

Overview of Camden Emergency Department and Hospitalization Data

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Construction of Camden Health Database

- Good planning starts with good data
- No good local datasets, most current data at the county or state level
- Patient level data is crucial to understanding health patterns
- Local data could pull together stakeholders and break down barriers

Camden Health Data

- Billing data for Camden City residents only
 - Cooper Health System
 - Our Lady Of Lourdes Health System
 - Virtua Health System
- Included in data files
 - Name, DOB, address
 - Diagnosis codes
 - Gender, Race, Insurance status, Date of Admission, Date of Discharge, Type of Visit
 - Charges/receipts
 - Emergency department visits and inpatient hospitalizations

Camden Health Data

- HIPAA protections/IRB protocols
 - Protocol reviewed by three IRB's (Institutional Review Boards)
 - Took approximately 9 months
 - Files isolated to a single hard drive
 - Locked in filing cabinet, behind 2 locked doors, next to security desk
 - Access only available to three researchers who are registered with the IRB's.

Camden Health Data

- Obtaining the Data
 - Hospital IT departments very slow
 - Incorrect data
- Data cleaning/standardization
 - Addresses misspelled and non-standard
 - Incorrectly entered names, DOB, etc
 - Insurance company info coded differently with each institution

Camden Health Data

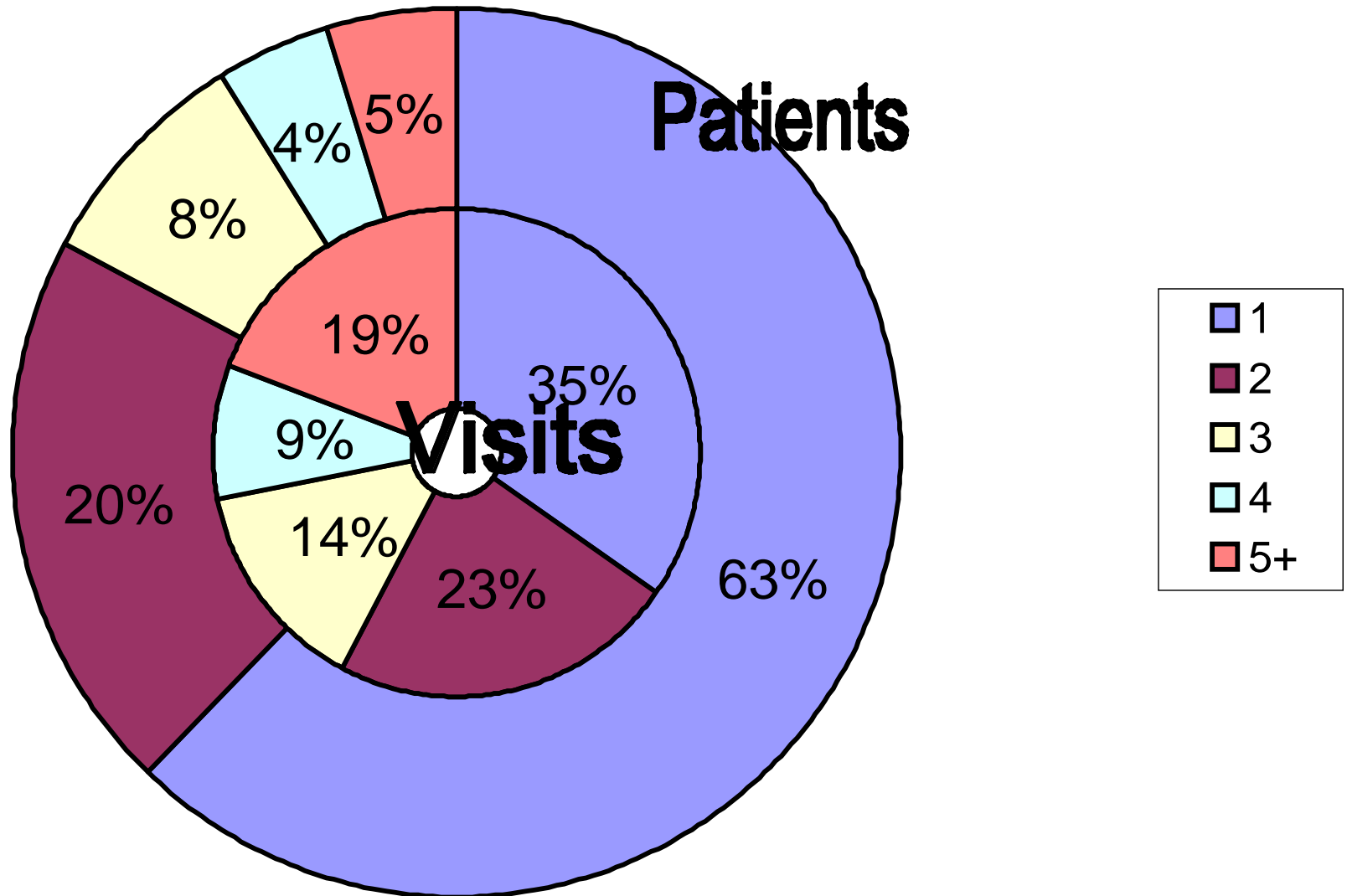
- Data Linkage Between Datasets
 - Complex process to link patients between disparate data sets
 - Probabilistic linkage based on Name, DOB, Address, and Hospital ID
 - Commercial software packages available
- Creation of Relational Database
 - Split flat data files into multiple related tables
 - Create queries and reports
- Geocode and map data

