HEALTHCARE COST AND UTILIZATION PROJECT

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Hospital Stays among People Living in the Poorest Communities, 2006

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Introduction

Despite national efforts to eliminate disparities in health care, socio-economic status (SES) remains an important predictor of access to and quality of care. Low socio-economic status is associated with higher hospital admission rates, possibly due to lower utilization of routine and preventive health care services among poorer individuals that could prevent the need for hospitalization.[1]

Community-level income (median income of a patient's ZIP Code of residence) is one important indicator of SES. In 2006, communities with a median household income of less than $38,000 were classified as the poorest communities in HCUP databases. Understanding differences in hospital utilization characteristics by community-level income can provide valuable insight for addressing health care disparities.

This Statistical Brief presents data from the Healthcare Cost and Utilization Project (HCUP) comparing hospital stays of patients from the poorest communities to other communities. Hospital resource utilization characteristics, including the volume, cost, underlying causes, most common procedures and expected primary payer, are examined by community-level income for patients. All differences between estimates noted in the text are statistically significant at the 0.05 level or better.

Findings

General Findings

In 2006, individuals residing in the poorest communities accounted for more than 11 million hospital stays in U.S. community hospitals (table 1), or about 28 percent of all hospitalizations. "Poorest communities" was defined as those ZIP Codes in the bottom quartile of median household income, or the bottom 25 percent. The rate of hospitalization among people

[1] Agency for Healthcare Research and Quality (AHRQ). *2008 National Healthcare Disparities Report*. Rockville, MD: U.S. Department of Health and Human Services, AHRQ; March 2009. AHRQ Pub. No. 09-0002.

Highlights

- The rate of hospitalization among people living in the poorest areas was 22 percent higher compared to people residing in wealthier communities. The rate of hospital stays among 45–64 year olds was nearly 50 percent higher for people in the lowest-income communities.
- Patients from the poorest communities were more likely to be admitted for potentially preventable conditions—higher rates were seen for asthma (87 percent), diabetes with complications (77 percent), COPD (69 percent), CHF (51 percent), skin infections (49 percent), pneumonia (42 percent), dehydration (38 percent), urinary tract infection (37 percent), and nonspecific chest pain (32 percent).
- Patients from the lowest income communities were more likely to receive most of the 20 top procedures performed in the hospital. The largest differences were seen for eye and ear procedures (81 percent higher), hemodialysis (80 percent), vaccination of newborns for hepatitis B (47 percent), ligation of fallopian tubes (47 percent), and respiratory intubation (32 percent).
- Patients from the lowest income communities were 63 percent more likely to be discharged from the hospital against medical advice than were patients from other communities.

living in the poorest areas was 22 percent higher compared to people residing in relatively wealthier communities (1,496 versus 1,223 stays per 10,000 population, respectively).

On average, patients spent just under 5 days in the hospital regardless of whether they came from the poorest or from wealthier communities. Despite similar lengths of stays, the average cost for a hospital stay was $700 lower among patients from the poorest areas ($7,800 versus $8,500, respectively), and in aggregate, accounted for 26.2 percent of the total national costs of all hospitalizations ($86.4 billion of $329.2 billion).

Patients living in the poorest communities were about 8 percent more likely to be admitted through the emergency department (ED) compared to patients living in other communities (46.0 versus 42.6 percent). These patients were about 63 percent more likely to leave against medical advice (1.3 versus 0.8 percent). The percentage of patients who died at the hospital was about the same irrespective of community-level income (about 2 percent).

As shown in table 2, regardless of whether patients lived in the poorest or in relatively wealthier communities, those residing in rural areas had the highest rates of hospitalization. The rural poor had the highest rate of hospitalization (1,597 stays per 10,000 population), which was 22 percent higher than in wealthier rural areas (1,309 stays per 10,000). The largest disparity in hospitalization rates was seen in large urban areas: individuals residing in the poorest large urban areas had hospitalization rates 27 percent higher compared to people living in wealthier large urban communities (1,536 versus 1,211 stays per 10,000 population). Differences in hospitalization rates by community-level income were considerably less pronounced for small urban areas. There was only a 9 percent difference between the poorest communities (1,327 stays per 10,000 population) and wealthier communities (1,213 stays per 10,000 population).

