

Project Access Year Three Operations Analysis Report

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Project Access Year Three Operations Analysis Report

Objective: The aim of this analysis serves to:

- 1) Assess physician office and hospital services provided during the third year of operations,
- 2) Identify the major diseases affecting the low-income uninsured,
- 3) Analyze the amount of donated services associated with caring for Project Access patients during the third year of operations, and
- 4) Compare selected indicators from year one, two and three.

Methodology: This report provides descriptive analysis of the third year cohort of Project Access patients from September 2001 through August 2002. Project Access data includes information from three sources:

- 1) CARES database which contains demographic descriptors of patients enrolled in Project Access,
- 2) Hospital data which contains administrative data including disease diagnostic codes, donated service charge amounts, admission and discharge dates, and procedure codes, and
- 3) Physician office administrative data including disease diagnostic codes, donated service amounts, dates of service, and procedure codes.

Data sets were cleaned and analyzed separately before linking and merging them for final analysis. In year three, there were 1,313 observations in the CARES data set, 726 unduplicated observations in the hospital data set, and 1,172 unduplicated observations in the physician office administrative data set. See Table 1 and Graph 1 for year one, two and three comparisons.

It should be noted that all financial information reflects **services donated by physicians and hospitals** participating in Project Access.

Results:

Year Three Demographics

The demographic characteristics of Project Access patients have changed little during the third year of operations. Project Access patients are predominantly female (64.5%), young, middle-aged (31-50 years), and unmarried (72.4%). Approximately 45% are racial minorities. Nearly 75% report high school education or less, and approximately 54% report one-person family status. More than 50% reported being employed, 5.1% report being unemployed, less than 10% report SSI, Social Security or pension, and the remaining 27.2% report no income. Approximately 70% meet the 100% of federal poverty guidelines, unchanged from year 2. The majority of program participants were enrolled for 61-80 days (61.2%), similar to years 1 and 2. However 26.5% of those served were enrolled for more than 100 days. Graphs 2 through 6 illustrate the characteristics of year three patients.

Most patients were disenrolled because their eligibility expired (69.4%). Sixty-one individuals (4.6%) were disenrolled due to noncompliance. Approximately 5.0% (56 people) of applicants were enrolled in Medicaid through the efforts of Project Access staff, or became insured, or were enrolled in another program. A handful of applicants were disenrolled in less than five days because they qualified for Medicaid, their income increased above the qualification level, or they were insured.

Hospital Services, Donated Service Amounts and Diagnostic Categories

An additional 34 patients received donated hospital services in year three (N = 726) as compared to year two operations (N = 682) (see Graph 7). Of those patients receiving care in a physician's office, 61.9% also received hospital services. Donated hospital services for year three of Project Access totaled \$4,645,398, nearly \$400,000 more than year two (\$4,254,155). Graph 8 describes total donated hospital services for the first three years of operation, while Graph 9 exhibits the donated hospital service charges for the first three years with respect to ranges of costs. It provides additional understanding about where shifts in donated service charges are occurring during the same time frame. Analysis of total donated service charges per patient (across all hospital admissions) during year three shows a median donated service charge

per patient of \$5,204, which is lower than year one (\$6,307), and comparable to year two (\$4,888).

Donated Inpatient Services

Within the hospital data set, observations with identical admit and discharge dates were coded as outpatient, whereas those observations with dissimilar admit and discharge dates were coded as inpatient. With a total of 1,862 hospital encounters, 76.0% were donated outpatient services, and 24.0% reflect donated inpatient services. The 1,862 hospital encounters were unduplicated, so that each encounter was associated with the patient who incurred the visit. Analysis of hospital services post duplication shows that 86.4% (627) accessed outpatient services only, while 9.9% (72) used inpatient services only, and 3.7% (27) used both outpatient and inpatient services.

Of those persons receiving donated inpatient hospital services, 18.7% experienced hospital stays between 1-10 days, while 4.0% were hospitalized for 11-20 days, 4.8% for 21-30 days, and 1.4% for 31-40 days (see Graph 10). There were 33 patients (4.5%) who had hospital stays totaling more than 40 days this year, similar to the previous two years.

The mean number of hospital encounters per patient was 2.6 in year three. Most patients had only one (47.2%) or two (20.4%) hospital encounters, while 17 patients (2.3%) had between 10 and 27 encounters (see Graph 12). When inpatients alone are analyzed, more than 50% have hospital days of 10 days or less, whereas the remainder are equally distributed among the four remaining strata, ranging from 11-20 days, 21-30 days, 31-40 days, and more than 40 days.

Of the 72 patients who utilized inpatient services only, 21 were readmitted once, five were readmitted twice, and one was readmitted three times. For this group of patients, the median number of days between admission one and two was 16.0 days, with a range between one and 87 days. The median number of days between admission two and three was 22.5 days, with a range between 15 and 38 days.

Inpatients, on average, had 4.1 (3.7, 4.6) hospital admissions, slightly higher than year two, which 3.7 (3.2, 4.1) admissions, with an average length of stay of 17.3 days (14.4, 20.2), essentially unchanged from year two. For inpatients the average total donated treatment charge in year three was \$12,795 (\$10,043, \$15,547), comparable to year two \$12,358 (\$10,017,

\$14,699). In year three the average donated service charge per admission was \$4,044 (\$3,320, \$4,769), slightly lower than year two \$4,273 (\$3,507, \$5,309) (See Table 2). Due to extremely high charges for a handful of patients, the median charge is a more accurate figure for donated service charges. The median donated treatment charge across all hospitalizations per inpatient was \$7,457, while the median charge per inpatient admission was \$2,014.

There were 398 primary diagnostic codes (excluding V-codes) for the inpatient group, and charges for these donated services totaled \$2,427,867. (A description of 17 broad diagnostic categories is contained in Appendix 1.) The amounts of diagnostic groupings have remained relatively constant over the past three years (Graph 12), with higher volume categories including signs and symptoms and ill-defined conditions, musculoskeletal problems, genitourinary disease and digestive disease. These diagnostic categories were rank ordered by amount of donated services and are listed in descending order, neoplasms/tumors, circulatory, digestive, musculoskeletal system, genitourinary disease, pregnancy complications, signs, symptoms and ill-defined conditions, metabolic/endocrine conditions, injury and poisoning, congenital anomalies, skin and tissue disease, respiratory, blood and blood forming disease, nervous system, mental health disease, and infections/parasitic disease (see Graph 13).

Donated Outpatient Services

The average total donated treatment charge for outpatient services in year three was \$3,180 (\$2,848, \$3,512), showing a steady downward trend over the three-year period (see Table 3). The average charge per encounter shows the same downward pattern as well, with a reduction of \$2,564 in year one to \$2,134 in year three. Outpatients, on average, had a similar number of encounters as year two, 1.8 (1.6, 1.9) visits (see Graph 14).

There were 1,158 outpatient primary diagnostic codes (excluding V-codes), which represented \$2,112,170 in donated service charges. These diagnostic categories were rank ordered by amount of donated services and are listed in descending order, digestive, neoplasms (tumors), genitourinary disease, signs, symptoms and ill-defined conditions, musculoskeletal system disease, circulatory system disease, respiratory, nervous system, injury and poisoning, skin and tissue disease, congenital anomalies, metabolic/endocrine conditions, infections/parasitic disease, blood and blood forming disease, pregnancy complications, and mental health disease (see Graph 15).

Physician Office Services, Donated Service Charges and Diagnostic Categories

During the third year of operations, 1,172 patients received donated physician services, 97 less than in year two (N = 1,269), but 162 more than in year one operations (N = 1,010). Volunteer physicians donated \$1,614,449 in services for Project Access patients during year three. Donated service charges per patient continue to decrease with each successive year. In year one, the mean and median donated service charge per patient was \$1,899 and \$555, respectively. In year two, the mean and median donated services charges were \$1,746 and \$55, respectively. In year three, the mean and median donated service charges were \$1,410 and \$485, respectively (see Table 4).

More than 50% of the year three patients were treated for donated service charges of less than \$500 (see Graph 15). An additional 15.3% were cared for with charges between \$500 and \$1,000, and 14.8% with charges between \$1,001 and \$2,000. Sixty-seven patients (6.0%) had charges ranging from \$5,000 to nearly \$30,000, and accounted for 40% of the overall donated service charges. These 67 patients collectively had donated service charges of \$652,561. The primary diagnoses of the high cost patients were cancer/ neoplasms (23.1%), musculoskeletal disease (20.0%), and digestive, cardiovascular respiratory and genitourinary diseases represented approximately 24% the primary diagnoses. Five patients had donated service charges ranging from \$20,000 to \$30,000 (see Graph 16).

A description of CPT code categories is contained in Appendix 2. Analysis of CPT codes by medical specialty for Project Access patients reveal that medical procedures represent approximately 42.0% of all procedures donated during the year, followed by laboratory and pathology (22.8%), radiology (16.0%), surgical procedures (14.2%), and evaluation and management (5.2%). The percentages are largely unchanged from last year, other than more laboratory and pathology procedures were performed (see Graph 17).

Diagnostic radiology (58.9%) was the most frequent category of radiologic procedure, followed by organ and disease oriented radiology (18.7%). The most frequent surgical procedures performed were on cardiovascular problems (29.9%), followed by digestive (15.1%), female surgical (12.2%), and musculoskeletal (12.1%) procedures. Of laboratory and pathology procedures, hematology and coagulation studies were performed most frequently (29.2%)

followed by chemistry (26.0%), and then urinalysis (12.0%). Surgical pathology studies were the least frequent (10%) procedure performed. Nearly 80% of medical procedures are office or outpatient services. Eighty percent of evaluation and management procedures are for outpatient consultation (see Graphs 18-20).

For patients treated by volunteer physicians, representing \$1,651,340 in donated service charges, there were 9,087 primary diagnostic codes (excluding V-codes). These diagnostic categories were rank ordered by amount of donated services and are listed in descending order, neoplasms (tumors), musculoskeletal system disease, signs, symptoms and ill-defined conditions, genitourinary disease, digestive, circulatory system disease, respiratory, nervous system, respiratory, injury and poisoning, metabolic/endocrine conditions, skin and tissue disease, pregnancy complications, infections/parasitic disease, blood and blood forming disease, congenital anomalies, and mental health disease (see Graph 21).

Combined Donated Service Charges for Physician Office and Hospital

The hospital and physician office data sets were merged, which resulted in 726 matches between the two data sets. Analysis of donated physician office and hospital costs combined reveals that the average donated service charge per patient was \$8,755 (\$7,501, \$10,009) in year three compared to \$9,004 (\$7,652, \$10,356) in year two, and \$11,888 (\$9,978, \$13,798) in year one. **As in previous years, the handful of patients with extremely high charges inflates the average charge dramatically** (see Table 5). The median combined charge, which better reflects the true average, total donated service charge per patient, was \$5204 in year three, compared to \$4,888 in year two, and \$6,308 in year one (see Graph 24).

When combined donated service charges for office and hospital treatment are compared from year one to year two operations, 18.0% were treated for less than \$1,000 in charges (year two = 14.1%, year one = 16.5%). Moreover, 32.0% of patients had combined donated service charges of \$1,001 to \$5,000 (year two = 34.7%, year one = 27.5%). Approximately 48.0% of patients who had both hospital and physician office treatment in year three were treated for \$5,000 or less, compared to 50% in year two and 41.7% in year one operations. Furthermore, approximately 75% of the patients were treated for \$10,000 or less compared to 60% in year two. Approximately 4.0% had combined donated treatment charges \$20,001 to \$30,000, and 5.0%

with charges in excess of \$30,000. Table 5 lists the total donated hospital and physician office service charges of patients with extremely high charges (see Graphs 23 and 24).

Graphs 24-32 illustrate sources of variation and components that may, in part, contribute to overall costs. Although donated hospital charges per patient remain consistent, the mean number of visits has increased. Outpatient encounters remain consistent with last year's figures, but associated charges continue to decrease. Inpatient encounters increased again in year three, but the mean donated service charge per patient has remained relatively similar to year two's results. Donated physician office service charges decreased, on average, approximately \$400 per patient.

High Charge Patients

Each year a small number of patients with extremely high charges in both the office and hospital setting continue to inflate charges. In the office setting, 22 patients represented 21.0% of donated service charges (\$344,978). In the hospital setting 24 patients represented \$1,401,120 donated services charges, or 30.2% of overall charges (see table 5). Graph 33 visually depicts hospital patients with donated service charges of \$30,000 or more over the three-year period. Diagnoses are consistent with those of the remaining patients.

The removal of patients with charges greater than \$30,000 reduces the donated service charge variability considerably. Total donated service charges per patient reflect charges across all hospital admissions. The mean total donated service charge is reduced by nearly \$2,000 dollars from approximately \$6400 to \$4,600 with these 24 patients removed. The median charge per encounter is reduced by nearly \$1,000 from \$1,219 to \$1,151. The mean number of encounters per patient is essentially unchanged, with a reduction from 2.7 to 2.4 encounters. The mean total days per patient is reduced, however, by one day (5.8 to 4.7 days) when outlier patients are excluded.

Closer inspection of these patients reveals several diagnoses with only a few common themes. These 24 cases have been categorized into non-preventable and preventable groups. Non-preventable is a diagnosis assumes continuous treatment that requires multiple visits to the doctor/hospital. "Preventable" is defined as an instance in which if recognized early, may result in earlier intervention, and hopefully, less costly care.

Seven out of the 24 patients had been diagnosed with neoplasms, a non-preventable diagnosis. These patients were seen for cancer of stomach, breast, and secondary malignant unspecified sites, pleurisy without mention of effusion or current TB, disturbance of skin sensation, dyspnea, and respiratory abnormalities.

Seventeen of the 24 might be classified as more preventable. These 17 cases included cardiovascular, pulmonary, prenatal diagnoses. Each had several visits with a variety of diagnoses listed below.

Cardiovascular Patient

Patient was seen for constipation, Congestive Heart failure, edema, mitral valve, stenosis, aortic valve, Esophageal reflux, Endocardium disease, congenital atresia and stenosis of aorta, specified disease of white blood cell, bronchitis, kidney and ureter disease.

Pre-Natal Patient

Patient was seen for UT infection, Isoimmunization from other specified blood group, incompatibility, affecting management of mother antepartum, mild unspecified preeclampsia with delivery, hypertension with delivery, maternal anemia with delivery, other newborn respiratory problems after birth, early onset of delivery, hemolytic disease.

Bone Fracture Patient

Patient was seen for limb pain, malunion of fracture, late effect of fracture of lower extremities (neck of femur), complication mechanical due to graft, other tissue NEC, Morbid Obesity.