Camden Health Data

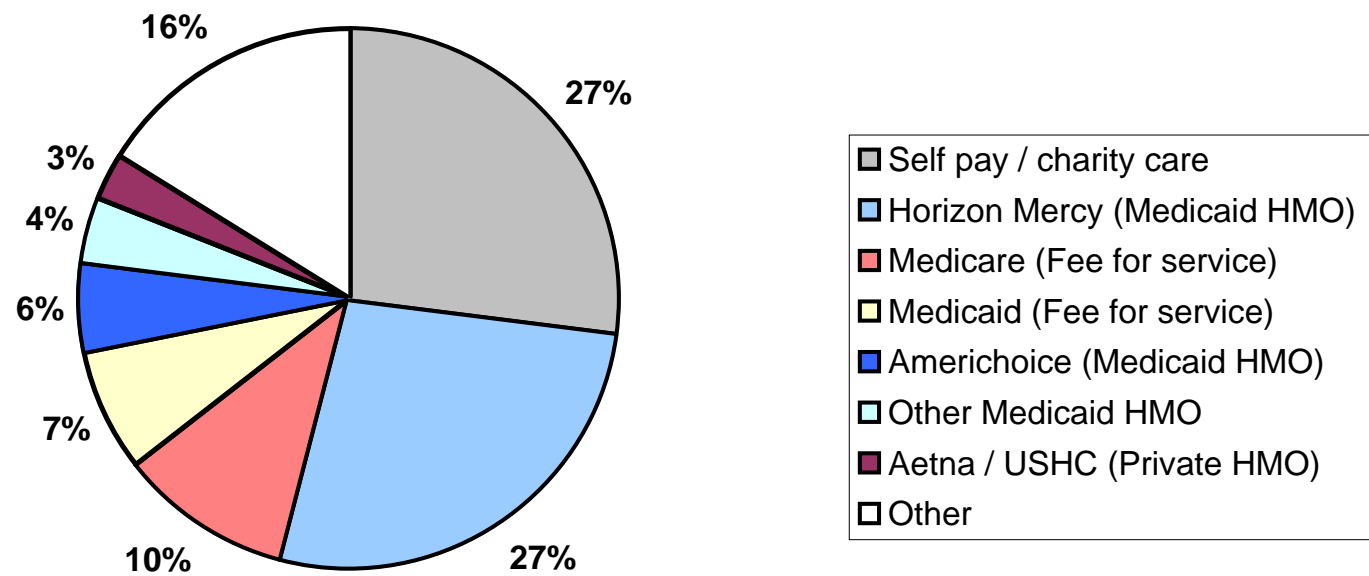
Overview 2003:

- 68,000 Visits
- 38,000 Unique patients across institutions
 - Used rough methodology of DOB and part of address
- Approx 50% of the City population uses the ER/hospital in one year
- Significant geographic variations