Hospital stays for patients in the poorest communities, by age and gender
Hospitalized patients from the poorest communities were slightly younger compared to patients from relatively wealthier areas (46.7 versus 48.2 years), as shown in table 2. Rates of hospitalization were consistently higher in the poorest areas across all age groups. However, the largest disparity was seen among 45-64 year olds, where the rate of hospital stays was nearly 50 percent greater among people in the lowest-income communities compared to other communities (1,607 versus 1,078 stays per 10,000 population). Among children aged 0 to 17 years and young adults aged 18 to 44 years, the hospitalization rate was about 20 percent greater in the poorest areas. Community-level income had the least impact on the hospitalization rate of older Americans, 65 years and above, with only a 6 percent difference between hospitalization rates (3,674 per 10,000 in the poorest communities compared to 3,461 stays per 10,000 population in wealthier communities).

Comparable to hospital care overall, women in the poorest areas were about 38 percent more likely to be hospitalized than men (1,724 versus 1,253 stays per 10,000 population). The rate of hospital stays by gender did not vary by community-level income—females were 1.4 times more likely to be hospitalized than men in both poorer and wealthier communities.

Most frequent reasons for hospital stays for patients from the poorest communities
Table 3 highlights the 20 most frequent health conditions causing hospitalization among patients from the poorest communities. Newborn birth was, by far, the most common reason for hospitalization regardless of income status, occurring at a rate of 155.6 and 136.1 stays per 10,000 patients in the lowest income communities and all other communities, respectively. Another birth-related condition, trauma to the perineum and vulva, was also among the most common reasons for hospitalization in both the poorest and relatively wealthier areas, occurring at a rate of 25.5 and 27.2 stays per 10,000 population, respectively.

Nine of the top 20 reasons for admission to the hospital were for potentially preventable conditions[2,3]—those conditions for which a hospital stay may be avoided with effective and timely ambulatory care—and all were higher among residents from the poorest communities (figure 1). The greatest disparities were seen for asthma (for which hospitalization rates were 87 percent higher among patients from the poorest communities), diabetes with complications (77 percent higher), chronic obstructive pulmonary disease (COPD) (69 percent higher), and congestive heart failure (51 percent higher).

[2] *Prevention Quality Indicators Overview.* AHRQ Quality Indicators. July 2004. Agency for Healthcare Research and Quality, Rockville, MD. http://qualityindicators.ahrq.gov/pqi_overview.htm
[3] Billings J. Using Administrative Data to Monitor Access, Identify Disparities, and Assess Performance of the Safety Net. http://www.ahrq.gov/data/safetynet/billings.htm

Other striking differences were seen for the following potentially preventable conditions: skin infections (49 percent higher among patients from the poorest communities), pneumonia (42 percent higher), dehydration (38 percent higher), urinary tract infection (37 percent higher), and nonspecific chest pain (32 percent higher). Finally, hospitalization rates were also higher for patients from the poorest communities for septicemia or blood infection (35 percent higher), stroke (26 percent higher) and affective or mood disorders (23 percent higher).

A lower rate of hospitalization was seen among patients from the poorest communities for only three of the top 20 conditions—osteoarthritis, which was 22 percent lower than for other communities, back problems (13 percent lower), and trauma to the perineum and vulva (6 percent lower).

