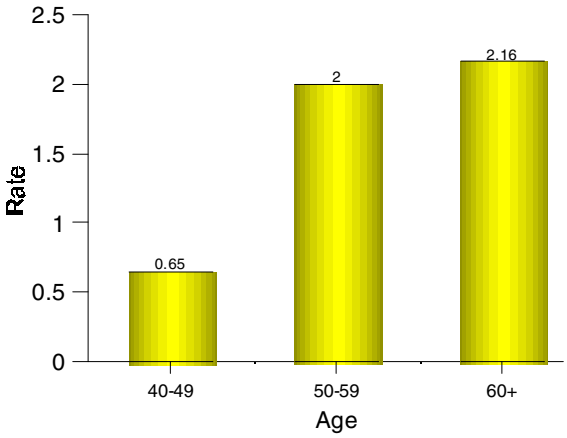
Rate by Sex



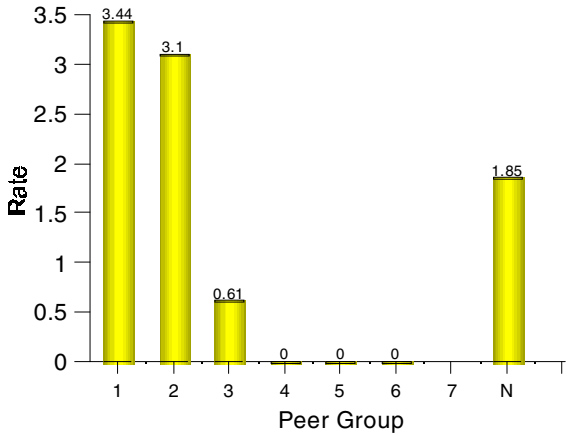
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

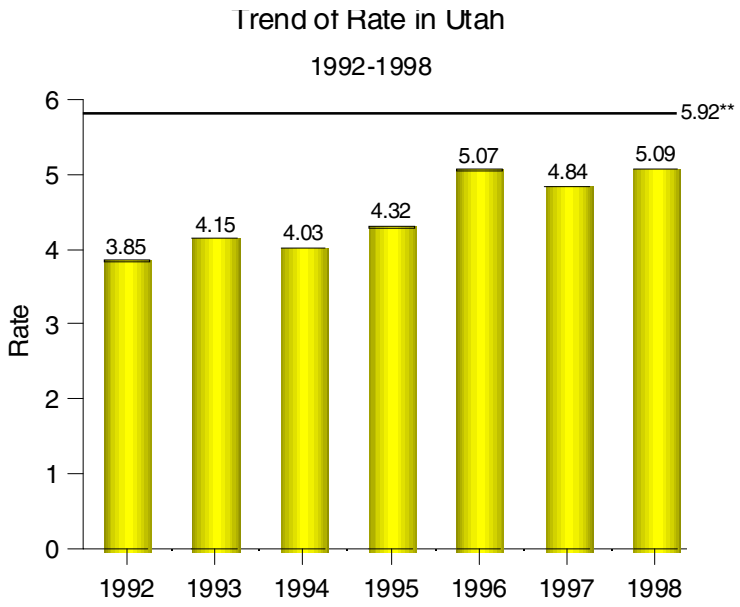
Low Birthweight

Low birthweight is a major determinant of infant mortality. Maternal factors that influence birthweight are smoking cessation, reduced maternal weight gain, and initiation of early prenatal care. Hospitals with high rates of low birthweight may reveal a problem in access to prenatal care in the community. Year 2000 target: reduce birthweight < 2,500 grams to no more than 5 per 100 live births. After a slight decrease in 1997, the low birthweight rate in Utah increased to 5.09 per 100 newborns in 1998.

Outcome:
Diagnosis of light for dates, fetal malnutrition, fetal growth retardation, extreme immaturity, or pre-term infant with birthweight less than 2,500 grams or birthweight unspecified

Population at risk:
MDC 15 (newborns and other neonates); exclude transfers from another institution

Rate:
Number of births less than 2500 grams per 100 newborns



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

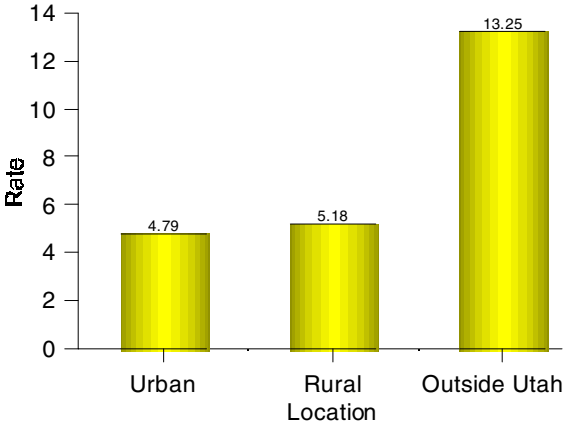
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			45,970	2,340	5.09
121	1	LDS	4,585	312	6.81
125	1	UNIVERSITY OF UTAH	3,066	434	14.16
138	2	UTAH VALLEY	3,979	286	7.19
141	2	MCKAY DEE	3,338	173	5.18
124	2	ST. MARK'S	3,219	166	5.16
120	2	SALT LAKE REGIONAL	1,348	20	1.48
137	3	MOUNTAIN VIEW	1,164	29	2.49
142	3	OGDEN REGIONAL	1,868	72	3.85
107	3	LAKEVIEW	700	36	5.14
108	3	DAVIS HOSPITAL	1,958	90	4.60
119	3	COTTONWOOD	3,553	107	3.01
126	3	PIONEER VALLEY	490	20	4.08
144	4	TIMPANOGOS REGIONAL	757	14	1.85
135	4	OREM COMMUNITY	1,395	30	2.15
118	4	ALTA VIEW	1,869	28	1.50
136	4	AMERICAN FORK	2,331	55	2.36
117	4	JORDAN VALLEY	1,467	39	2.66
103	5	BRIGHAM CITY	523	16	3.06
105	5	LOGAN REGIONAL	2,307	83	3.60
106	5	CASTLEVIEW	437	15	3.43
134	5	ASHLEY VALLEY	286	7	2.45
112	5	VALLEY VIEW	699	28	4.01
140	5	DIXIE	1,944	84	4.32
102	6	MILFORD VALLEY	26	0	0.00
133	6	TOOELE VALLEY	166	4	2.41
129	6	GUNNISON VALLEY	266	7	2.63
104	6	BEAR RIVER VALLEY	80	0	0.00
114	6	KANE COUNTY	37	0	0.00
101	6	BEAVER VALLEY	76	1	1.32
113	6	CENTRAL VALLEY	114	3	2.63
128	6	SAN JUAN	179	2	1.12
116	6	DELTA COMMUNITY	114	3	2.63
109	6	UINTAH BASIN	398	13	3.27
130	6	SANPETE VALLEY	109	2	1.84
110	6	GARFIELD MEMORIAL	40	1	2.50
115	6	FILLMORE COMMUNITY	45	2	4.44
132	6	SEVIER VALLEY	228	6	2.63
111	6	ALLEN MEMORIAL	96	4	4.17
139	6	WASATCH COUNTY	170	3	1.77
122	N	PRIMARY CHILDREN'S	543	145	26.70