Health Status Measurement

Eight health concepts are measured in the SF-8, and include:

1. Physical functioning
2. Bodily pain
3. Role limitations due to physical health problems
4. Role limitations due to personal or emotional problems, emotional well-being
5. Social functioning
6. Energy/fatigue
7. General health perceptions
8. Perceived change in health

These eight health concepts comprise the physical and mental health composite scores. Physical health scores of this population using the initial SF-8 measure indicates the median physical health functioning score of the Project Access patients varies from 10-14 points lower than the general US population (poorer perceived physical health than general population). The other noteworthy piece of information is that the mean/median mental health functioning scores (poorer perceived mental health scores than general population) vary from 7-8 points lower than the national norm (See Table 7).

Comparison of Pre/Post Physical and Mental Health Scores

There are 32 patients to date that have a second SF-8 measure, and five that have had a third SF-8. There is a statistically significant improvement in perceptions of physical health in these 32 patients. However, it is still very small sample, and caution should be used in sharing this widely. Once sample size approaches 100 or more, confidence in results will also increase (see Table 8).

Employment and Insurance Status

Analysis of employment, insurance status, and missed work days due to illness reveals that all patients enrolled in Project Access are working either full time (46.3%), part time (45.3%), or are working a temporary or seasonal job (8.4%). Nearly 12% work 40 or more hours per week, while 41.5% report 31-40 hours, 28.7% 21-30 hours, and 18.1% work less than 20 hours per week. The length of time the job was held was also assessed, and 46.7% reported having their job for the past two years, while 6.7% had held their job between 12 and 24 months, 10.9% for 6 to 12 months, and 35.9% for less than 6 months.

Nearly 50.0% of those completing the survey indicated they had not missed work due to illness, whereas 14.9% had missed work more than 10 days due to illness, 9.6% missed 5-9 days, and 27.7% missed 1-4 days. The majority of Project Access patients (60.2%) indicate they have not missed work due to physician appointments, 17.2% miss 1-2 days, 9.7% miss 3-4 days, and 12.9% miss 5 or more days of work due to physician visits. The majority (83.9%) of respondents report they do not miss work due to family members illness. Moreover, a majority (65.1%) of

respondents reported that self/family illness has not prevented them from being employed, however, 11.6% report being prevented from working due to illness in the past 6 months, 8.5% in the past year, and 14.8% for more than one year.

Approximately 62.4% of Project Access patients indicate they do not lose income due to health problems, however the remaining 37.6% report income loss ranging from a partial day (2.2%) to 5 or more days (20.4%). Of those who report some type of low employment, the following reasons were listed laid off or quit (17.6%), homemaker (11.7%), student (5.9%), disabled or health problems (56.5%), or other reason (8.5%).

During the past six months of 2002, 10.2% (29 patients) of Project Access disenrolled patients reported having some type of medical payment support, either Medicaid (8.8%) or Medicare (1.4%). Approximately 82% of Project Access patients are new enrollees, while just over 18% had been reenrolled.

Conclusions and Recommendations:

The Project Access partnership continues to provide a valuable service to the Wichita/Sedgwick County community. Area hospitals, physicians, and other health care providers are serving a large number of ill Sedgwick County residents who would otherwise, be unable to access medical care. Although the demographic characteristics, medical diagnostic categories, and procedure codes are relatively similar in all three years, the average donated service charge has become lower each year.

Findings indicate that a great majority of patients are served for \$5,000 or less. As in previous years, a small percentage of patients were hospitalized for 31 or more days. The mean LOS for years two and three are comparable, and most patients have one or two encounters with the hospital system. In year three, total charges for donated physician office services were \$1,651,165 for 1,172 patients, \$563,929 less than year two (\$2,215,094 for 1,269 patients). Total charges for donated hospital services was \$4,645,398 for 726 patients, while year two donated services totaled \$4,254,255 for 682 patients. There were 24 patients with charges greater than \$30,000 for hospital services, and 22 patients with physician office charges greater than \$10,000.

According to D.P. Rogoff (HRSA Community Access Program), the average cost for uncoordinated care is between \$6,000 and \$6,500 per person per year, whereas coordinated care costs between \$3,700 and \$4,500 per person per year. Using this formula, the costs savings in Sedgwick County, through the volunteer health care providers efforts, ranges between \$2,626,000 and \$3,019,900 for those 1,313 patients enrolled through Project Access in year three. Between \$9 and \$10 million dollars of cost savings has been achieved during the past 3 years.

As in years one and two, a small percentage of those patients receiving care in year three, had extremely high treatment costs, repeated hospitalizations, and multiple physician office visits. A low-income family or individual must cope not only with a lack of resources needed to meet daily requirements such as food, rent, utilities, and transportation, but must also perform the cooking, cleaning, provide childcare, work when needed, and help older children with homework. Additional tasks can become overwhelming, making it easier to continue in the cycle of chaos than to try to cope with one more task. Many low-income families, particularly single mother families, exist one step away from chaos. In the daily struggle to meet daily living requirements such as shelter, food, clothing, and transportation, these families may not have the social or material resources required to provide self-care and return to health. They become ill again, with repeated visits to the physicians office or return visits to the hospital.

Of the 700 plus hospitalized patients, only 24 patients were extreme outliers in terms of resource consumption. This finding suggests that a case management system, which assists these patients directly, may be an effective method for reducing and equalizing utilization of health care services. The participating hospitals may elect to design and implement a method of identifying Project Access (and other self-pay patients) who are readmitted to the hospital within 30 days of discharge. Substantial savings could be achieved if even 25% of the readmissions could be prevented. This technique may be helpful to participating physicians as well.

In conclusion, the analyses suggest that local physicians, hospitals, and other health care providers, as well as Project Access, are providing valuable, cost-effective service to low-income uninsured residents of Sedgwick County.

Sedgwick County Project Access Participants Evaluation Plan

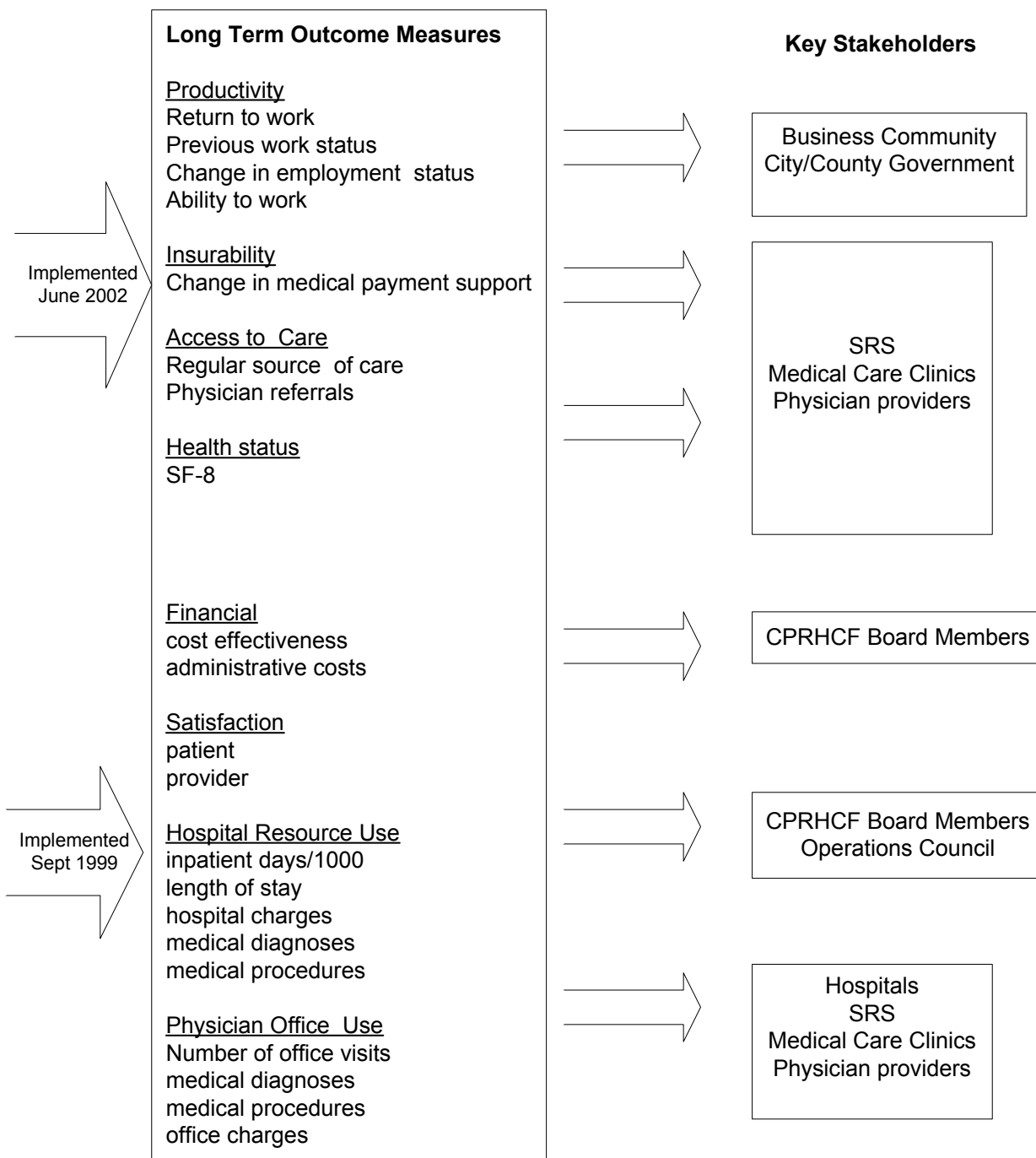
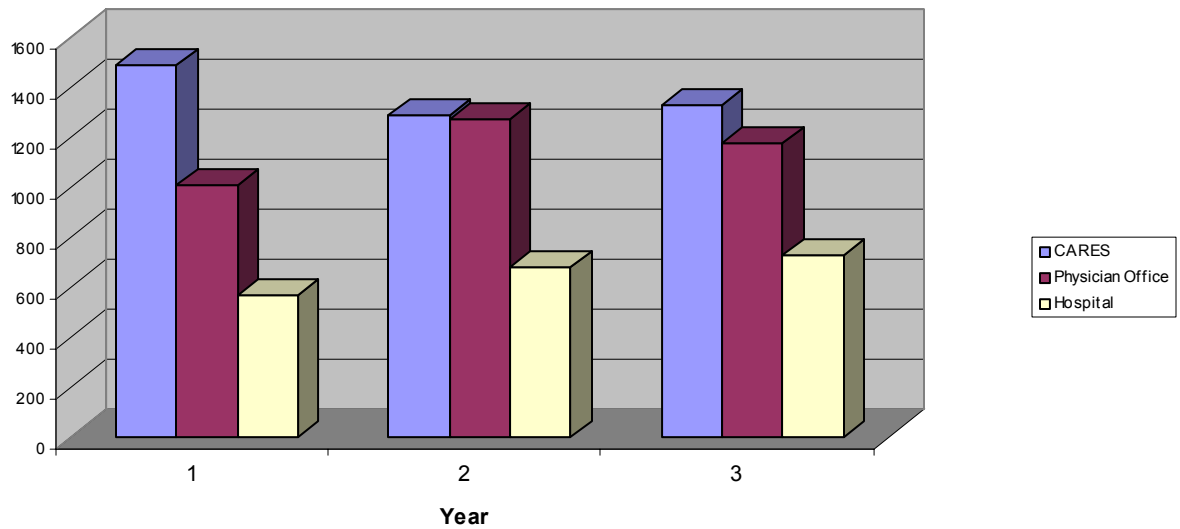


Table 1: Project Access Data Sets for Year One, Two and Three Analysis

Year	CARES	Hospital	Physician Office
1	N=1,484	N = 566	N =1,010
2	N=1,288	N = 682	N = 1,269
3	N= 1,313	N = 726	N = 1,172

Graph 1

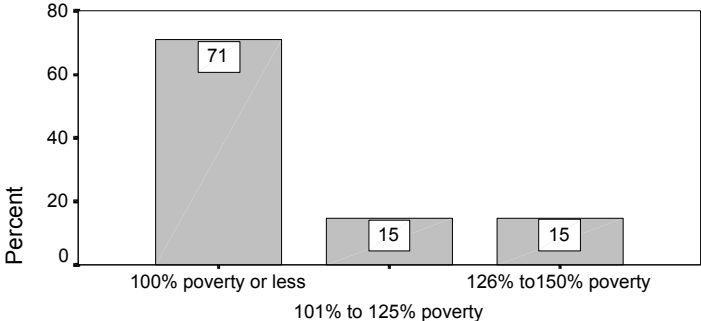
Number of Project Access Patients Enrolled, and Served by Physician Office and Area Hospitals from 1999 to 2002 (Years 1, 2 and 3)



Graph 2

Project Access Year 3 Operations

Patient Percent Poverty



income level

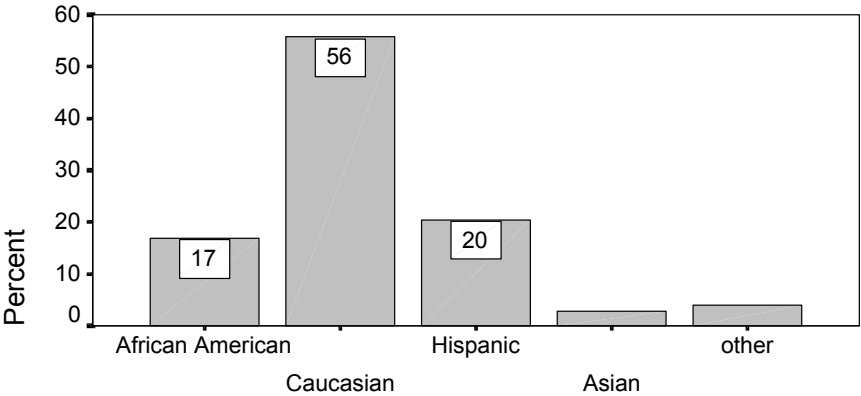
Reflects patients from Sept. 2001--August 2002

N = 1,313

Graph 3

Project Access Year 3 Operations

Patient Ethnicity



ethnicity

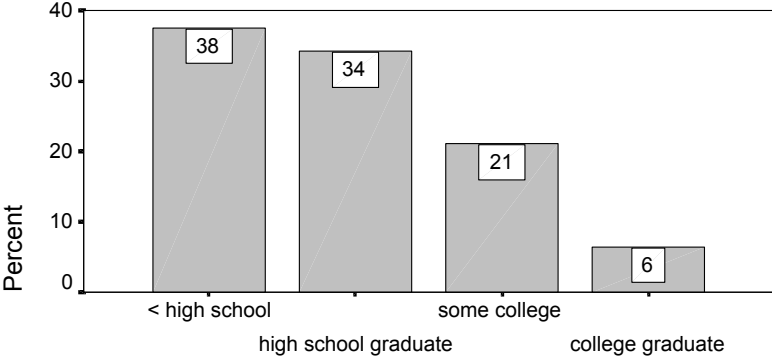
Reflects patients from Sept. 2001--August 2002