Most frequent procedures performed during hospital stays for patients from the poorest communities
Table 4 illustrates the top 20 most common procedures performed during hospitalizations for patients from the poorest communities. Regardless of whether patients lived in the poorest or relatively wealthier communities, blood transfusion was the most frequently performed procedure, occurring at a rate of 89.6 and 74.4 procedures per 10,000 patients in lowest income and relatively wealthier communities, respectively; however, the rate of blood transfusions was 20 percent higher among patients from the lowest income communities. The rate of blood transfusions has increased over the last several years for all patients. From 2003 to 2006, the rate of blood transfusions grew by about 19 percent from 75.4 to 89.6 transfusions per 10,000 patients from the poorest areas, and by about 17 percent in patients from relatively wealthier areas (data not shown).

Diagnostic cardiac catheterization, irrespective of community-level income, was the second most frequent procedure performed, occurring at a similar rate in patients from the poorest and all other communities (about 55 procedures per 10,000 population, respectively). There was no difference between patients based on community-level income.

Most of the top 20 procedures were more common in patients from the lowest income areas. The rate of hemodialysis (for renal failure) was about 80 percent greater among patients residing in the poorest communities, with a rate of 37.7 procedures per 10,000 patients in the lowest-income communities versus 20.9 procedures per 10,000 patients in all other communities (ranking 9th and 13th, respectively).

Six of the most commonly performed procedures for patients from the lowest income communities were related to childbirth and infants: cesarean section, fetal monitoring, repair of current obstetric laceration, circumcision, rupture of membranes, and ligation of fallopian tubes. Cesarean section was 13 percent higher among patients from the lowest income communities, fetal monitoring was 29 percent higher, and ligation of fallopian tubes was 47 percent higher. There was no difference between communities for rupture of membranes. Circumcision and repair of current obstetric laceration were 5 and 6 percent more common, respectively, among patients from wealthier communities.

Several procedures that are predominantly outpatient procedures were more common among patients from the poorest communities. Hospitalized patients living in the poorest communities underwent upper gastrointestinal endoscopy (biopsy) about 25 percent more often and colonoscopy 20 percent more often than patients living in relatively wealthier areas. Similarly, ophthalmologic and otologic (eye and ear) diagnostic and therapeutic procedures were 81 percent higher among inpatients from the poorest communities (ranking 15th and 32nd, respectively).

Hospitalized patients from the poorest communities were vaccinated about 47 percent more frequently, with a rate of 40.3 vaccinations per 10,000 patients residing in the poorest areas versus 27.4 vaccinations per 10,000 patients living in relatively wealthier areas (ranking 7th and 11th, respectively). The vast majority of these vaccinations are administered to infants to prevent hepatitis B.

The rate of respiratory intubation (being on a respirator) was about 32 percent higher in patients from the poorest communities, with a rate of 51.7 procedures per 10,000 patients in the lowest-income areas versus 39.1 procedures per 10,000 patients in relatively wealthier communities (ranking 3rd and 6th, respectively).

Expected payer for hospital stays for patients living in the poorest communities
The expected payer for hospital stays varied based on whether patients resided in the poorest communities or other communities (figure 2). Together, government-sponsored health insurance programs, Medicare and Medicaid, were billed for two-thirds of all stays for patients residing in the poorest communities. While Medicare covered roughly equal proportions of patients from the lowest income communities and from wealthier

communities, Medicaid covered 28.3 percent of patients from the lowest income communities (over 1 in 4) compared to 15.7 percent from wealthier areas. Likewise, uninsured stays were 52 percent more common among patients from the poorest communities (7.3 percent of stays from the poorest areas were uninsured versus 4.8 percent from other areas). In contrast, private health insurance was the primary payer for only 22.7 percent of stays from the poorest communities, compared with 39.0 percent of stays from wealthier areas.

Data Source

The estimates in this Statistical Brief are based upon data from the HCUP 2006 Nationwide Inpatient Sample (NIS). Most statistics were generated from HCUPnet, a free, online query system that provides users with immediate access to the largest set of publicly available, all-payer national, regional, and State-level hospital care databases from HCUP. A supplemental source included population data from Claritas (2006) to create population-based rates.

Definitions

Diagnoses, Procedures, ICD-9-CM, and Clinical Classifications Software (CCS)
The principal diagnosis is that condition established after study to be chiefly responsible for the patient's admission to the hospital. All-listed procedures include all procedures performed during the hospital stay.