peer group key on page 34

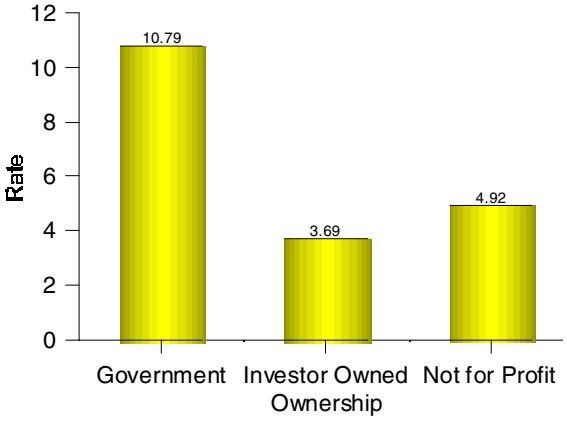
Source: Utah Hospital Discharge Database, 1992-1998.

Low Birthweight

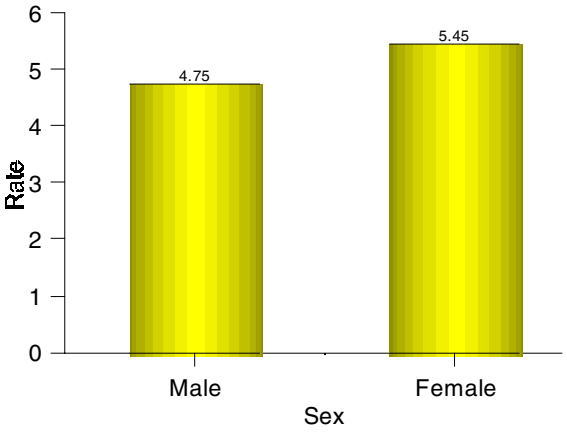
Rate by Patient Residence



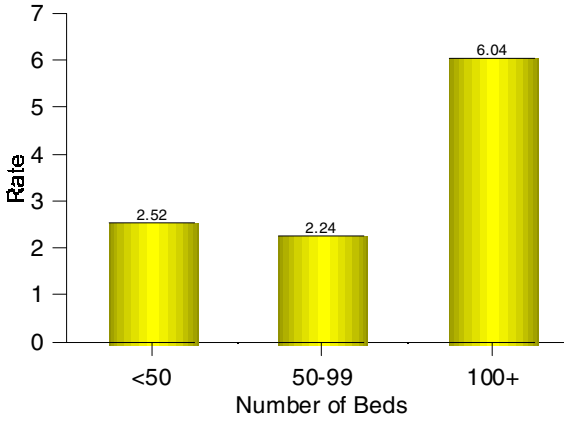
Rate by Ownership



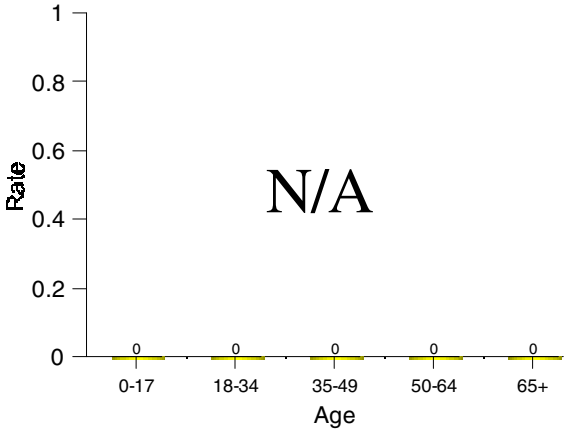
Rate by Sex



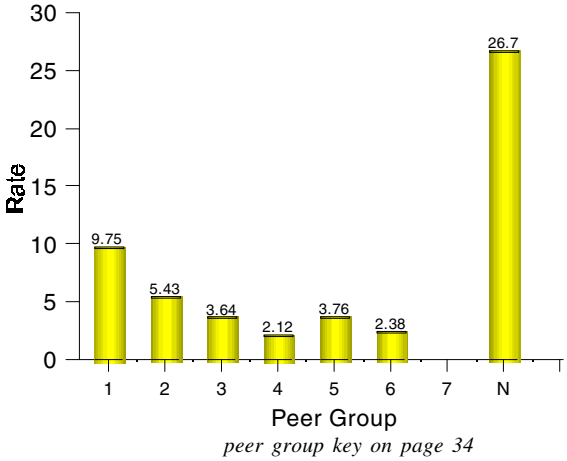
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

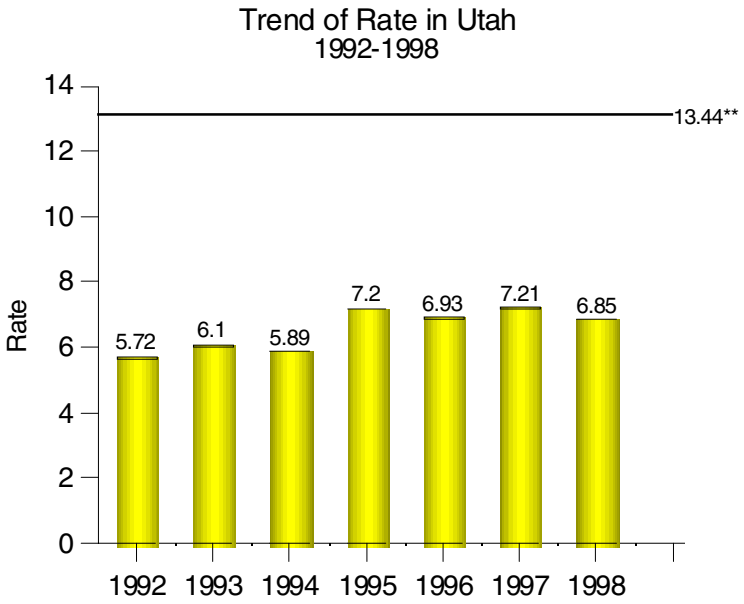
Pediatric Asthma

Adequate ambulatory care can prevent many hospitalizations for asthma. Studies have shown that hospitalization for asthma is a particular problem among poor children and adolescents. Hospitals with high rates of pediatric asthma may reveal a problem in access to primary care in the community. In 1998, 5.95 percent of Utah female children were diagnosed with asthma, compared to 7.78 percent for the male population of the same age.