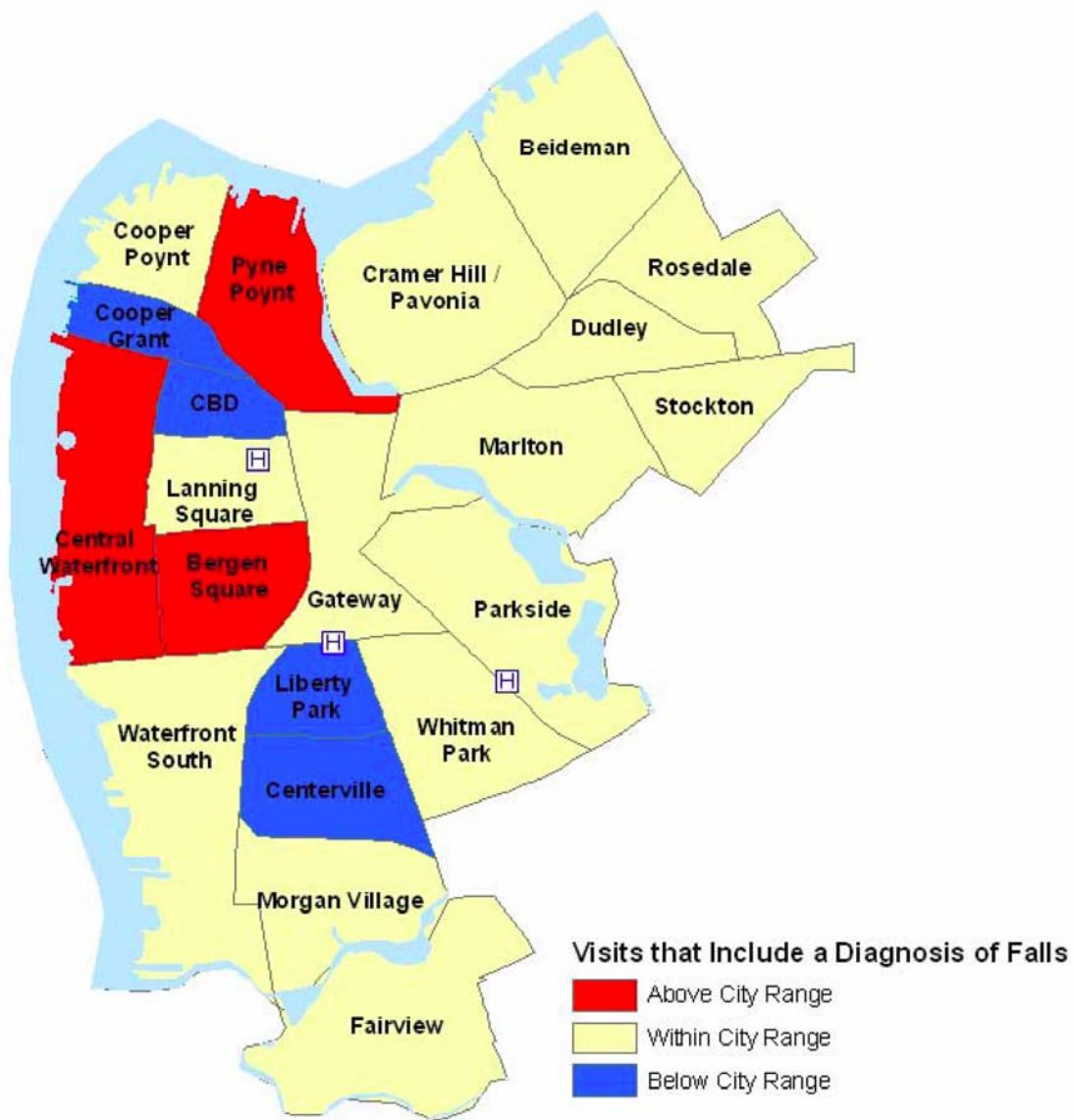
Visit Frequency (Pt's vs Visits)



Patient Insurance Status



Camden Hospital and Emergency Room Health Data - 2003



Comparisons are based on rate per 100,000 population.