ICD-9-CM is the International Classification of Diseases, Ninth Revision, Clinical Modification, which assigns numeric codes to diagnoses and procedures. There are about 13,600 ICD-9-CM diagnosis codes and 3,500 ICD-9-CM procedure codes.

CCS categorizes ICD-9-CM diagnoses into a manageable number of clinically meaningful categories.[4] This "clinical grouper" makes it easier to quickly understand patterns of diagnoses and procedures.

Types of hospitals included in HCUP
HCUP is based on data from community hospitals, defined as short-term, non-Federal, general and other hospitals, excluding hospital units of other institutions (e.g., prisons). HCUP data include OB-GYN, ENT, orthopedic, cancer, pediatric, public, and academic medical hospitals. They exclude long-term care, rehabilitation, psychiatric, and alcoholism and chemical dependency hospitals, but these types of discharges are included if they are from community hospitals.

Unit of analysis
The unit of analysis is the hospital discharge (i.e., the hospital stay), not a person or patient. This means that a person who is admitted to the hospital multiple times in one year will be counted each time as a separate "discharge" from the hospital.

Median income of the patient's ZIP Code
Median community-level income is the median household income of the patient's ZIP Code of residence. The cut-offs for the quartile designation are determined using ZIP Code demographic data obtained from Claritas. The income quartile value is missing for homeless and foreign patients. In 2006, the lowest income quartile ranged from $1–$37,999, while the highest income quartile was defined as $62,000 or above. Patients in the lowest quartile were classified as living in the poorest communities; all others were classified as living in "relatively wealthier" or "other communities."

Costs and charges
Total hospital charges were converted to costs using HCUP Cost-to-Charge Ratios based on hospital accounting reports from the Centers for Medicare and Medicaid Services (CMS). Costs will tend to reflect the actual costs of production, while charges represent what the hospital billed for the case. For each hospital, a hospital-wide cost-to-charge ratio is used because detailed charges are not available across all HCUP States. Hospital charges reflect the amount the hospital charged for the entire hospital stay and does not include professional (physician) fees. For the purposes of this Statistical Brief, costs are reported to the nearest hundred.

[4] HCUP CCS. Healthcare Cost and Utilization Project (HCUP). May 2008. U.S. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp.

Payer
Payer is the expected primary payer for the hospital stay. To make coding uniform across all HCUP data sources, payer combines detailed categories into more general groups:

- Medicare includes fee-for-service and managed care Medicare patients.
- Medicaid includes fee-for-service and managed care Medicaid patients. Patients covered by the State Children's Health Insurance Program (SCHIP) may be included here. Because most state data do not identify SCHIP patients specifically, it is not possible to present this information separately.
- Private insurance includes Blue Cross, commercial carriers, and private HMOs and PPOs.
- Other includes Worker's Compensation, TRICARE/CHAMPUS, CHAMPVA, Title V, and other government programs.
- Uninsured includes an insurance status of "self-pay" and "no charge."

When more than one payer is listed for a hospital discharge, the first-listed payer is used.

Place of residence
Patient place of residence is a simplified adaptation of Urban Influence Codes and indicates whether the patient resides in a large metropolitan area (metropolitan area having one million residents or more), a small metropolitan area (metropolitan area having fewer than one million residents), or a non-metropolitan area (rural), using the 2003 U.S. Office of Management and Budget definition.

About HCUP

HCUP is a family of powerful health care databases, software tools, and products for advancing research. Sponsored by the Agency for Healthcare Research and Quality (AHRQ), HCUP includes the largest all-payer encounter-level collection of longitudinal health care data (inpatient, ambulatory surgery, and emergency department) in the United States, beginning in 1988. HCUP is a Federal-State-Industry Partnership that brings together the data collection efforts of many organizations—such as State data organizations, hospital associations, private data organizations, and the Federal government—to create a national information resource.