Population at risk:
Children age < 18; exclude MDC 15 (all maternal and neonatal discharges)

Outcomes:
Diagnosis of asthma

Rate:
Number of discharges with asthma per 100 discharges



** US Rate,1996 Source: NIS

Source: Utah Hospital Discharge Database, 1992-1998.

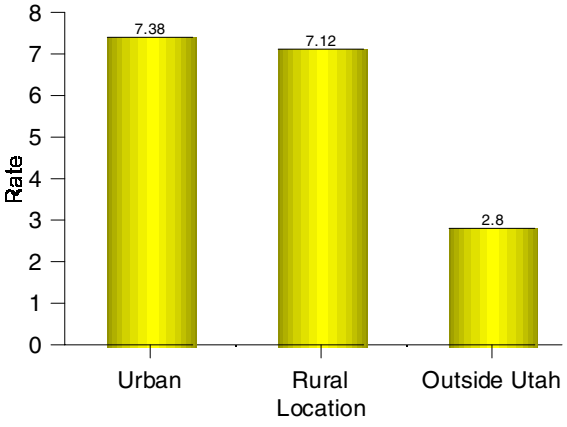
Individual Hospital Rates, 1998

#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			18,111	1,241	6.85
121	1	LDS	247	7	2.83
125	1	UNIVERSITY OF UTAH	501	9	1.80
138	2	UTAH VALLEY	1,627	91	5.59
141	2	MCKAY DEE	1,200	124	10.33
124	2	ST. MARK'S	258	24	9.30
120	2	SALT LAKE REGIONAL	17	1	5.88
137	3	MOUNTAIN VIEW	309	12	3.88
142	3	OGDEN REGIONAL	402	25	6.22
107	3	LAKEVIEW	124	3	2.42
108	3	DAVIS HOSPITAL	414	50	12.08
119	3	COTTONWOOD	427	45	10.54
126	3	PIONEER VALLEY	126	25	19.84
144	4	TIMPANOGOS REGIONAL	117	11	9.40
135	4	OREM COMMUNITY	15	0	0.00
118	4	ALTA VIEW	125	2	1.60
136	4	AMERICAN FORK	360	23	6.39
117	4	JORDAN VALLEY	170	20	11.77
103	5	BRIGHAM CITY	87	13	14.94
105	5	LOGAN REGIONAL	592	50	8.45
106	5	CASTLEVIEW	211	21	9.95
134	5	ASHLEY VALLEY	110	13	11.82
112	5	VALLEY VIEW	99	2	2.02
140	5	DIXIE	578	30	5.19
102	6	MILFORD VALLEY	83	7	8.43
133	6	TOOELE VALLEY	66	9	13.64
129	6	GUNNISON VALLEY	101	10	9.90
104	6	BEAR RIVER VALLEY	70	6	8.57
114	6	KANE COUNTY	44	2	4.55
101	6	BEAVER VALLEY	53	1	1.89
113	6	CENTRAL VALLEY	115	8	6.96
128	6	SAN JUAN	105	12	11.43
116	6	DELTA COMMUNITY	27	1	3.70
109	6	UINTAH BASIN	234	13	5.56
130	6	SANPETE VALLEY	32	2	6.25
110	6	GARFIELD MEMORIAL	68	5	7.35
115	6	FILLMORE COMMUNITY	23	2	8.70
132	6	SEVIER VALLEY	164	26	15.85
111	6	ALLEN MEMORIAL	72	8	11.11
139	6	WASATCH COUNTY	35	2	5.71
122	N	PRIMARY CHILDREN'S	7,789	500	6.42