N = 1,312

Graph 4

Project Access Year 3 Operations

Patient Education Level



education

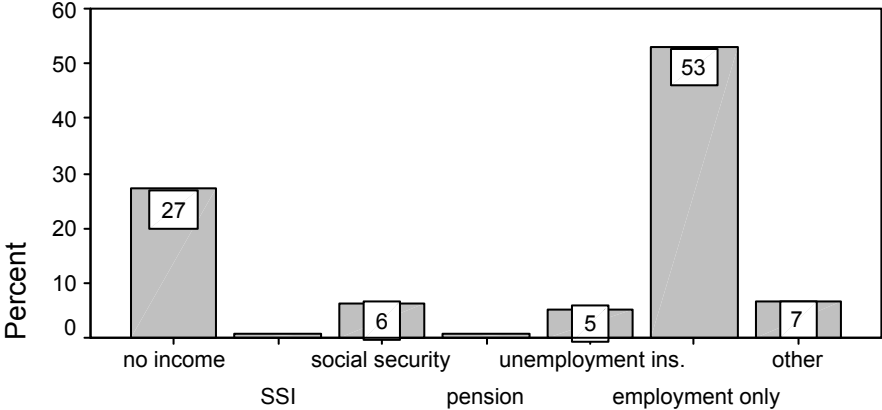
Reflects patients from Sept. 2001--August 2002

N = 1,305

Graph 5

Project Access Year 3 Operations

Patient Income Source

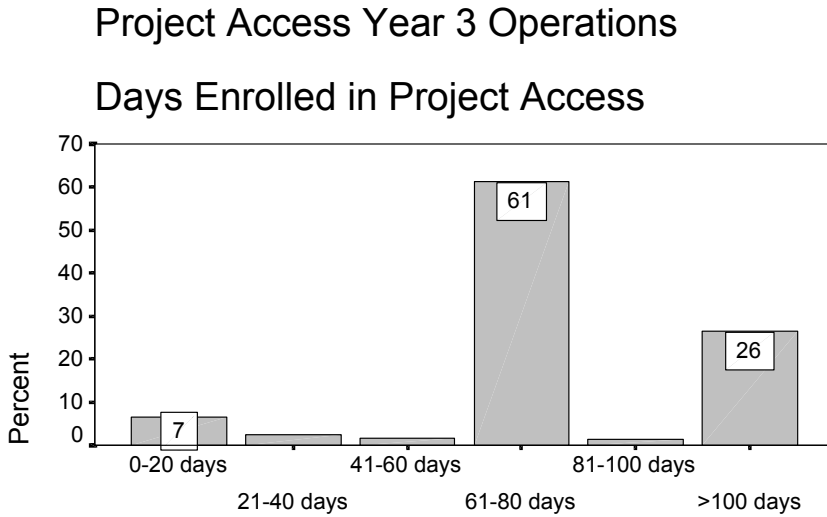


income sources

Reflects patients from Sept. 2001--August 2002

N = 1,313

Graph 6

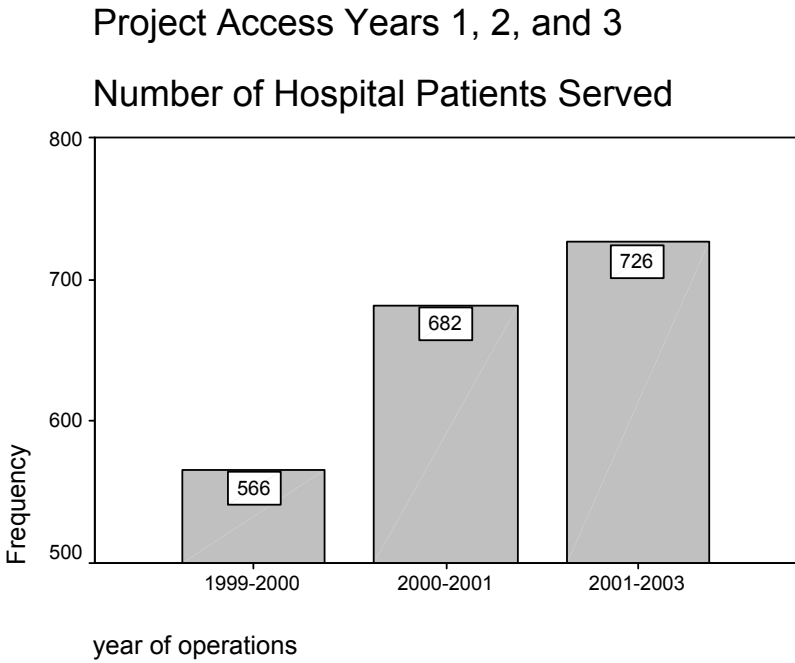


NDAYSREC

Reflects patients from Sept. 2001--August 2002

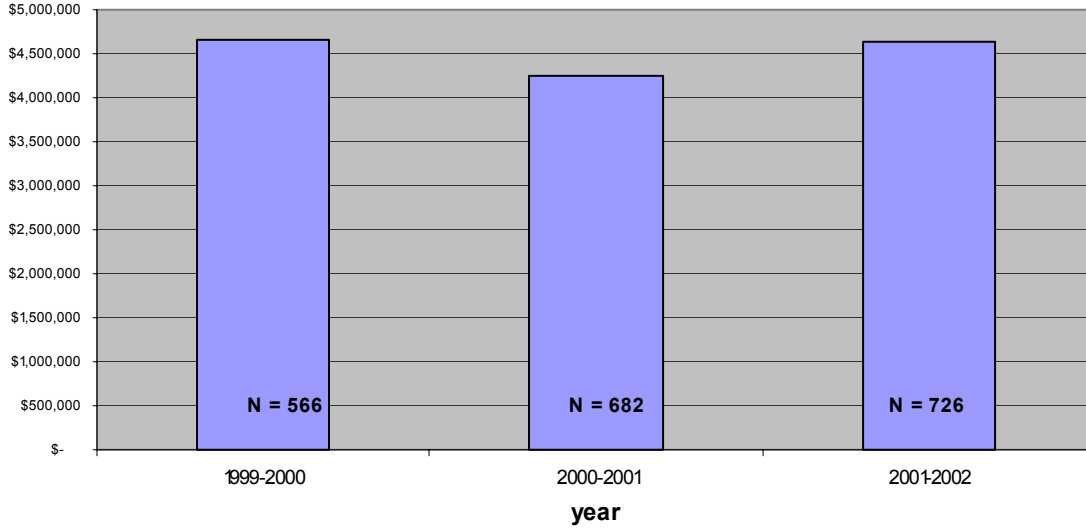
N = 1,091 (222 patients not yet disenrolled)

Graph 7



Graph 8

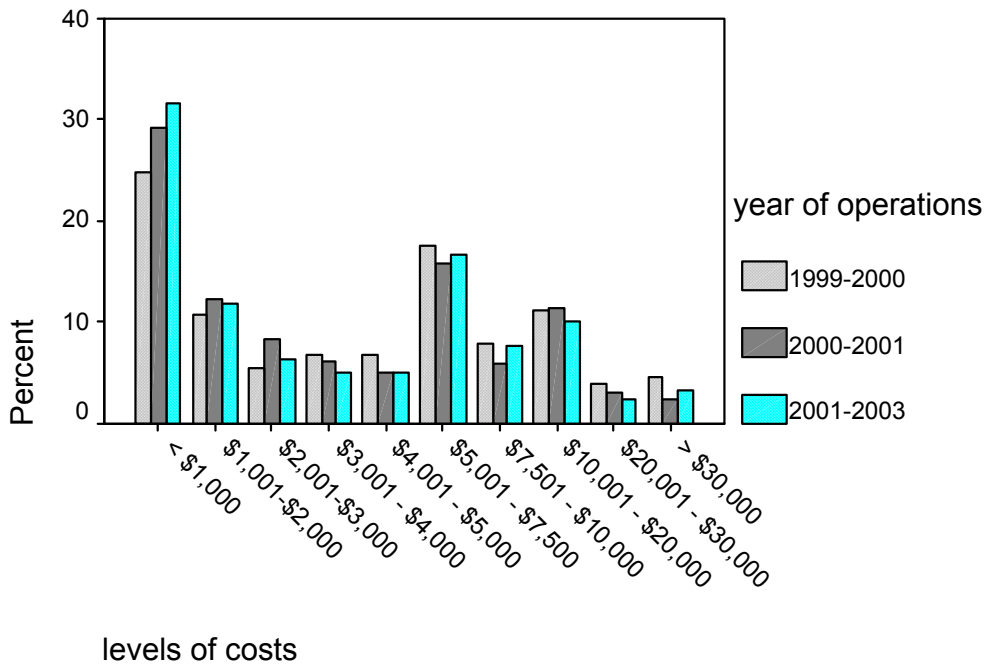
Total Annual Charges of Donated Hospital Services by Year of Operations



Graph 9

Project Access Years 1, 2, and 3

Comparison of Donated Hospital Services by Year



Graph 10

Project Access Years 1, 2, and 3

Comparison of Hospital Services by Year

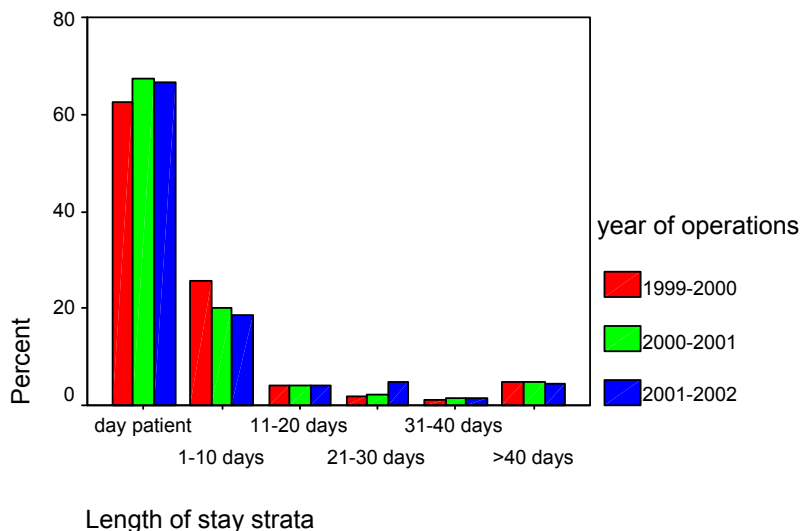
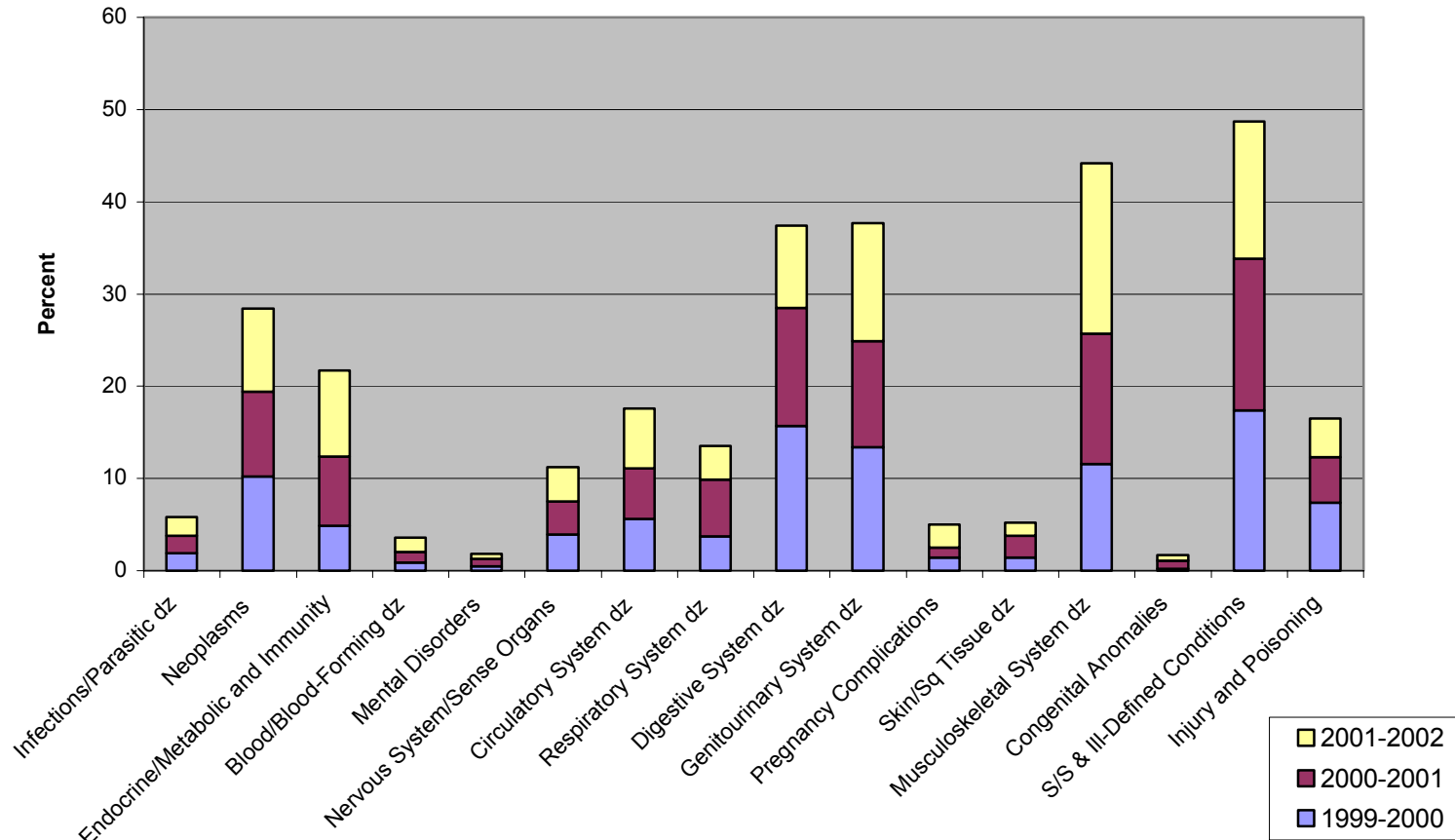


Table 2: Donated Inpatient Service Charges and Encounters by Year Of Operations

Year	1	2	3
Average total charge per patient	\$16,317 (\$13,423, \$19,210)	\$12,358 (\$10,017, \$14,699)	\$12,795 (\$10,043 \$15,547)
Average charge per inpatient admission	\$6,903 (\$5,678, \$8,127)	\$4,273 (\$3,507, \$5,039)	\$4,044 (\$3,320, \$4,769)
Average number of total admissions per patient	2.9 (2.6, 3.2)	3.7 (3.2, 4.1)	4.1 (3.7, 4.6)
Average length of stay per patient	15.0 (11.7, 18.4)	17.3 (14.3, 20.4)	17.3 (14.4, 20.2)