HCUP would not be possible without the contributions of the following data collection Partners from across the United States:

Arizona Department of Health Services
Arkansas Department of Health
California Office of Statewide Health Planning and Development
Colorado Hospital Association
Connecticut Hospital Association
Florida Agency for Health Care Administration
Georgia Hospital Association
Hawaii Health Information Corporation
Illinois Department of Public Health
Indiana Hospital Association
Iowa Hospital Association
Kansas Hospital Association
Kentucky Cabinet for Health and Family Services
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Division of Health Care Finance and Policy
Michigan Health & Hospital Association
Minnesota Hospital Association
Missouri Hospital Industry Data Institute
Nebraska Hospital Association
Nevada Department of Health and Human Services
New Hampshire Department of Health & Human Services
New Jersey Department of Health and Senior Services
New York State Department of Health

North Carolina Cecil G. Sheps Center for Health Services Research
Ohio Hospital Association
Oklahoma State Department of Health
Oregon Association of Hospitals and Health Systems
Rhode Island Department of Health
South Carolina State Budget & Control Board
South Dakota Association of Healthcare Organizations
Tennessee Hospital Association
Texas Department of State Health Services
Utah Department of Health
Vermont Association of Hospitals and Health Systems
Virginia Health Information
Washington State Department of Health
West Virginia Health Care Authority
Wisconsin Department of Health and Family Services
Wyoming Hospital Association

About the NIS

The HCUP Nationwide Inpatient Sample (NIS) is a nationwide database of hospital inpatient stays. The NIS is nationally representative of all community hospitals (i.e., short-term, non-Federal, non-rehabilitation hospitals). The NIS is a sample of hospitals and includes all patients from each hospital, regardless of payer. It is drawn from a sampling frame that contains hospitals comprising about 90 percent of all discharges in the United States. The vast size of the NIS allows the study of topics at both the national and regional levels for specific subgroups of patients. In addition, NIS data are standardized across years to facilitate ease of use.

About HCUPnet

HCUPnet is an online query system that offers instant access to the largest set of all-payer health care databases that are publicly available. HCUPnet has an easy step-by-step query system, allowing for tables and graphs to be generated on national and regional statistics, as well as trends for community hospitals in the U.S. HCUPnet generates statistics using data from HCUP's Nationwide Inpatient Sample (NIS), the Kids' Inpatient Database (KID), the State Inpatient Databases (SID) and the State Emergency Department Databases (SEDD).

For More Information

For more information about HCUP, visit http://www.hcup-us.ahrq.gov/.

For additional HCUP statistics, visit HCUPnet, our interactive query system, at www.hcup-us.ahrq.gov.

For information on other hospitalizations in the U.S., download *HCUP Facts and Figures: Statistics on Hospital-based Care in the United States in 2006*, located at http://www.hcup-us.ahrq.gov/reports.jsp

For a detailed description of HCUP, more information on the design of the NIS, and methods to calculate estimates, please refer to the following publications:

Steiner, C., Elixhauser, A., Schnaier, J. The Healthcare Cost and Utilization Project: An Overview. *Effective Clinical Practice* 5(3):143–51, 2002

Introduction to the HCUP Nationwide Inpatient Sample, 2006. Online. May 14, 2008. U.S. Agency for Healthcare Research and Quality. http://www.hcup-us.ahrq.gov/db/nation/nis/2006NIS_INTRODUCTION.pdf

Houchens, R., Elixhauser, A. *Final Report on Calculating Nationwide Inpatient Sample (NIS) Variances, 2001.* HCUP Methods Series Report #2003-2. Online. June 2005 (revised June 6, 2005). U.S. Agency for Healthcare Research and Quality. http://www.hcup-us.ahrq.gov/reports/CalculatingNISVariances200106092005.pdf

Houchens R.L., Elixhauser A. *Using the HCUP Nationwide Inpatient Sample to Estimate Trends. (Updated for*