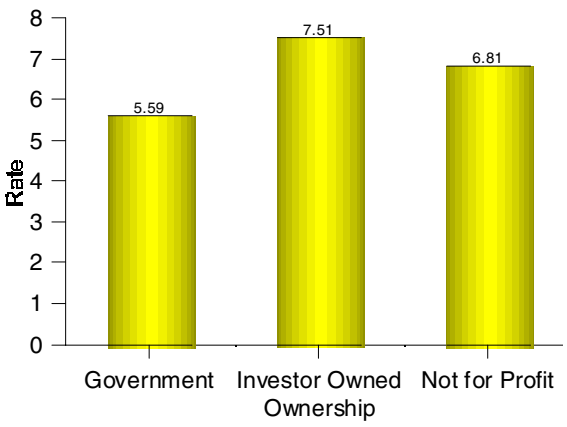
peer group key on page 34

Pediatric Asthma

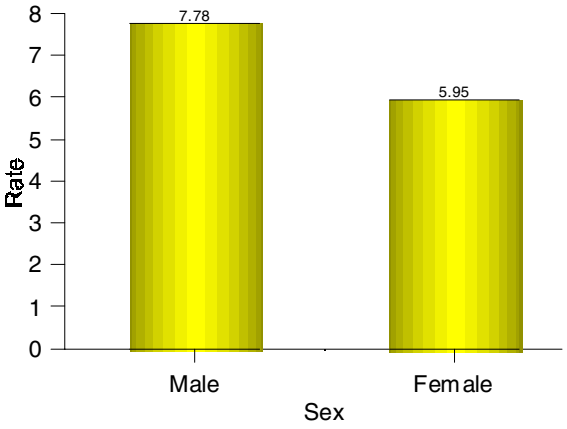
Rate by Patient Residence



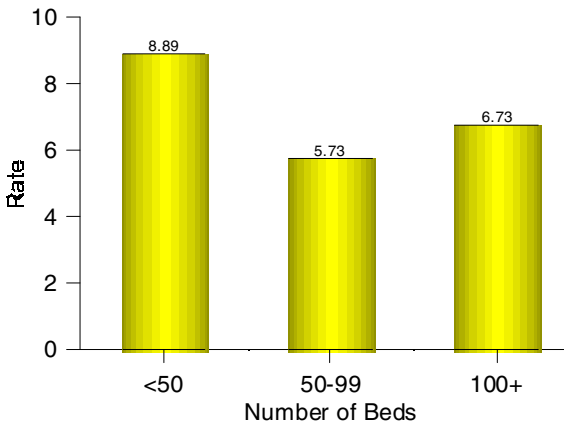
Rate by Ownership



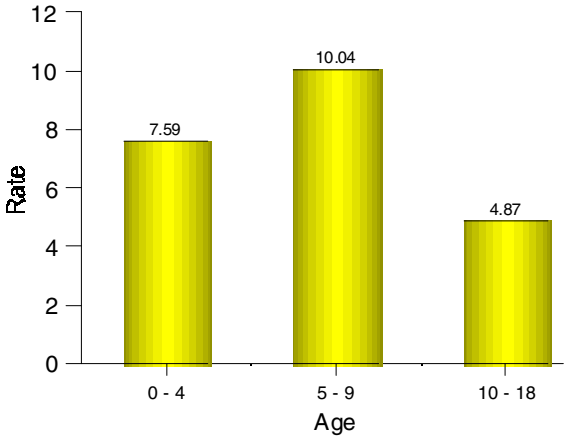
Rate by Sex



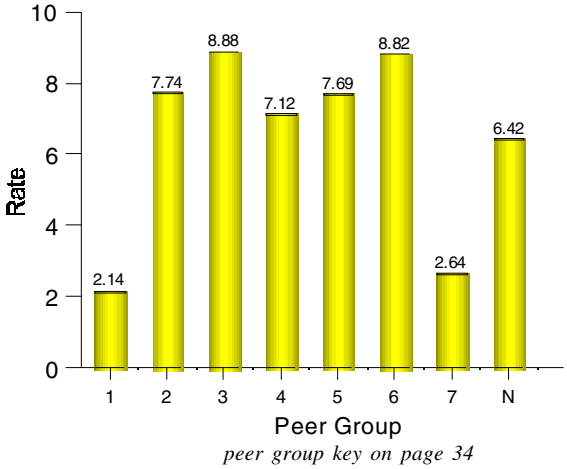
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

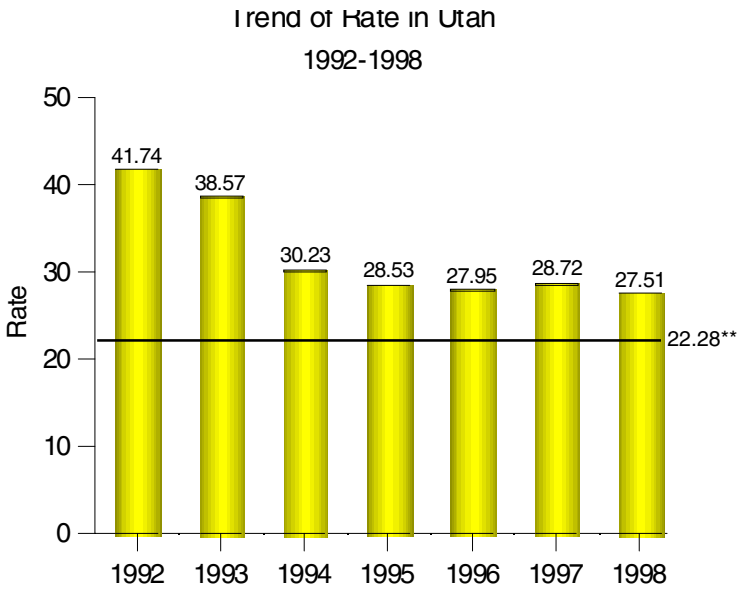
Diabetes Long-term Complications

Long-term complications of diabetes include blindness, renal failure, and vascular disease leading to amputation. Onset of these complications can be postponed or prevented if patients control their blood glucose to near normal levels and receive early medical care for complications. Hospitals with high rates of diabetic complications may reveal a problem in access to diabetes services in the community. The overall rate of diabetes long-term complications in Utah continues to decline from 41.74 percent in 1992 to 27.51 percent in 1998.

Outcome:
Diagnosis of renal, eye, neurological, circulatory, or other complication due to diabetes

Population at risk:
Diagnosis of diabetes; adults age 18+; exclude all maternal discharges (DRGs 370-375)

Rate:
Number of discharges with complications per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

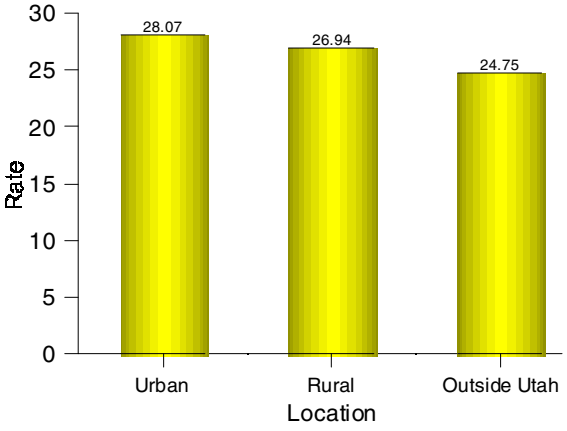
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State totals			13,043	3,588	27.51
121	1	LDS	1,416	501	35.38
125	1	UNIVERSITY OF UTAH	1,018	349	34.28
138	2	UTAH VALLEY	1,053	324	30.77
141	2	MCKAY DEE	989	238	24.07
124	2	ST. MARK'S	1,452	310	21.35
120	2	SALT LAKE REGIONAL	442	142	32.13
137	3	MOUNTAIN VIEW	278	50	17.99
142	3	OGDEN REGIONAL	526	131	24.91
107	3	LAKEVIEW	263	70	26.62
108	3	DAVIS HOSPITAL	471	61	12.95
119	3	COTTONWOOD	715	181	25.32
126	3	PIONEER VALLEY	257	63	24.51
144	4	TIMPANOGOS REGIONAL	115	21	18.26
135	4	OREM COMMUNITY	12	4	33.33
118	4	ALTA VIEW	302	53	17.55
136	4	AMERICAN FORK	256	107	41.80
117	4	JORDAN VALLEY	141	63	44.68
103	5	BRIGHAM CITY	89	23	25.84
105	5	LOGAN REGIONAL	383	112	29.24
106	5	CASTLEVIEW	178	32	17.98
134	5	ASHLEY VALLEY	186	59	31.72
112	5	VALLEY VIEW	80	20	25.00
140	5	DIXIE	638	185	29.00
102	6	MILFORD VALLEY	7	0	0.00
133	6	TOOELE VALLEY	121	51	42.15
129	6	GUNNISON VALLEY	53	10	18.87
104	6	BEAR RIVER VALLEY	36	0	0.00
114	6	KANE COUNTY	35	4	11.43
101	6	BEAVER VALLEY	30	6	20.00
113	6	CENTRAL VALLEY	66	15	22.73
128	6	SAN JUAN	37	13	35.14
116	6	DELTA COMMUNITY	19	7	36.84
109	6	UINTAH BASIN	154	30	19.48
130	6	SANPETE VALLEY	31	8	25.81
110	6	GARFIELD MEMORIAL	21	2	9.52
115	6	FILLMORE COMMUNITY	29	1	3.45
132	6	SEVIER VALLEY	99	25	25.25
111	6	ALLEN MEMORIAL	48	7	14.58
139	6	WASATCH COUNTY	33	14	42.42
122	N	PRIMARY CHILDREN'S	7	0	0.00