Graph 12

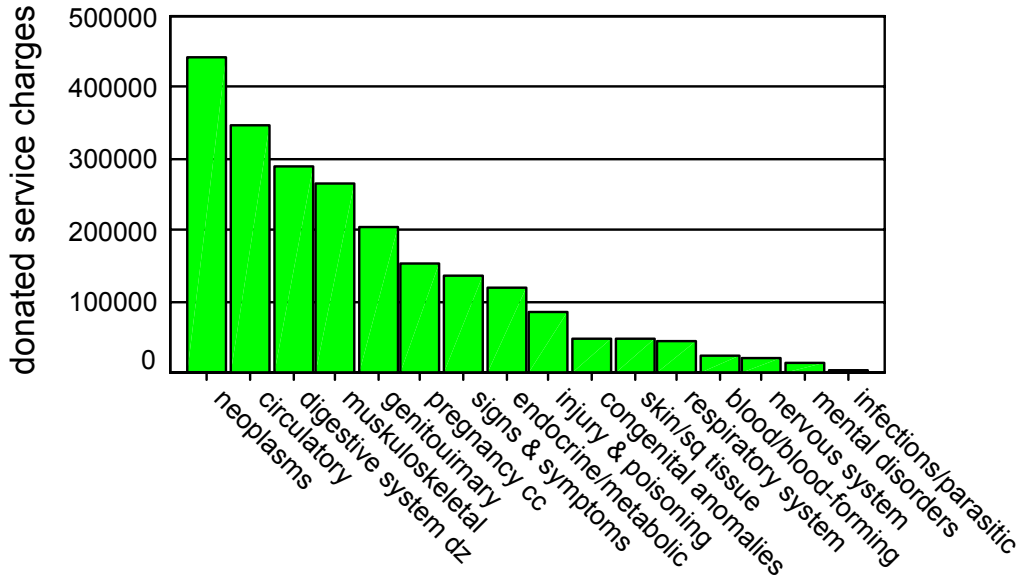
**Project Access Years 1, 2, and 3
 Comparison of Volume of Hospital Diagnostic Code Groupings by Year**



Graph 13

Project Access Year 3 Operations

Donated Services by Primary Diagnosis



Represents Inpatient only

N = 398 dx codes (excludes V-codes)

Table 3: Donated Outpatient Service Charges and Encounters by Year of Operations

Year	1	2	3
Average total charge per patient	\$3,366 (\$3,018, \$3,714)	\$3,284 (\$2,896, \$3,672)	\$3,180 (\$2,848, \$3,512)
Average charge per encounter	\$2,564 (\$2,293, \$2,834)	\$2,231 (\$1,998, \$2,464)	\$2,134 (\$1,907, \$2,361)
Average number of encounters per patient	1.5 (1.4, 1.6)	1.8 (1.6, 1.9)	1.8 (1.7, 1.9)

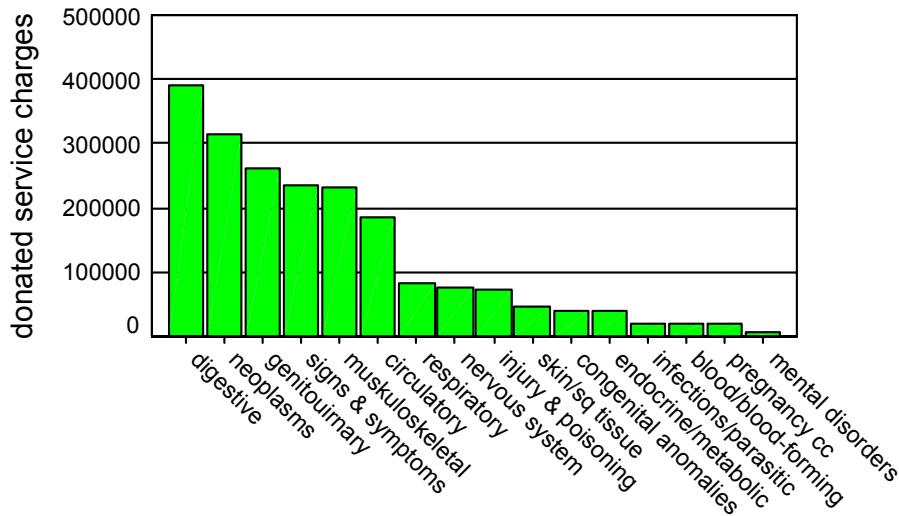
Graph 14

Project Access Mean Inpatient Donated
 Service Charge per Patient by Year



Graph 15

Project Access Year 3 Operations
 Donated Services by Primary Diagnosis



Represents Outpatient only

N = 1,158 dx codes (excludes V-codes)

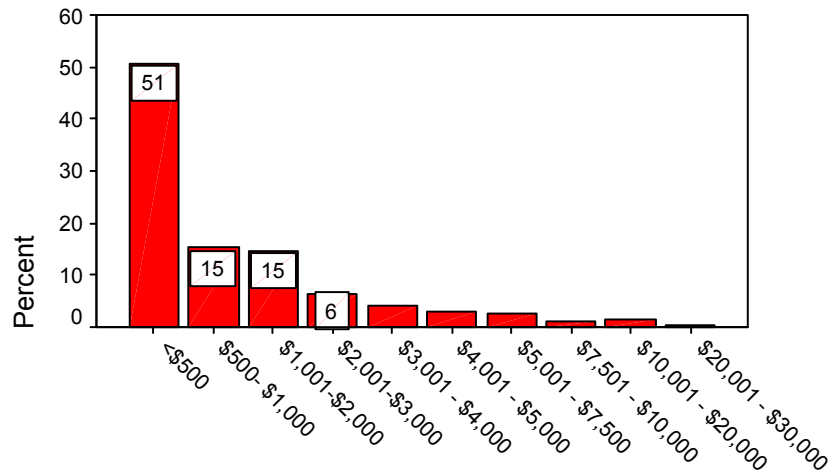
Table 4:
 Project Access Donated Physician Office Services
 Total Charges Per Patient

Year	Mean	Median
1	\$1,899	\$555
2	\$1,746	\$559
3	\$1,410	\$485

Graph 16

Project Access Year 3 Operations

Physician Office Activity, Total Charge per Patient



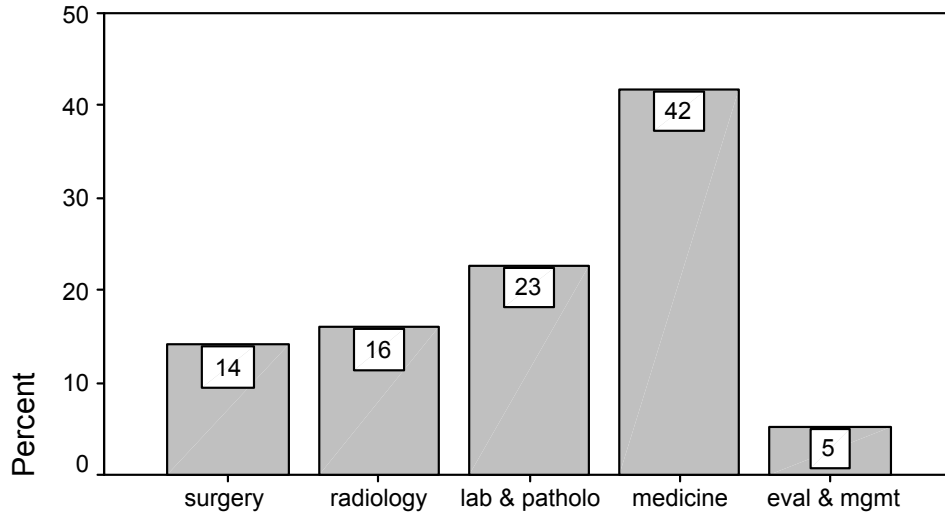
Reflects patients from Sept. 2001-August 2002

N = 1,172 patients

Graph 17

Project Access Year 3 Operations

Physician Office Procedure Codes



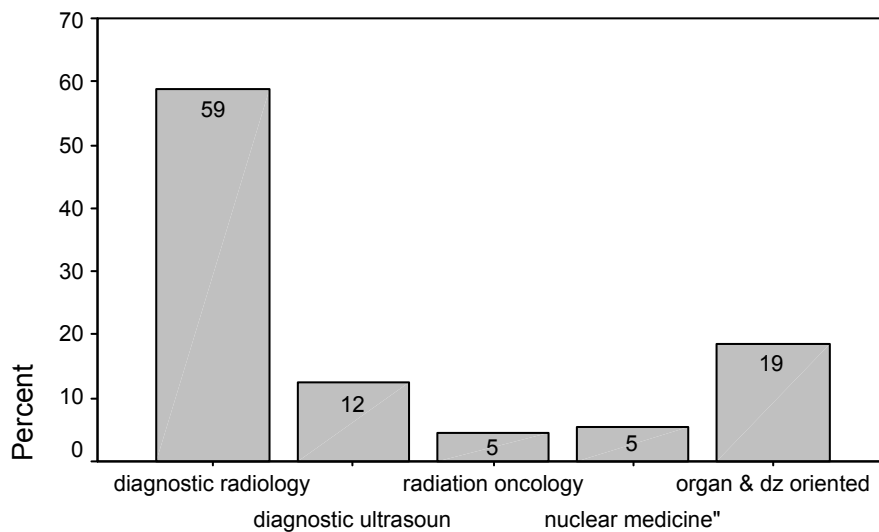
Reflects patients from Sept. 2001-August 2002

N = 1,172 patients

Graph 18

Project Access Radiology Procedures Year 3

Physician Office CPT Code

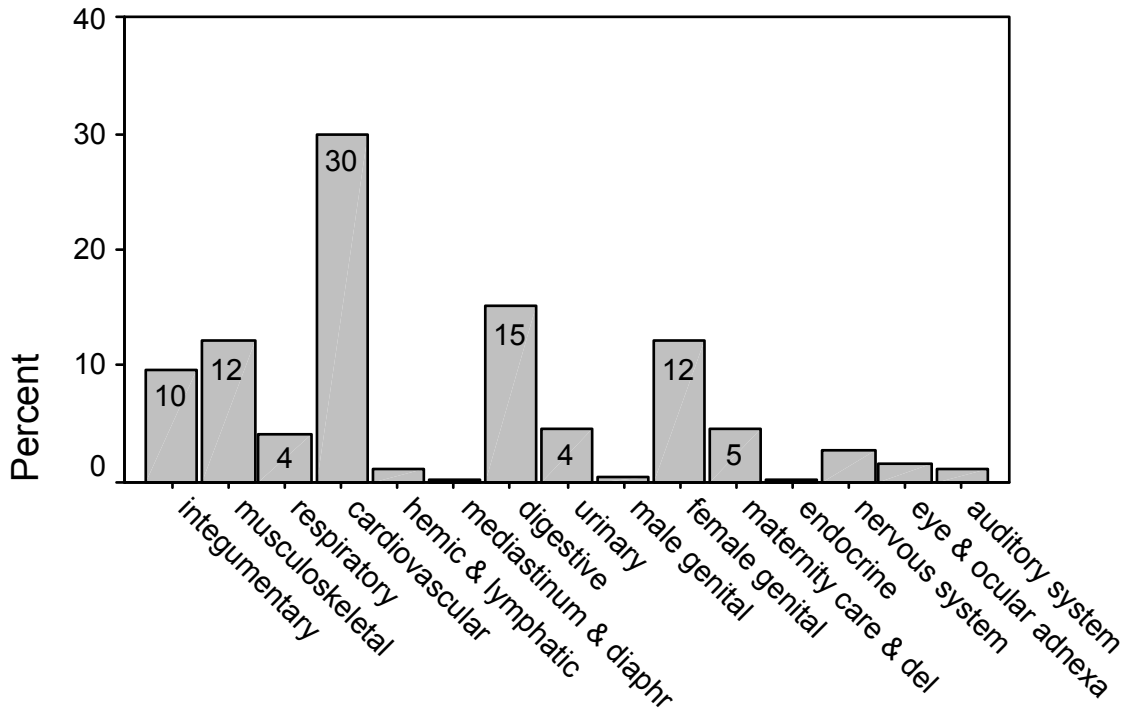


Reflects patients from Sept. 2001-August 2002

Graph 19

Project Access Surgical Procedures Year 3

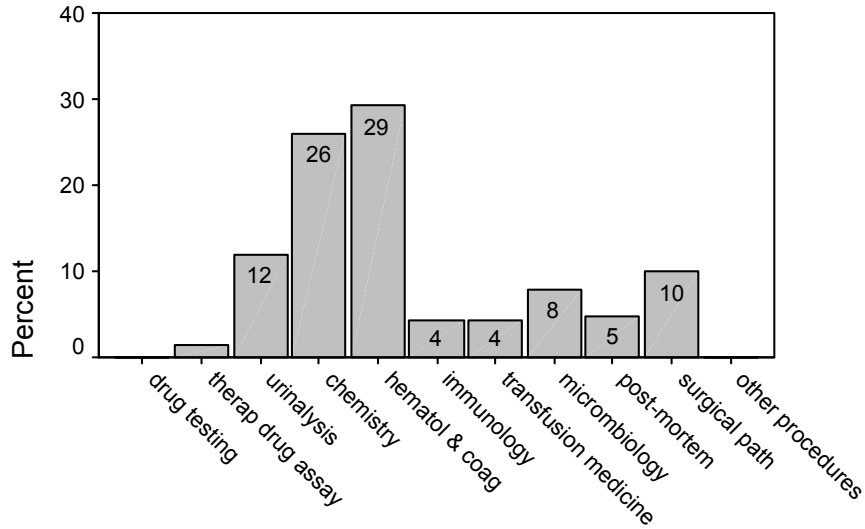
Physician Office CPT Code



Reflects patients from Sept. 2001-August 2002

Graph 20

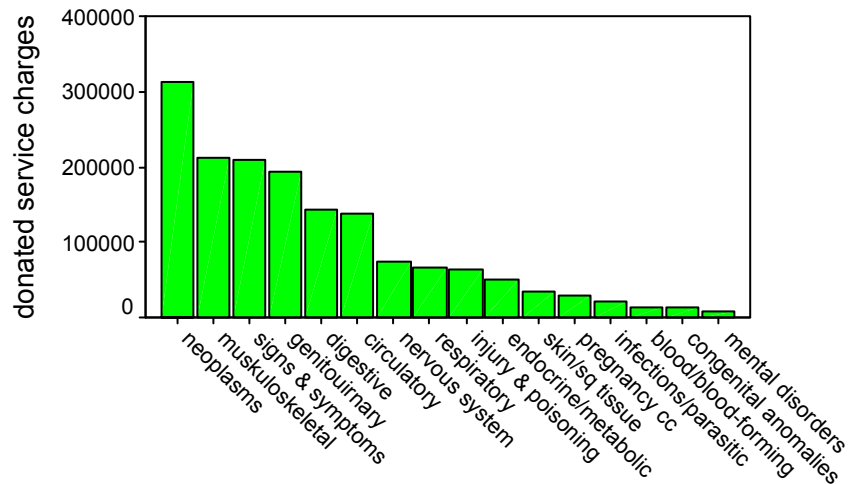
**Project Access Lab Procedures Year 3
 Physician Office CPT Code**