1988–2004). HCUP Methods Series Report #2006-05. Online. August 18, 2006. U.S. Agency for Healthcare Research and Quality. http://www.hcup-us.ahrq.gov/reports/2006_05_NISTrendsReport_1988-2004.pdf

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AHRQ welcomes questions and comments from readers of this publication who are interested in obtaining more information about access, cost, use, financing, and quality of health care in the United States. We also invite you to tell us how you are using this Statistical Brief and other HCUP data and tools, and to share suggestions on how HCUP products might be enhanced to further meet your needs. Please e-mail us at hcup@ahrq.gov or send a letter to the address below:

Irene Fraser, Ph.D., Director
Center for Delivery, Organization, and Markets
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850

Table 1. Characteristics of hospital stays for patients residing in the poorest communities compared to patients from other communities, 2006*

	Poorest communities	All other communities	All discharges
Total number of discharges	11,079,400	27,386,000	39,450,200
Rate of hospitalization per 10,000 population*	1,496	1,223	1,324
Utilization characteristics			
Mean length of stay, days	4.7	4.5	4.6
Mean hospital costs	$7,800	$8,500	$8,400
Aggregate national costs, billions	$86.4 billion	$233.2 billion	$329.2 billion
Percentage admitted from the ED	46.0%	42.6%	43.8%
Percentage left against medical advice	1.3%	0.8%	1.0%
Percentage died in the hospital	2.1%	2.0%	2.0%

*About 2.5 percent of median community-level income data were missing on HCUP NIS records. Denominator data for rates were based on Claritas Population Estimates, 2006.

Note: “Poorest communities” included hospital stays with a median household income of the patient’s ZIP Code of residence of less than $38,000. “All other communities” included stays with a median household income of the patient’s ZIP Code of residence of greater than or equal to $38,000.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample (NIS), 2006.

Table 2. Characteristics of inpatients residing in the poorest communities compared to other communities, 2006*

	Poorest communities	All other communities	Percentage difference between poorest communities and all others	All discharges
Location of residence (rate per 10,000 population*)				
Large metropolitan (urban) area	1,536	1,211	27%	1,294
Small metropolitan (urban) area	1,327	1,213	9%	1,264
Non-metropolitan area (rural)	1,597	1,309	22%	1,494
Mean age, years	46.7	48.2	--	47.7
Age (rate per 10,000 population*)				
0–17 years	1,001	837	20%	899
18–44 years	1,019	830	23%	904
45–64 years	1,607	1,078	49%	1,233
65 and older years	3,674	3,461	6%	3,591
Gender (rate per 10,000 population*)				
Male	1,253	1,022	23%	1,111
Female	1,724	1,412	22%	1,524

*About 2.5 percent of median community-level income data were missing on HCUP NIS records. Denominator data for rates were based on Claritas Population Estimates, 2006.

Note: “Poorest communities” included hospital stays with a median household income of the patient’s ZIP Code of residence of less than $38,000. “All other communities” included stays with a median household income of the patient’s ZIP Code of residence of greater than or equal to $38,000.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample (NIS), 2006.

Table 3. Top 20 most common reasons for admission to the hospital for patients residing in the poorest communities, 2006

Rank (poorest areas)	Principal diagnosis, CCS category	Rate of stays per 10,000 patients in the poorest communities*	Rate of stays per 10,000 patients in all other communities*	Percent difference between poorest communities and all others	Rank (other areas)
1	Newborn infants	155.6	136.1	14%	1
2	Pneumonia	51.4	36.1	42%	3
3	Congestive heart failure (CHF)	48.2	32.0	51%	4
4	Coronary atherosclerosis (hardening of the arteries)	42.2	38.3	10%	2
5	Nonspecific chest pain	34.1	25.8	32%	6
6	Chronic obstructive pulmonary disease (COPD)	28.3	16.7	69%	16
7	Skin infections	25.8	17.3	49%	15
8	Trauma to perineum and vulva	25.5	27.2	-6%	5
9	Cardiac dysrhythmias (irregular heartbeat)	25.1	24.4	3%	8
10	Diabetes mellitus with complications	25.0	14.1	77%	25
11	Septicemia	24.9	18.5	35%	14
12	Affective disorders	24.6	20.1	23%	13
13	Acute myocardial infarction (heart attack)	23.5	21.6	9%	10
14	Complication of device, implant, or graft	22.9	20.1	14%	12
15	Urinary tract infection	21.9	15.9	37%	18
16	Dehydration	21.6	15.6	38%	21
17	Asthma	21.1	11.3	87%	26
18	Acute cerebrovascular disease (stroke)	20.8	16.5	26%	17
19	Osteoarthritis	20.1	25.6	-22%	7
20	Back problems	18.8	21.6	-13%	11