peer group key on page 34

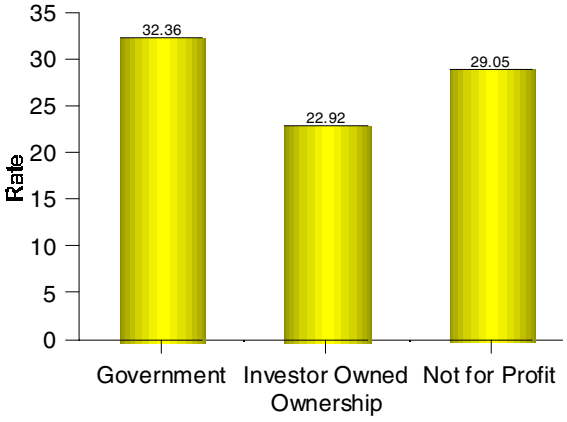
Source: Utah Hospital Discharge Database, 1992-1998.

Diabetes Long Term Complications

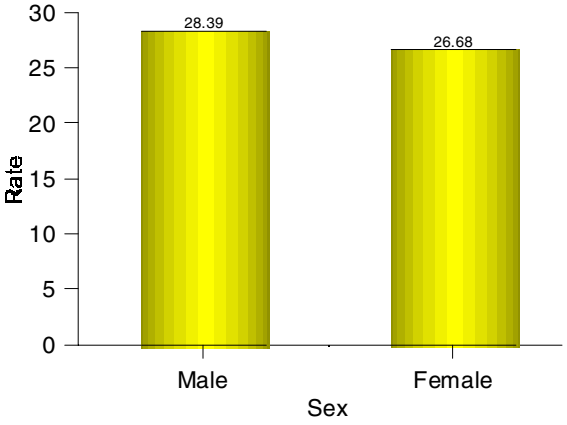
Rate by Patient Residence



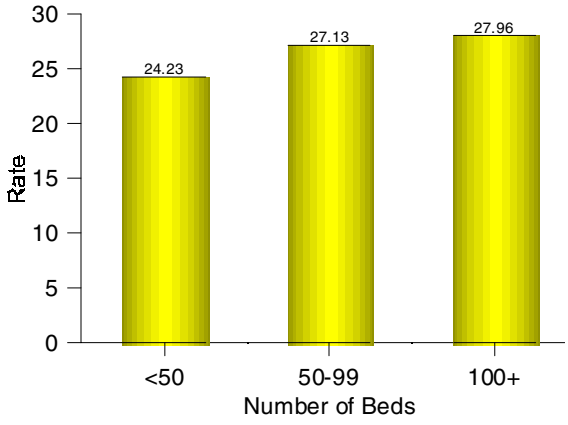
Rate by Ownership



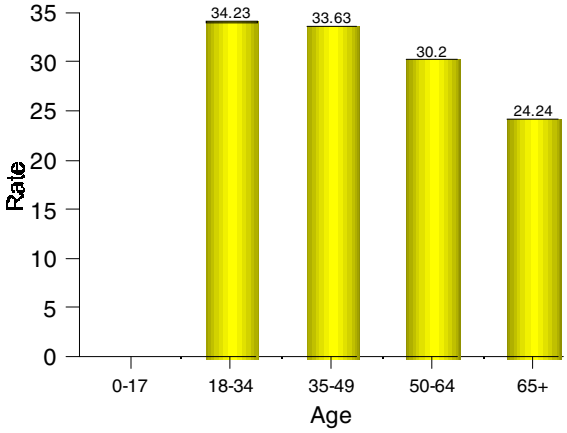
Rate by Sex



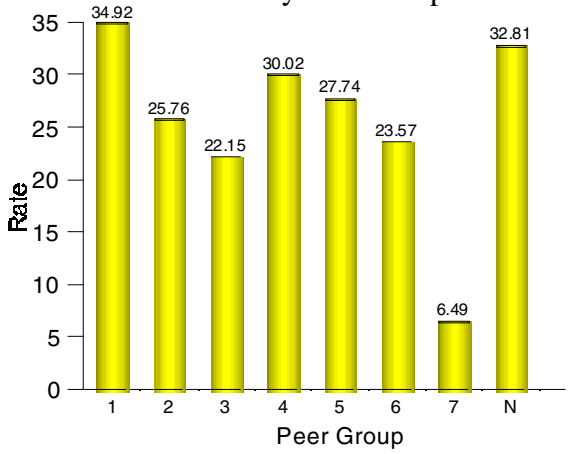
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

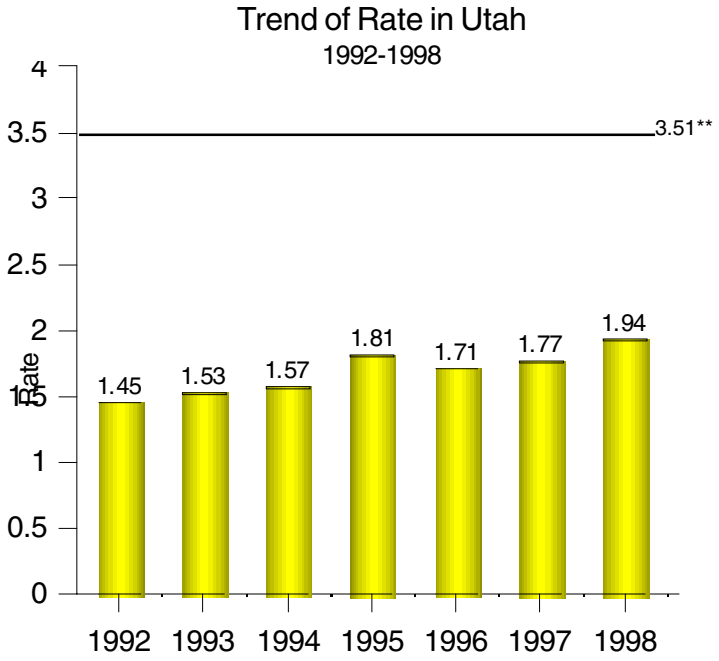
Cerebrovascular Disease - Non-elderly

Cerebrovascular disease, or stroke, is a major cause of death. Reduction of high blood pressure, cholesterol, and smoking can result in lower stroke-related morbidity and mortality. Hospitals with high rates of cerebrovascular disease among the non-elderly may reveal a need for targeted risk reduction in the community.