Reflects patients from Sept. 2001-August 2002

Graph 21

**Project Access Year 3 Operations
 Donated Services by Primary Diagnosis**



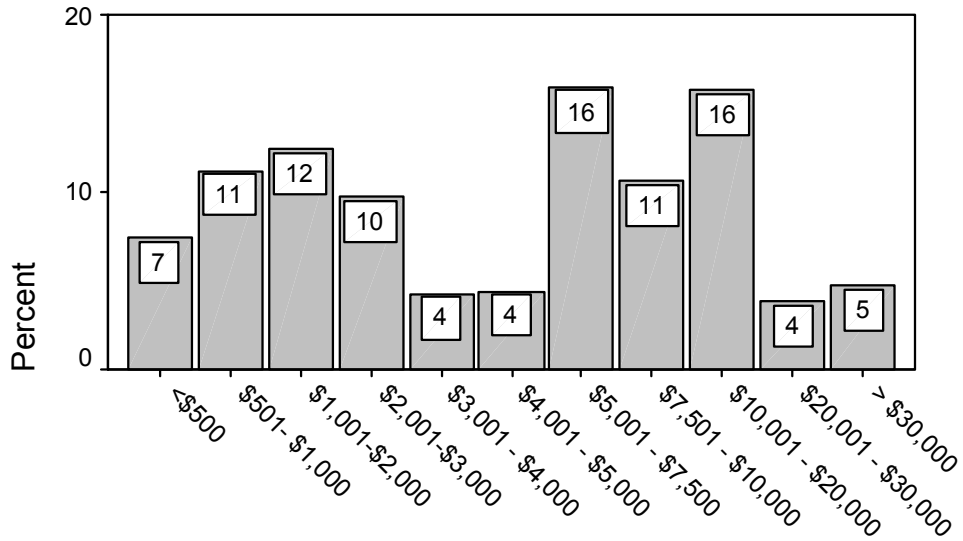
Represents Physician Office only

N = 9,087 dx codes (excludes V-codes)