*About 2.5 percent of median community-level income data were missing on HCUP NIS records. Denominator data for rates were based on Claritas Population Estimates, 2006.

Notes: “Poorest communities” included hospital stays with a median household income of the patient’s ZIP Code of residence of less than $38,000. “All other communities” included stays with a median household income of the patient’s ZIP Code of residence of greater than or equal to $38,000.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2006.

Table 4. Top 20 most common inpatient all-listed procedures for patients residing in the poorest communities, 2006

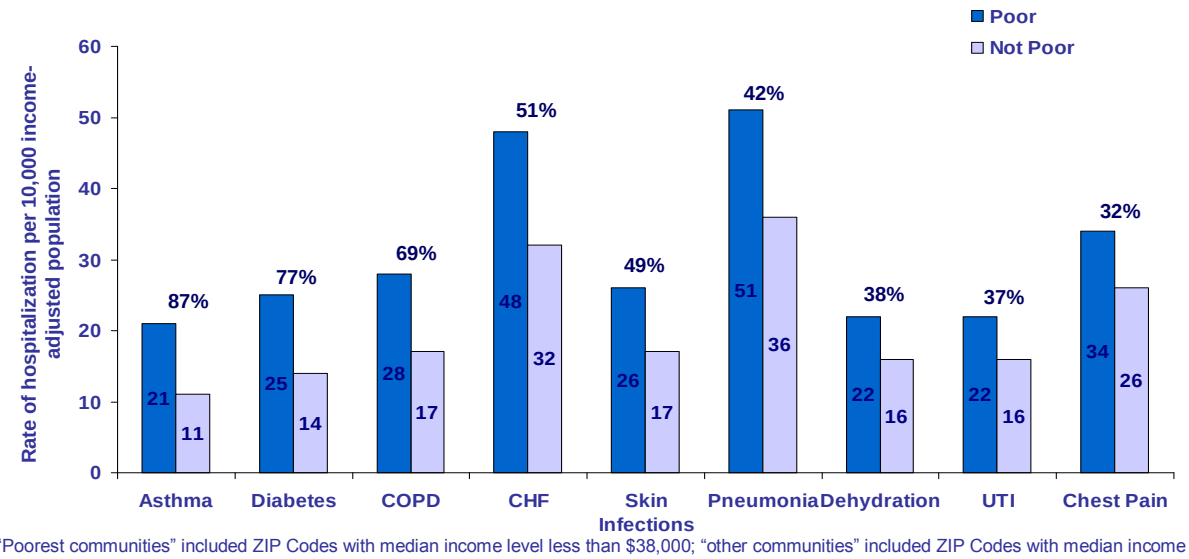
Rank (poorest areas)	All-Listed Procedures, CCS Category	Rate of procedure per 10,000 patients in the poorest communities*	Rate of procedure per 10,000 patients in all other communities*	Percent difference between poorest communities and all others	Rank (other areas)
1	Blood transfusion	89.6	74.4	20%	1
2	Diagnostic cardiac catheterization, coronary arteriography	55.6	54.5	2%	2
3	Respiratory intubation and mechanical ventilation	51.7	39.1	32%	6
4	Cesarean section	48.3	42.9	13%	4
5	Upper gastrointestinal endoscopy, biopsy	46.9	37.5	25%	7
6	Repair of current obstetric laceration	43.1	45.8	-6%	3
7	Vaccinations	40.3	27.4	47%	11
8	Circumcision	39.0	40.9	-5%	5
9	Hemodialysis	37.7	20.9	80%	13
10	Fetal monitoring	37.3	28.9	29%	10
11	Rupture of membranes to assist in delivery	33.3	33.0	1%	8
12	Percutaneous coronary angioplasty (PTCA)	27.8	30.4	-9%	9
13	Echocardiogram	24.9	23.2	8%	12
14	Colonoscopy	22.8	19.0	20%	15
15	Ophthalmologic and otologic diagnosis and treatment	19.4	10.7	81%	32
16	Enteral and parenteral nutrition	17.8	17.3	3%	17
17	Hysterectomy	17.6	18.2	-3%	16
18	Cholecystectomy	16.3	14.1	16%	19
19	Arthroplasty knee	15.8	19.0	-17%	14
20	Ligation of fallopian tubes	15.0	10.2	47%	36