Population at risk:
Adults age 18-64; exclude deliveries (DRGs 370-375)

Outcome:
Diagnosis of intracranial hemorrhage, cerebral or precerebral arterial occlusion, cerebral thrombosis, cerebrovascular accident, cerebral atherosclerosis, cerebrovascular disease, late effects of cerebrovascular disease, or transient cerebral ischemia

Rate:
Number of discharges with transient ischemic attack (TIA) or cerebrovascular accident (CVA) per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

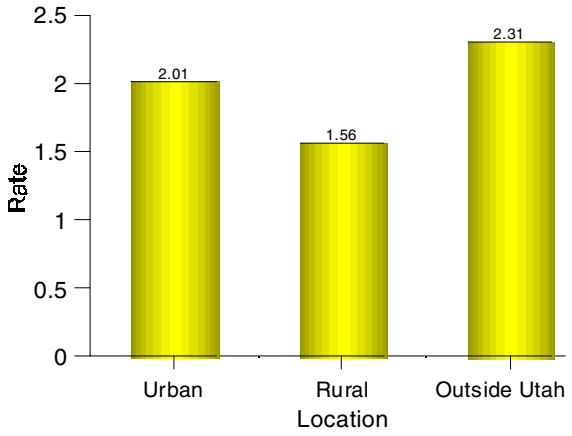
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Totals			68,663	1,333	1.94
121	1	LDS	9,152	195	2.13
125	1	UNIVERSITY OF UTAH	8,664	242	2.79
138	2	UTAH VALLEY	6,098	120	1.97
141	2	MCKAY DEE	4,447	127	2.86
124	2	ST. MARK'S	6,088	104	1.71
120	2	SALT LAKE REGIONAL	1,447	30	2.07
137	3	MOUNTAIN VIEW	1,037	17	1.64
142	3	OGDEN REGIONAL	2,020	48	2.38
107	3	LAKEVIEW	1,216	8	0.66
108	3	DAVIS HOSPITAL	1,744	13	0.75
119	3	COTTONWOOD	4,503	136	3.02
126	3	PIONEER VALLEY	1,014	18	1.78
144	4	TIMPANOGOS REGIONAL	482	9	1.87
135	4	OREM COMMUNITY	142	2	1.41
118	4	ALTA VIEW	1,665	29	1.74
136	4	AMERICAN FORK	995	15	1.51
117	4	JORDAN VALLEY	855	10	1.17
103	5	BRIGHAM CITY	347	3	0.87
105	5	LOGAN REGIONAL	2,076	11	0.53
106	5	CASTLEVIEW	660	8	1.21
134	5	ASHLEY VALLEY	473	6	1.27
112	5	VALLEY VIEW	432	4	0.93
140	5	DIXIE	2,944	43	1.46
102	6	MILFORD VALLEY	162	0	0.00
133	6	TOOELE VALLEY	367	4	1.09
129	6	GUNNISON VALLEY	211	6	2.84
104	6	BEAR RIVER VALLEY	152	0	0.00
114	6	KANE COUNTY	78	0	0.00
101	6	BEAVER VALLEY	170	1	0.59
113	6	CENTRAL VALLEY	175	4	2.29
128	6	SAN JUAN	144	0	0.00
116	6	DELTA COMMUNITY	57	1	1.75
109	6	UINTAH BASIN	616	6	0.97
130	6	SANPETE VALLEY	98	4	4.08
110	6	GARFIELD MEMORIAL	106	0	0.00
115	6	FILLMORE COMMUNITY	38	0	0.00
132	6	SEVIER VALLEY	324	6	1.85
111	6	ALLEN MEMORIAL	285	5	1.75
139	6	WASATCH COUNTY	103	2	1.94
122	N	PRIMARY CHILDREN'S	244	2	0.82

peer group key on page 34

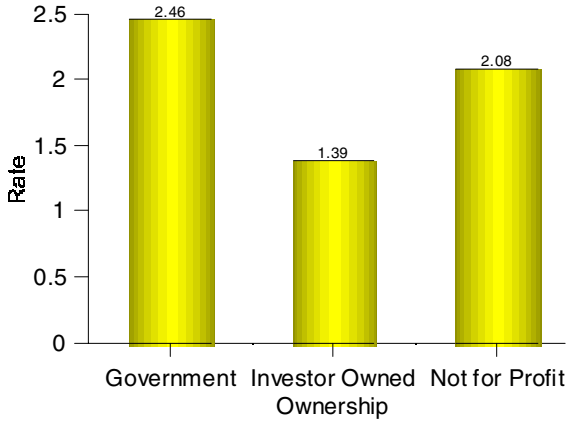
Source: Utah Hospital Discharge Database, 1992-1998.