Graph 23

Project Access Year 3 Operations

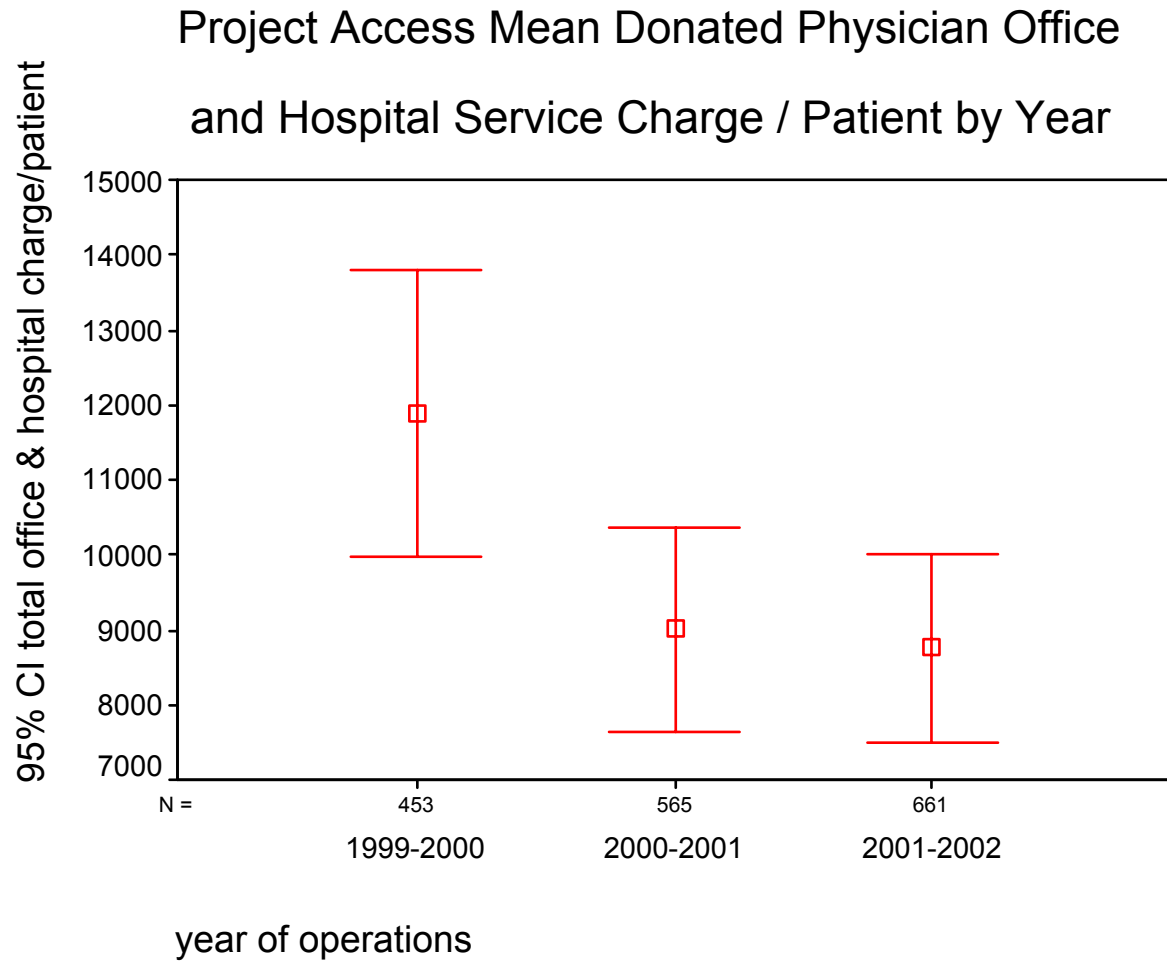
Total Office and Hospital Charges



Represents patients from September 2001 -- August 2002

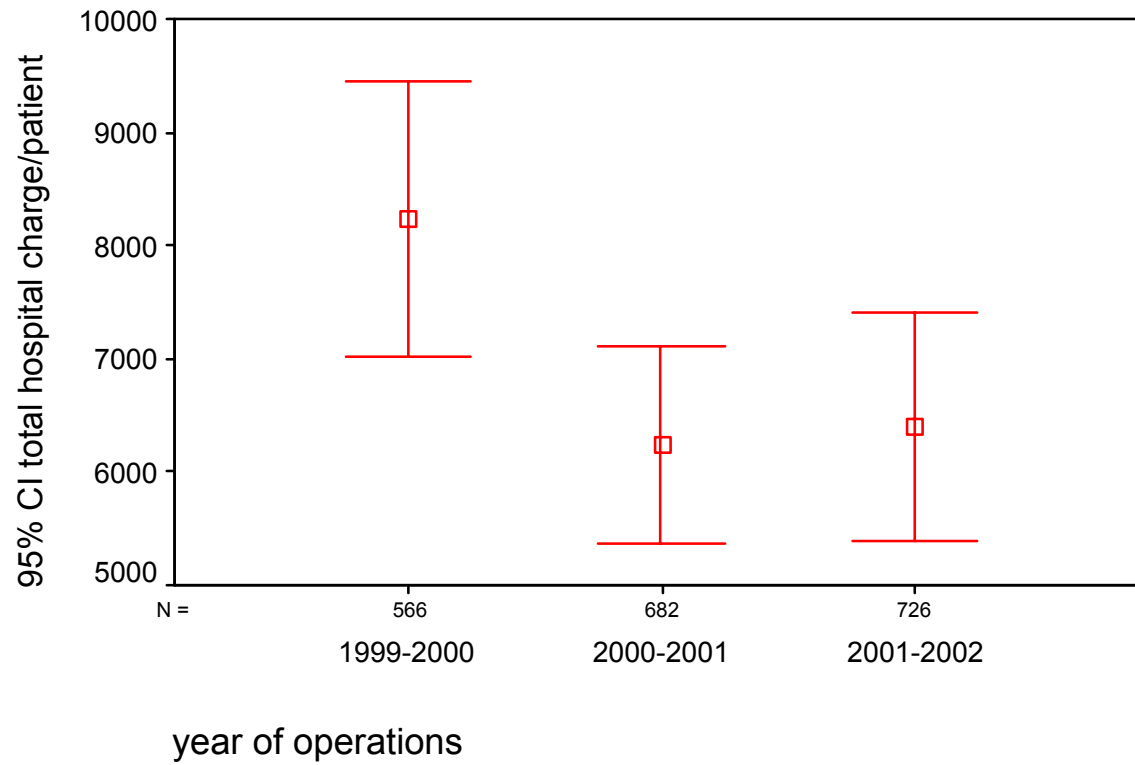
N = 661

Graph 24



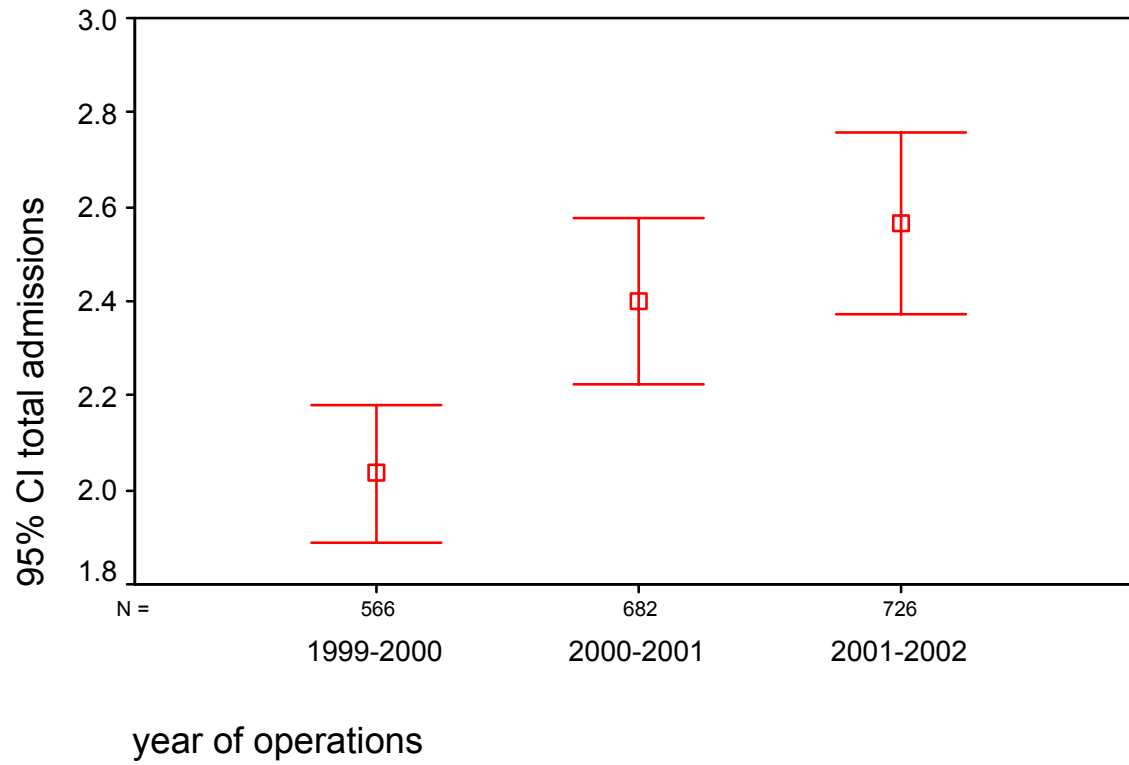
Graph 25

Project Access Mean Donated Hospital Service Charge per Patient by Year



Graph 26

Project Access Mean Number of Hospital Encounters per Patient by Year



Graph 27

Project Access Mean Number of Outpatient Encounters per Patient by Year



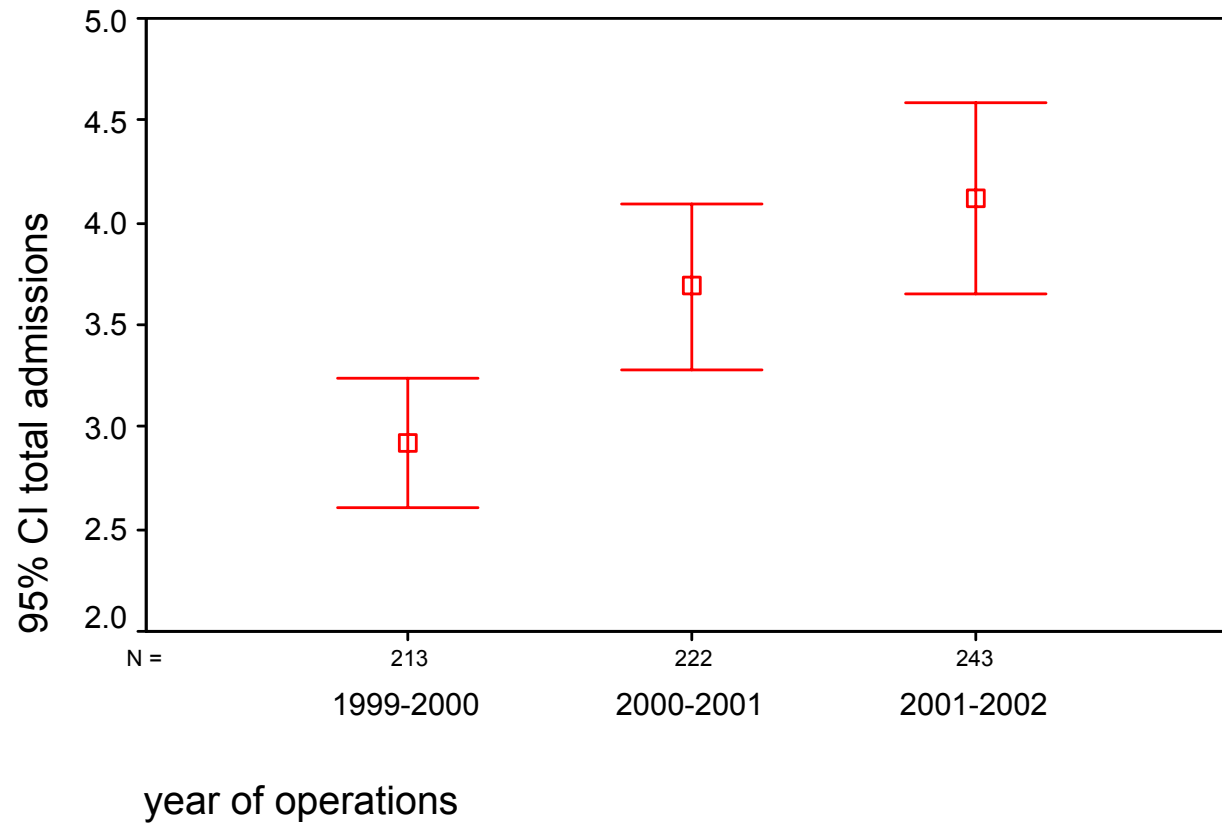
Graph 28

Project Access Mean Outpatient Donated Service Charge per Patient by Year



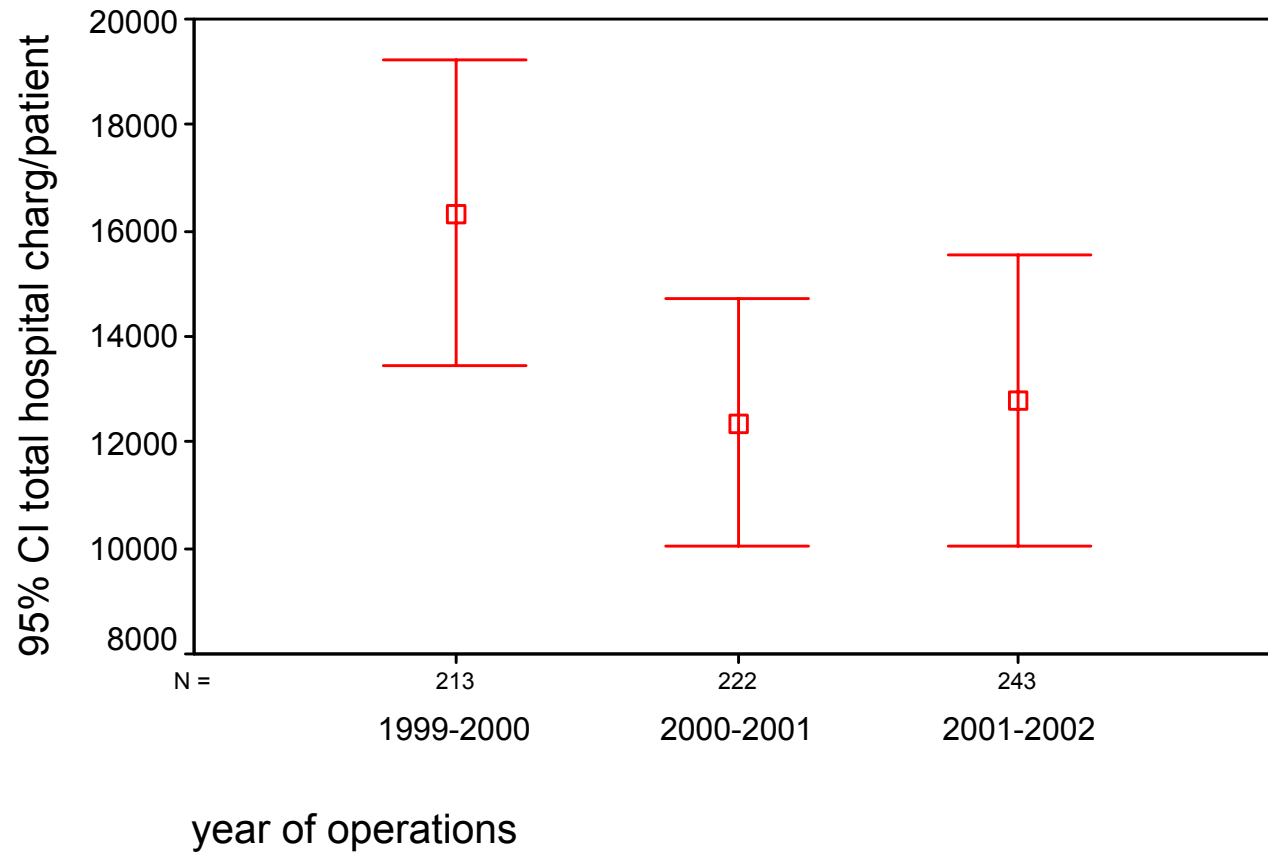
Graph 29

Project Access Mean Number of Inpatient Encounters per Patient by Year



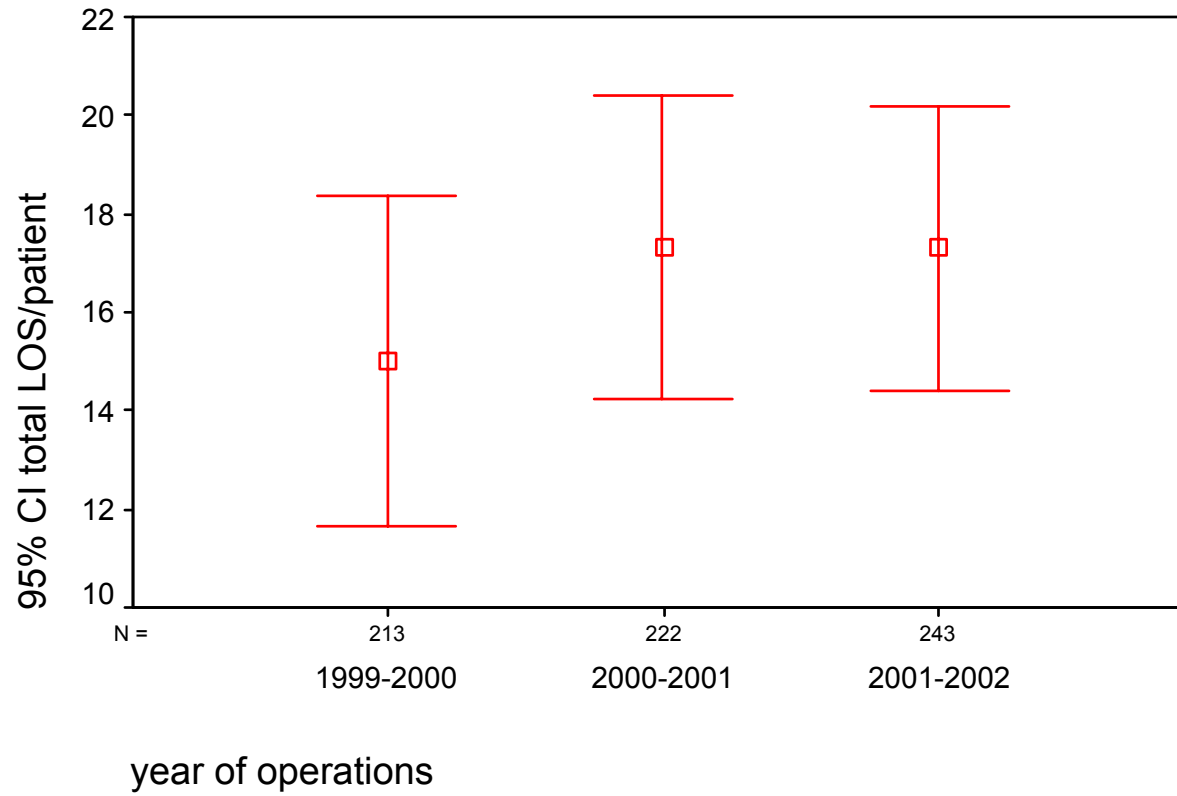
Graph 30

Project Access Mean Inpatient Donated Service Charge per Patient by Year

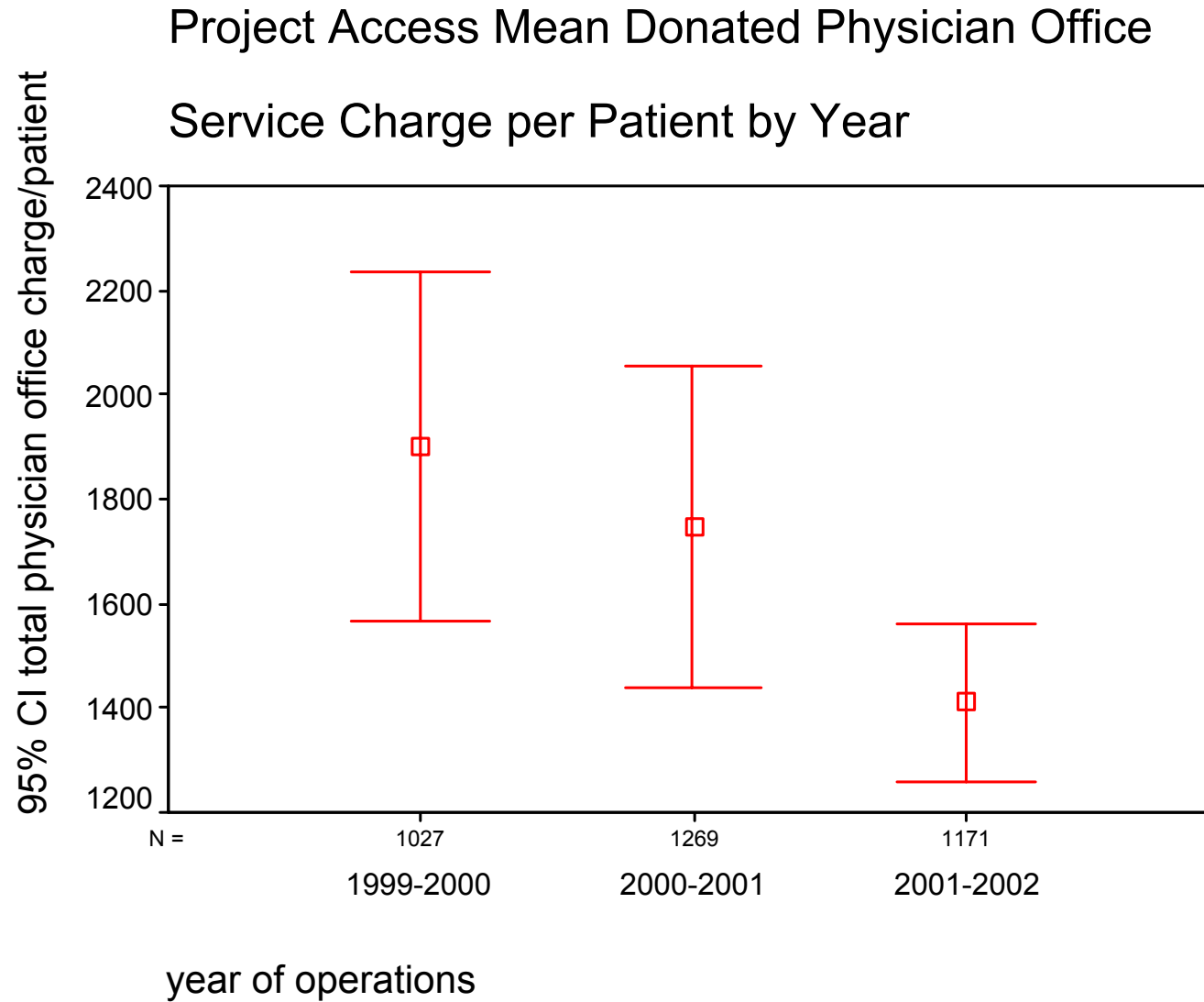


Graph 31

Project Access Average Length of Stay Per Patient by Year



Graph 32



**Table 5: Project Access Year 3
 Patients with Elevated Charges**

	Hospital	Physician Office
1	30,024	10,014
2	30,177	10,456
3	32,113	10,532
4	32,259	11,111
5	32,280	11,363
6	33,208	11,749
7	33,272	11,830
8	35,890	11,892
9	36,740	11,933
10	37,000	12,094
11	41,066	12,449
12	42,563	12,546
13	42,923	12,656
14	44,355	12,764
15	51,185	16,719
16	54,568	18,325
17	60,066	19,990
18	60,093	22,632
19	61,313	23,138
20	64,061	24,660
21	75,248	26,363
22	78,374	29,761
23	154,340	
24	238,007	
Total	\$1,401,120	\$344,978

**Table 6: Comparison of Patient Days per 1,000 for Project Access Patients
 Years 1, 2, and 3 with and without Charge Outliers**

Year	1	2	3
Patient days per 1,000 (all patients)	.0057	.0056	.0058
Patient days per 1,000 (w/o outlier patients)	.0045	.0050	.0047

Graph 33

Project Access Years 1, 2, and 3: Diagnostic Code Groupings of Hospital Patients with Donated Service Charges >\$30,000

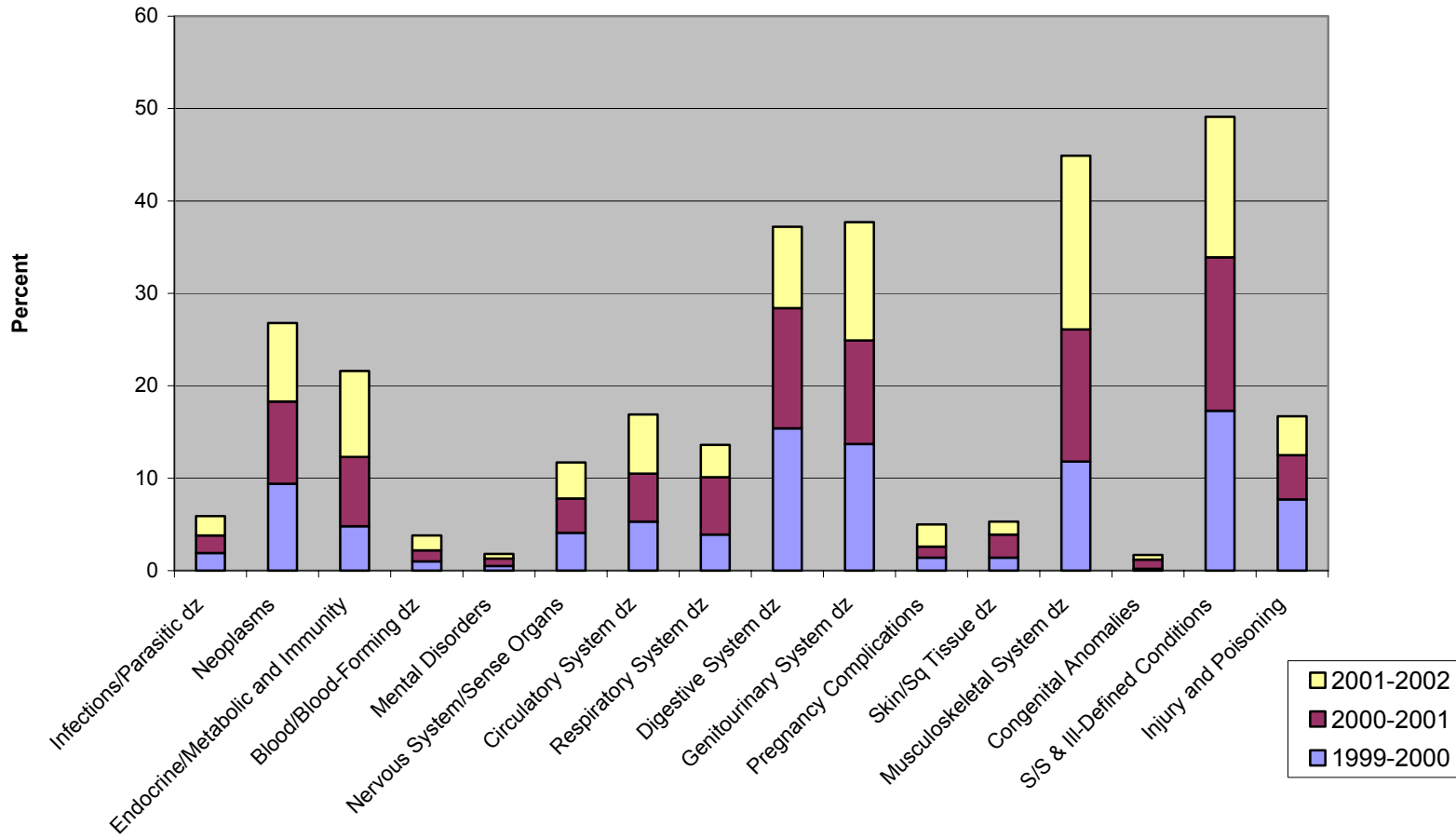


Table 7: Comparison of SF-8 Composite Scores for Sedgwick County Project Access Patients to General US Population Norms