Source:
CAMConnect
Camden
Health
Report, 2006

Camden Health Data

New Data Set 2002 - 2007

- 387,000 records with 98,000 patients
- Leading utilizer came 324 visits
- Most expensive patient \$3.5 million
- Total revenue to hospitals for Camden residents \$460,000,000 + charity care
- 80% costs = 13% patients
- 90% costs = 20% patients

Top 10 ED Diagnosis 2002-2007 (317,791 visits)

465.9	ACUTE URI NOS	12,549
382.9	OTITIS MEDIA NOS	7,638
079.99	VIRAL INFECTION NOS	7,577
462	ACUTE PHARYNGITIS	6,195
493.92	ASTHMA NOS W/ EXACER	5,393
558.9	NONINF GASTROENTERIT NEC	5,037
789.09	ABDOMINAL PAIN-SITE NEC	4,773
780.6	FEVER	4,219
786.59	CHEST PAIN NEC	3,711
784.0	HEADACHE	3,248
729.5	PAIN IN LIMB	2,908
724.5	BACKACHE NOS	2,858
789	ABDOMINAL PAIN	2,836
599.0	URIN TRACT INFECTION NOS	2,799
V58.3	ATTENT DRESSING/SUTURE	2,792
724.2	LUMBAGO	2,704
920	CONTUSION FACE/SCALP/NCK	2,645
490	BRONCHITIS NOS	2,526
V68.9	ADMIN ENCOUNTER NOS	2,475
786.50	CHEST PAIN NOS	2,455

Top 10 Hospital Diagnosis 2002-2007 (65,988 visits)

V30.00	SINGLE LB-IN HOSPITL NEC	6,315
786.59	CHEST PAIN NEC	2,378
428.0	CONGESTVE HRT FAILUR NOS	2,033
V30.01	SINGLE LB/BY C-SECTION	1,985
486	PNEUMONIA, ORGANISM NOS	1,554
493.92	ASTHMA NOS W/ EXACER	1,210
414.01	CORNARY ATHERO-NATV VESL	1,038
645.11	POST TERM PREG-DELIVERED	994
654.21	PREV C-SECT NOS-DELIVER	801
491.21	OBST CH BRONCH W/ EXAC	738
599.0	URIN TRACT INFECTION NOS	673
664.01	DEL W 1 DEG LACERAT-DEL	649
780.2	SYNCOPE AND COLLAPSE	588
276.5	VOLUME DEPLETION	561
780.39	OTHER CONVULSIONS	554
650	NORMAL DELIVERY	549
659.71	ABN FETAL HRT RATE, DEL	531
410.71	SUBENDO INFRC-INIT EPISD	527
682.6	CELLULITIS OF LEG	513