Cerebrovascular Disease Non-elderly

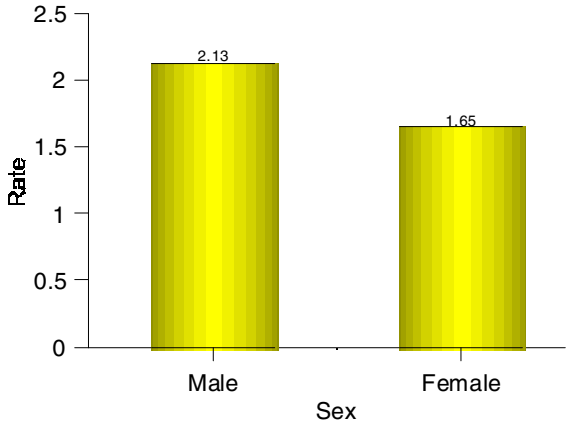
Rate by Patient Residence



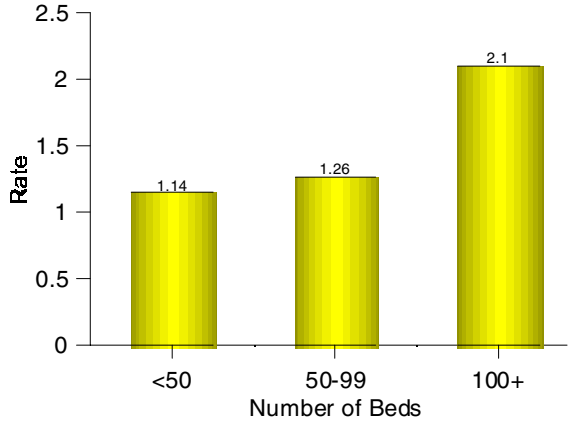
Rate by Ownership



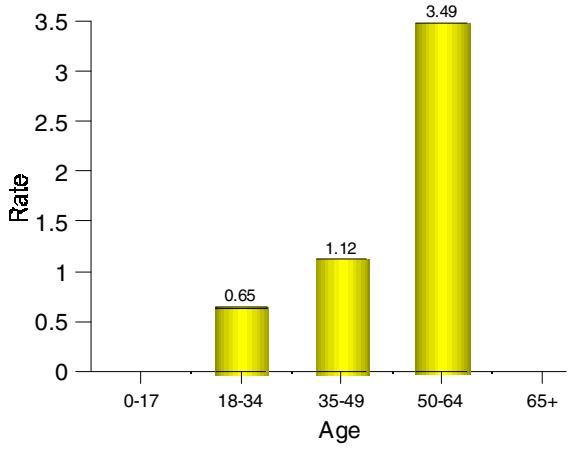
Rate by Sex



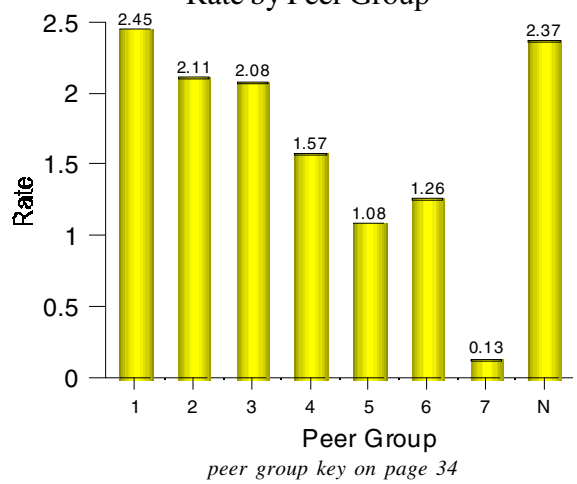
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.

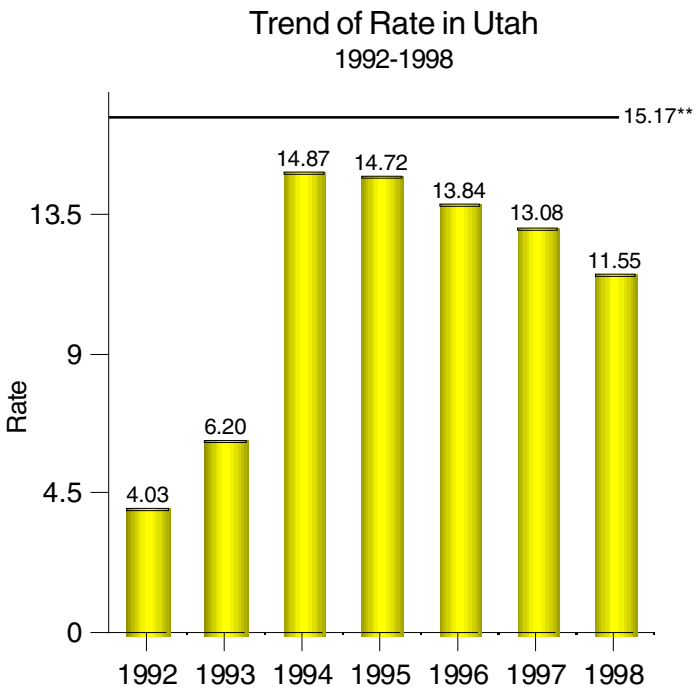
Diabetes Short-term Complications

Some acute complications of diabetes require emergency treatment. Such complications are more likely to occur in patients who are inadequately monitored or poorly educated about the management of diabetes. Hospitals with high rates of diabetic complications may reveal a problem in access to diabetes services in the community.

Population at risk:
Diagnosis of diabetes; adults age 18+; exclude deliveries (DRGs 370-375)

Outcome:
Diagnosis of uncontrolled diabetes, diabetic ketoacidosis, diabetes with hyperosmolar or unspecified coma