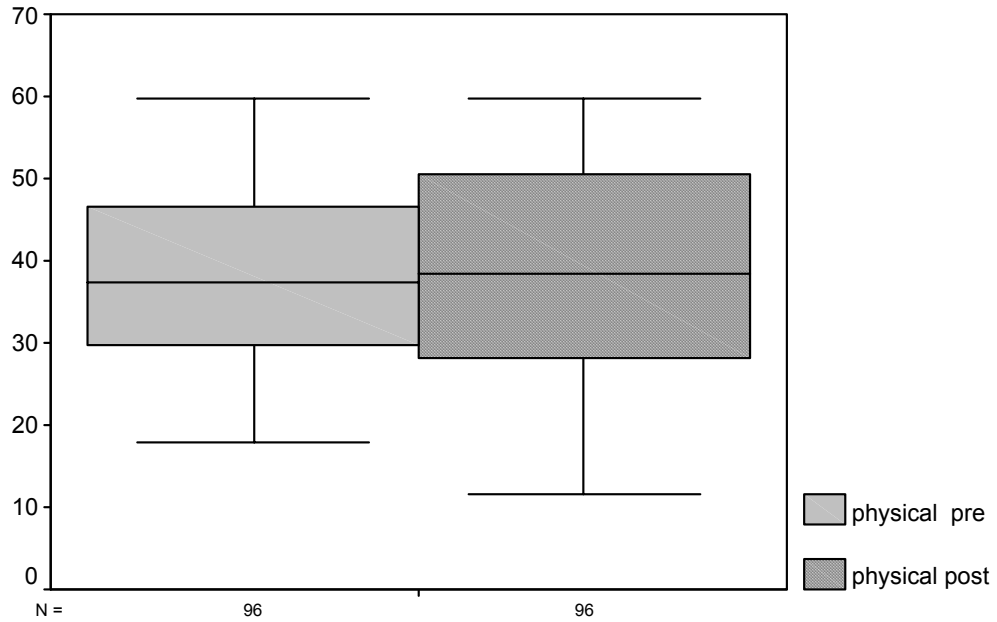
		Current Project Access patients	SF-8 Norms for General US Population	Current Project Access patients	SF-8 Norms for General US Population
		physical health composite score	physical health composite score	mental health composite score	mental health composite score
N	Valid	262	N= 7472	262	N= 7472
	Missing	23		23	
Mean		38.42	49.20	42.45	49.19
Median		37.68	51.89	43.15	51.14
Percentiles	25	28.82	43.95	32.46	44.18
	50	37.68	51.89	43.15	54.14
	75	48.06	55.93	52.63	57.46
SD		11.17	9.07	11.56	9.46

Table 8: Comparison of Initial vs. Follow-Up SF-8 Scores for Project Access Patients

	Initial SF-8 Mean (SD) N=32	Post SF-8 Mean (SD) N=32	Paired t-test	SF-8 Norms for General US Population N= 7472
Physical health composite score	34.9 (11.90)	40.2 (10.8)	t=2.624, df=31, p=.01	49.20 (9.07)
Mental health composite score	41.5 (12.8)	41.37 (10.8)	t=-.032, df=31, p=.96	49.19 (9.46)