*About 2.5 percent of median community-level income data were missing on HCUP NIS records. Denominator data for rates were based on Claritas Population Estimates, 2006.

Notes: “Poorest communities” included hospital stays with a median household income of the patient’s ZIP Code of residence of less than $38,000. “All other communities” included stays with a median household income of the patient’s ZIP Code of residence of greater than or equal to $38,000.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2006.

Figure 1. Rates of hospitalization for ambulatory care sensitive conditions were 32 to 87 percent higher among patients from the poorest communities, 2006*

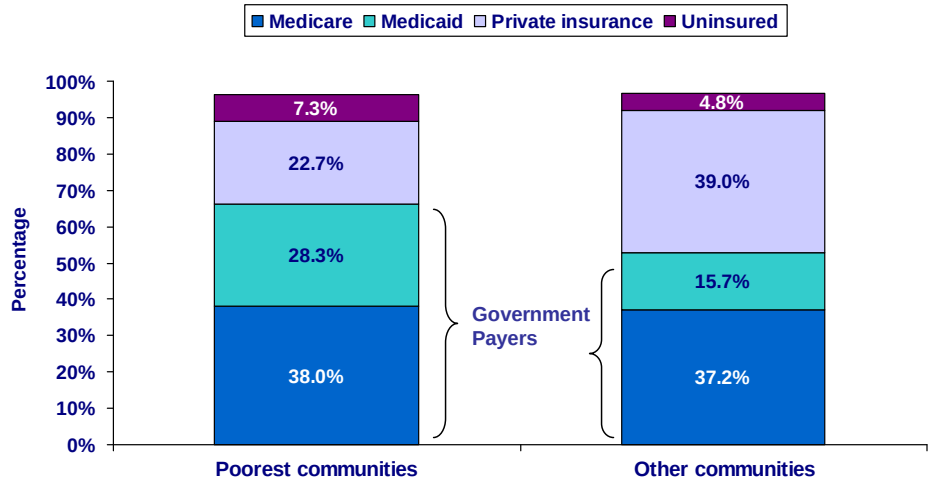


"Poorest communities" included ZIP Codes with median income level less than $38,000; "other communities" included ZIP Codes with median income level greater than or equal to $38,000.

Note: A small portion of stays, less than 4 percent, were covered by other insurance programs (such as TRICARE/CHAMPUS and Title V) and are not included in this figure.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2006

Figure 2. Government insurance programs, Medicare and Medicaid, were billed for two-thirds of stays for patients residing in the poorest communities, 2006*



"Poorest communities" included ZIP Codes with median income level less than $38,000; "other communities" included ZIP Codes with median income level greater than or equal to $38,000.

Note: A small portion of stays, less than 4 percent, were covered by other insurance programs (such as TRICARE/CHAMPUS and Title V) and are not included in this figure.

Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 2006