Rate:
Number of discharges with complications per 100 discharges



** US Rate,1996 Source: NIS

Individual Hospital Rates, 1998

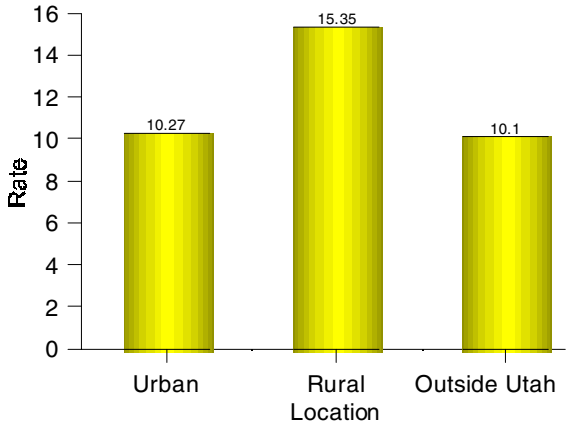
#	Peer*	Hospital	At Risk Pop	Outcome	Rate
State Total			13,043	1,507	11.55
121	1	LDS	1,416	138	9.75
125	1	UNIVERSITY OF UTAH	1,018	99	9.73
138	2	UTAH VALLEY	1,053	82	7.79
141	2	MCKAY DEE	989	124	12.54
124	2	ST. MARK'S	1,452	75	5.17
120	2	SALT LAKE REGIONAL	442	47	10.63
137	3	MOUNTAIN VIEW	278	29	10.43
142	3	OGDEN REGIONAL	526	47	8.94
107	3	LAKEVIEW	263	27	10.27
108	3	DAVIS HOSPITAL	471	37	7.86
119	3	COTTONWOOD	715	139	19.44
126	3	PIONEER VALLEY	257	58	22.57
144	4	TIMPANOGOS REGIONAL	115	9	7.83
135	4	OREM COMMUNITY	12	4	33.33
118	4	ALTA VIEW	302	37	12.25
136	4	AMERICAN FORK	256	11	4.30
117	4	JORDAN VALLEY	141	27	19.15
103	5	BRIGHAM CITY	89	6	6.74
105	5	LOGAN REGIONAL	383	43	11.23
106	5	CASTLEVIEW	178	57	32.02
134	5	ASHLEY VALLEY	186	10	5.38
112	5	VALLEY VIEW	80	19	23.75
140	5	DIXIE	638	173	27.12
102	6	MILFORD VALLEY	7	4	57.14
133	6	TOOELE VALLEY	121	28	23.14
129	6	GUNNISON VALLEY	53	4	7.55
104	6	BEAR RIVER VALLEY	36	2	5.56
114	6	KANE COUNTY	35	4	11.43
101	6	BEAVER VALLEY	30	2	6.67
113	6	CENTRAL VALLEY	66	18	27.27
128	6	SAN JUAN	37	1	2.70
116	6	DELTA COMMUNITY	19	7	36.84
109	6	UINTAH BASIN	154	21	13.64
130	6	SANPETE VALLEY	31	4	12.90
110	6	GARFIELD MEMORIAL	21	5	23.81
115	6	FILLMORE COMMUNITY	29	9	31.03
132	6	SEVIER VALLEY	99	37	37.37
111	6	ALLEN MEMORIAL	48	22	45.83
139	6	WASATCH COUNTY	33	4	12.12
122	N	PRIMARY CHILDREN'S	7	1	14.29

peer group key on page 34

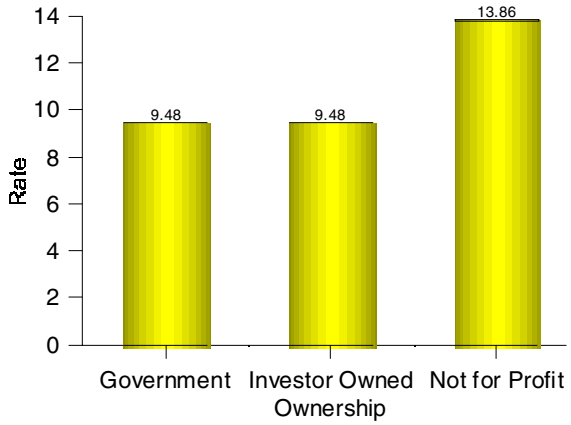
Source: Utah Hospital Discharge Database, 1992-1998.

Diabetes Short Term Complications

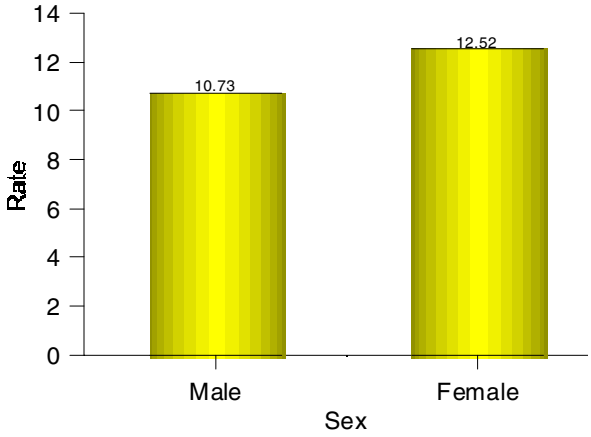
Rate by Patient Residence



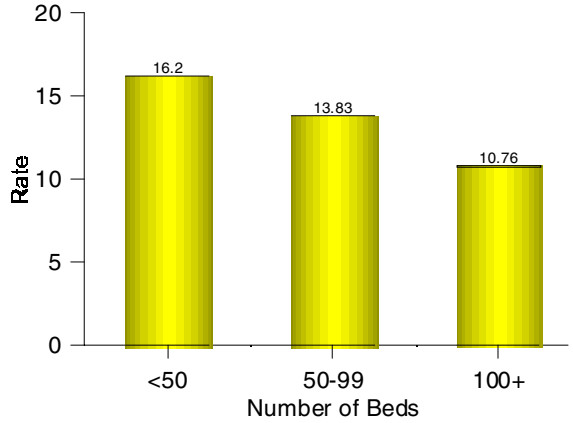
Rate by Ownership



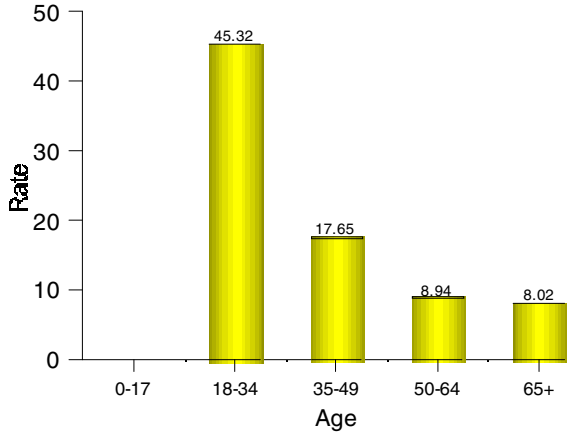
Rate by Sex



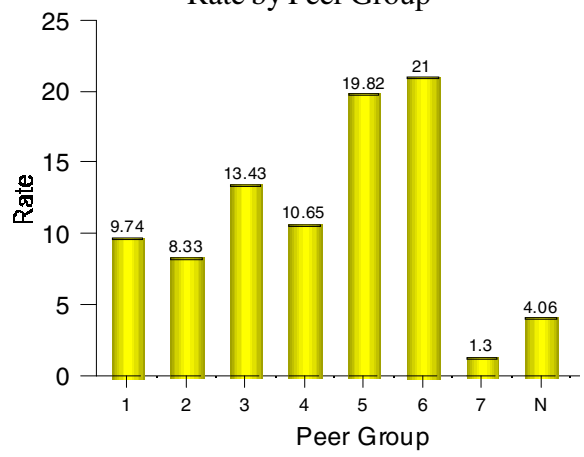
Rate by Hospital Size



Rate by Age Group



Rate by Peer Group



peer group key on page 34

Source: Utah Hospital Discharge Database, 1992-1998.