SF-8 Physical Status

Comparison of Pre/Post Variability



SF-8 Mental Status

Comparison of Pre/Post Variability

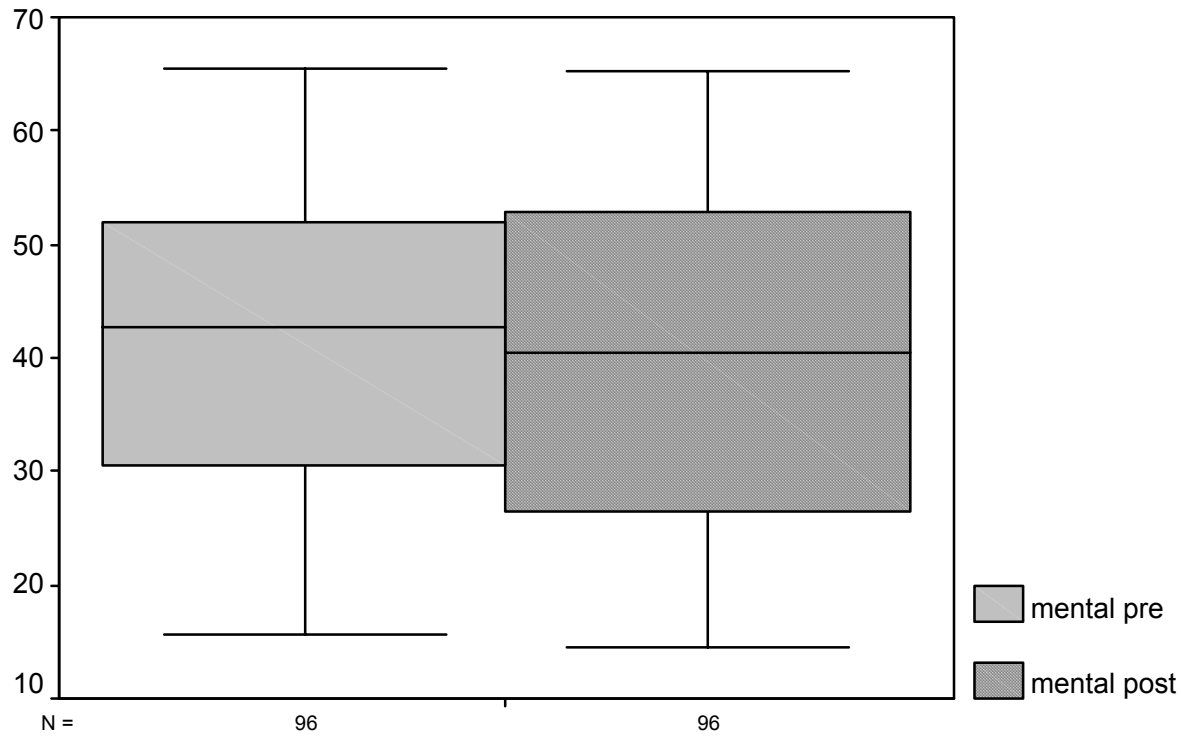


Figure 1

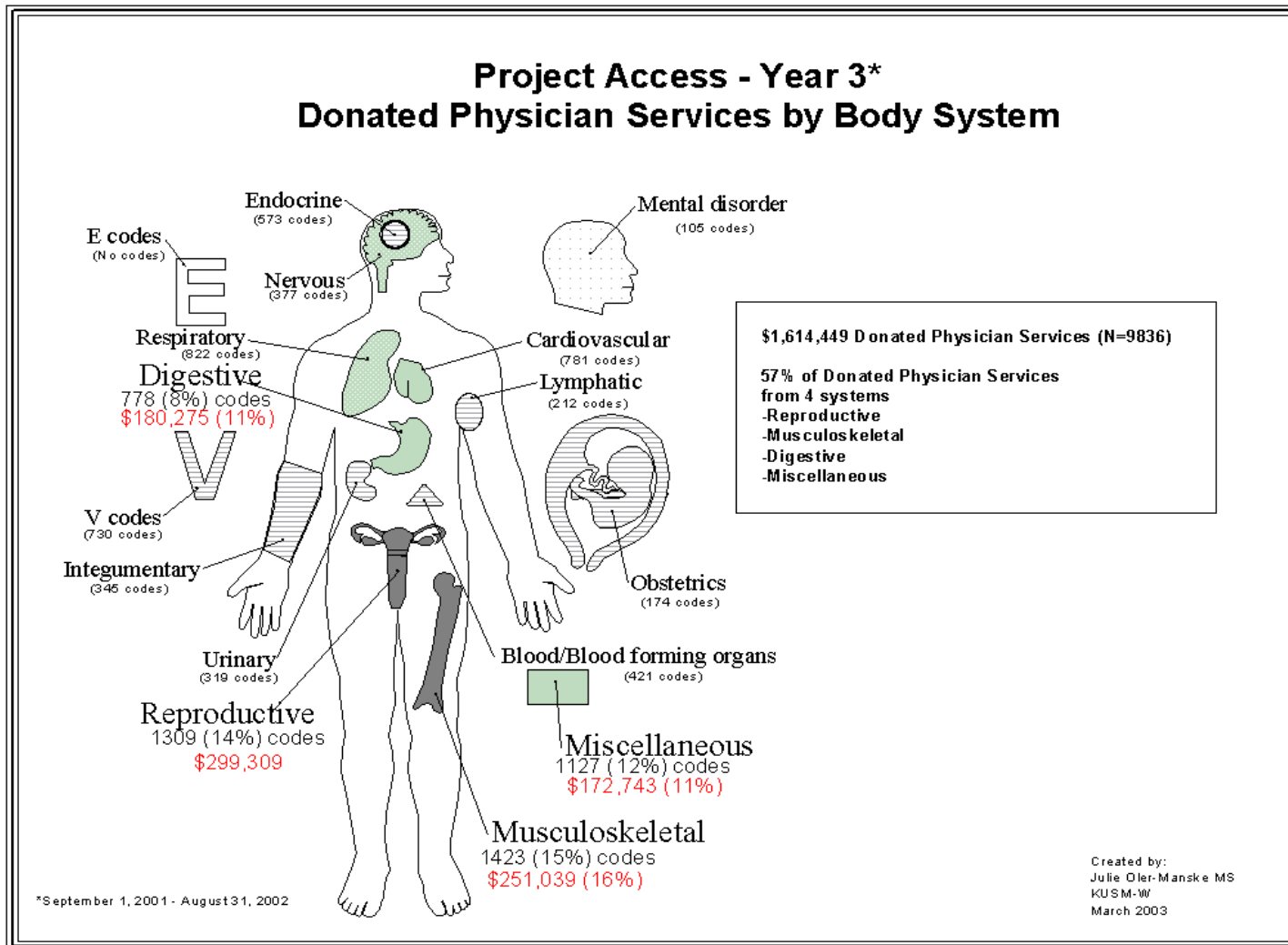


Figure 2

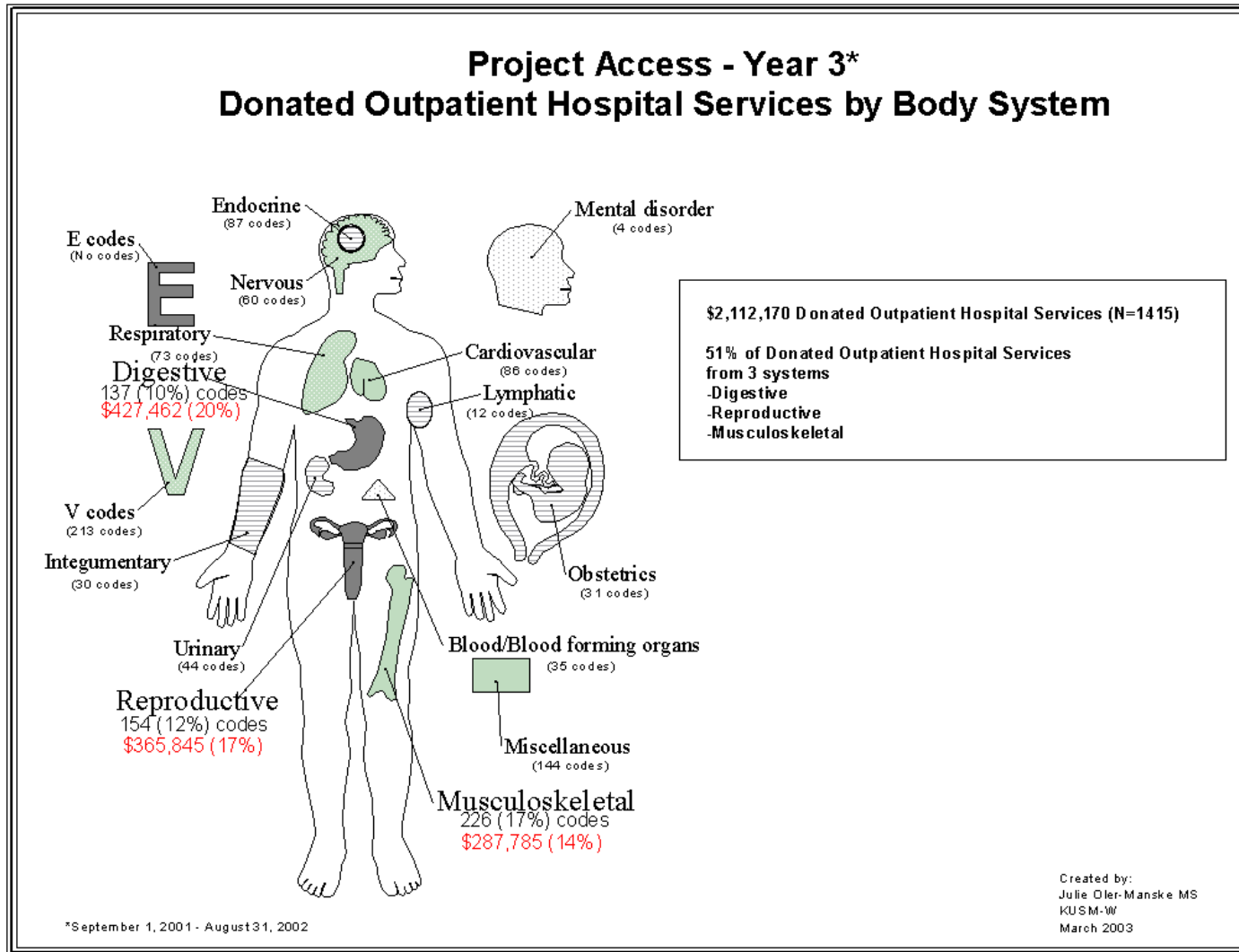


Figure 3

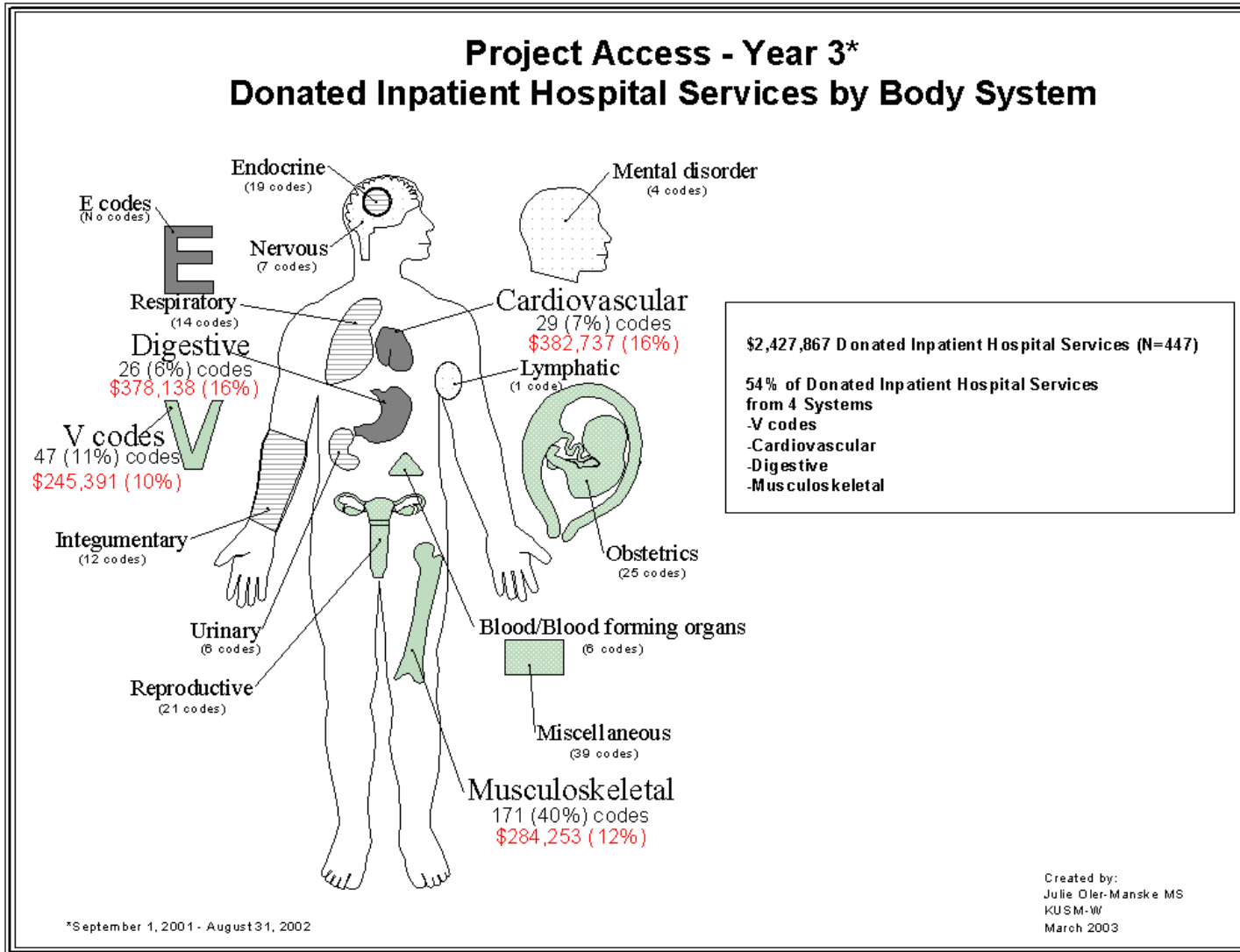
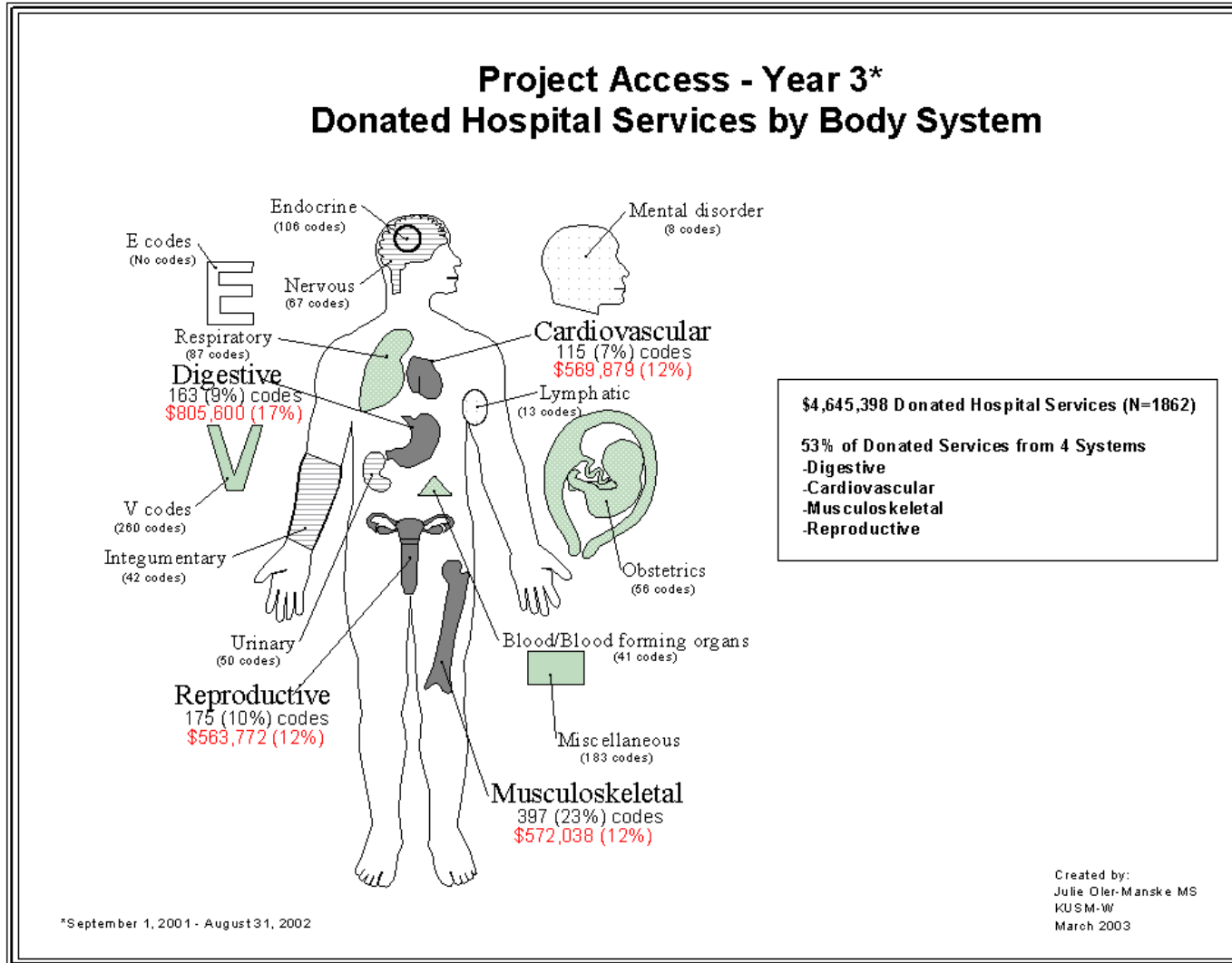


Figure 4



Appendix 1: Description of Diagnostic Categories

The Health Care Financing Administration (HCFA) Prospective Payment System classifies disease(s), diagnostic and surgical procedures using a coding system. For this analysis, codes applicable for the acute care setting, DRGs (diagnosis related-groups) and ICD-9 codes were used. A DRG is one of 495 classifications of diagnoses in which patients demonstrate similar resource consumption and length of stay patterns, whereas ICD-9 codes are quite specific to diagnoses of disease, types and sites of surgical procedures, as well as diagnostic procedures such as radiological and laboratory exams.

The principle or primary diagnosis is the condition established after study to be chiefly responsible for the hospital admission for care. Whereas all other diagnoses, second, third or fourth, may exist at the time of admission or develop subsequently during the hospitalization, these additional ICD-9 codes affect treatment received and/or the length of stay. A co-morbidity is a preexisting condition that, due to its presence with a specific diagnosis, causes an increase in the length of stay.

Due to the extensive use of “medicalese” for DRG and ICD-9 codes, a body systems grouping mechanism was used to provide a sense of the volume and severity of disease that uninsured patients are experiencing. The following is a description of the 17 categories of disease, diagnoses and procedures observed from September 1999 through July 2000.

1. **Infections and parasitic diseases:** Patients in this category had diagnoses such as hepatitis B, viral hepatitis with or without complications during their hospitalization.
2. **Neoplasms:** Patients with a wide variety of types and sites of cancers were treated. Neoplasms were located in all major body systems and included colon, rectum, gallbladder, mouth, trachea, larynx, lung, thyroid, breast, cervix and uterus, prostate, skin, brain, and spine.
3. **Endocrine, metabolic, nutritional disorders:** Diagnoses in this category included diabetes, goiter, thyrotoxicosis, and hypothyroidism.
4. **Blood and blood-forming diseases:** Patients in this grouping were treated for anemia, thrombocytopenia and lymphadenitis.
5. **Mental disorders:** Patients in this grouping had diagnoses of psychoses, depression, and anxiety disorder.
6. **Nervous system and sense organs:** A wide range of diagnoses were represented in the category—including neuritis, hydrocephalus, corneal ulcers, chronic otitis media and hearing loss.
7. **Circulatory system diseases:** Diagnoses in this category included heart disease, hypertension, heart attack, atherosclerosis, dysrhythmias, enlarged heart, arteriosclerosis, peripheral venous insufficiency, and hemorrhoid.
8. **Respiratory system diseases:** Patients in this category were treated for nasal cavity problems and sinusitis, bronchitis, bronchiolitis, chronic tonsillitis, pneumonia, chronic airway obstruction, breathing difficulties related to radiation therapy.
9. **Digestive system diseases:** Diagnoses in this category included tooth, pulp and other mouth diseases, esophagitis, peptic ulcer, reflux disease, gastritis and hemorrhage, appendicitis w/ peritonitis, hernia repair, ulcerative colitis, fistula, lower gastrointestinal hemorrhage, chronic hepatitis, gall bladder surgery, pancreatic disease.

10. **Genitourinary system diseases:** A wide range of diagnoses were observed in this category including acute and chronic renal disease, kidney stones in kidney and ureter, ureteral obstruction, blood in urine, disorders of male and female reproductive systems.
11. **Complications of pregnancy, childbirth and puerperium:** A small number of women were treated for problems such as threatened premature labor, pregnancy management for complicated births, excessive bleeding post delivery,
12. **Skin and subcutaneous tissue diseases:** Patients in this category were treated for cellulitis and abscesses, dermatitis, or skin ulcers.
13. **Musculoskeletal system:** This category is a high volume category affecting a large number of patients in the data set. The category includes such diagnoses as osteo and rheumatoid arthritis, spine and joint pain/procedures.
14. **Congenital anomalies:** This category was very low volume and involved the correction of anomalies on adult patient.
15. **Conditions** arising in the perinatal period: There were no observations of this category in the first year of operations.
16. **Ill-defined conditions, signs and symptoms:** A wide range of diagnoses were observed in this category including dizziness, sleep disturbances, malaise, and various types of chest pain, nausea, vomiting, abdominal pain, abdominal swelling, abnormal laboratory and radiological results.
17. **Injury and poisoning:** This category is also wide-ranging, and includes such diagnoses as fractures of the face, ribs and extremity, open wounds, contusions, burns, post procedure complications, and postoperative infections.

The medical diagnoses of second year Project Access patients were analyzed across the first 13 admissions. Diagnostic categories were summed to assess which categories were high frequency.

Appendix 2: Description of Physician Office Procedures

The Health Care Financing Administration (HCFA) Prospective Payment System classifies disease(s), diagnostic and surgical procedures using a coding system. For this analysis, ICD-9 codes and Current Procedural Terminology (CPT) codes applicable for the health care services were used. ICD-9 codes are quite specific to diagnoses of disease, types and sites of surgical procedures, as well as diagnostic procedures such as radiological and laboratory exams, whereas CPT codes describe intervention services associated with treatment procedures. ICD-9 disease codes were described previously. A broad, medical treatment and/or services category label was used to provide a sense of the types and volume of services rendered to uninsured patients. The following is a description of the five categories of treatments and procedures observed from September 1999 through July 2000.

1. **Surgical procedures**—includes “package” services of the actual surgical procedure, preoperative, perioperative, and normal, uncomplicated postoperative care.
2. **Radiology** services regularly employ imaging, diagnostic and treatment procedures. Diagnostic procedures include computerized tomography (CT), magnetic resonance imaging (MRI), or diagnostic ultrasound, while interventional radiology procedures may include radiation oncology or diagnostic therapeutic nuclear medicine, and other therapeutic technologies. Radiology procedures are comprised of two components: technical and professional. The technical component includes the provision of the equipment, supplies, technical personnel and costs attendant to the performance of the procedure. The professional component encompasses the physician’s work in providing the service, including supervision, interpretation and report of the procedure.
3. **Laboratory & Pathology** includes any laboratory tests that may be performed for diagnostic and/or treatment purposes in the care of the patient. Subsections include organ or disease-oriented panels, drug testing, drug screens, therapeutic drug assays (in which a drug level is measured), evocative/suppression testing (measure the effects of administered stimulating or suppressive agents upon the patient), consultation, urinalysis, chemistry (glucose, electrolytes, etc.), hematology and coagulation (hemoglobin/hematocrit, prothrombin time, INR, etc.), immunology, transfusion, microbiology (cultures, organism identification, and sensitivity studies), four types of pathology studies, anatomic pathology (post mortem), cytopathology (Pap smears), cytogenetic (chromosome analysis), and surgical (gross and microscopic examination of specimens submitted from surgical procedures).
4. **Medicine** is a broad category including diagnostic and therapeutic services such as immunizations, injections, specialty-specific codes, and special services. The specialty services include psychiatry, therapeutic or diagnostic infusions (excluding chemotherapy) that require a physician’s presence, biofeedback, dialysis, ophthalmology, cardiovascular (cardiography, echocardiography, cardiac catheterization, electrophysiologic studies), pulmonary, allergy and clinical immunology, neurology and neuromuscular procedures, sleep testing, central nervous system assessments, chemotherapy administration, physical medicine and rehabilitation, wound management, osteopathic or chiropractic manipulative treatment, anesthesia and special services and reports.

5. **Evaluation and Management** involves office visits (new and established), hospital visits (initial and subsequent), and consultations. These are face-to-face, professional services, and include assessment (chief complaint, past, present and social history, and a review of systems), diagnostic services and treatment interventions provided by the physician.