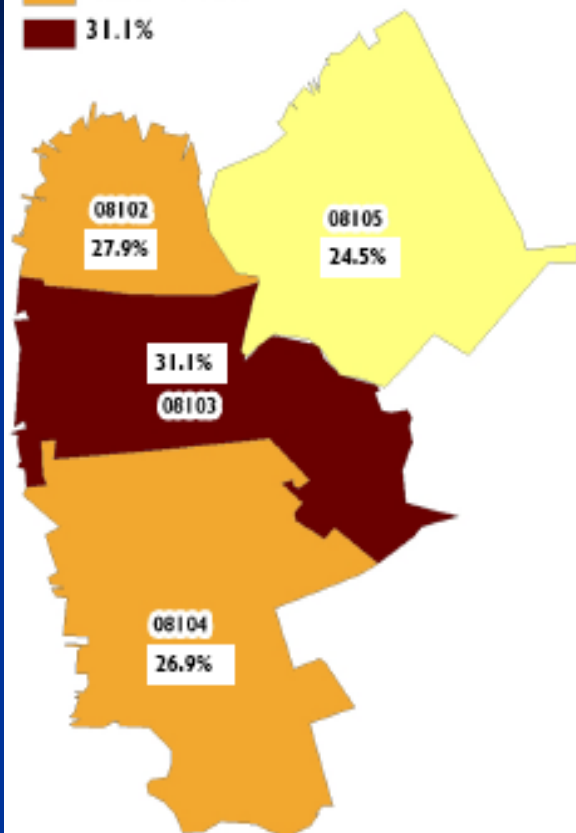
Chronic Disease Visits by Zip

Percent of Population with at least 1 Visit

24.5%

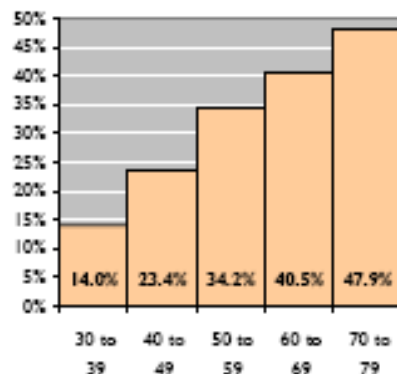
26.9% - 27.9%

31.1%

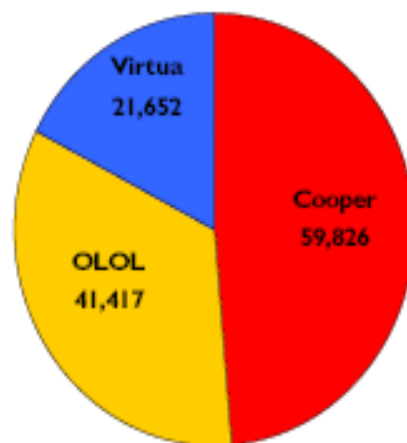


Chronic Disease Visits by Age

Percent of Population with at least 1 Visit



Chronic Disease Visits by Hospital

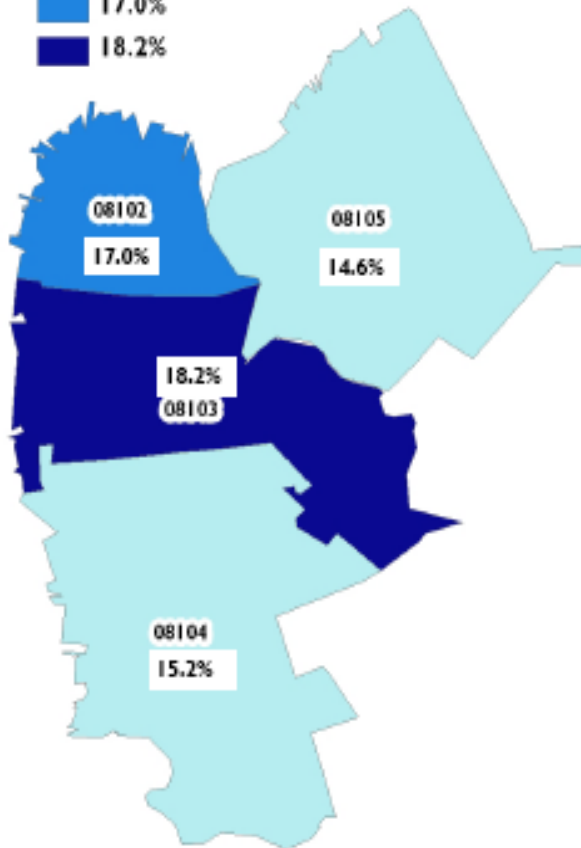
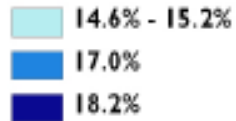


Number of Visits	Total Visits	Total Patients	Charges	Receipts
1 to 10	54,207	12,612	\$1,042,444,520	\$145,106,010
11 to 20	35,958	2,521	\$528,530,965	\$71,784,792
Over 20	32,730	960	\$407,663,357	\$51,105,098
TOTAL	122,895	16,093	\$1,978,638,841	\$267,995,901

Hospital Admissions and ER Visits for Chronic Disease 2002 - 2007

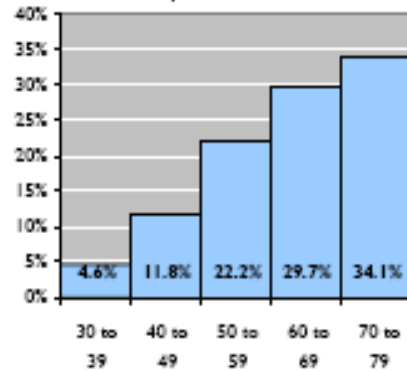
Diabetes Visits by Zip

Percent of Population with at least 1 Visit

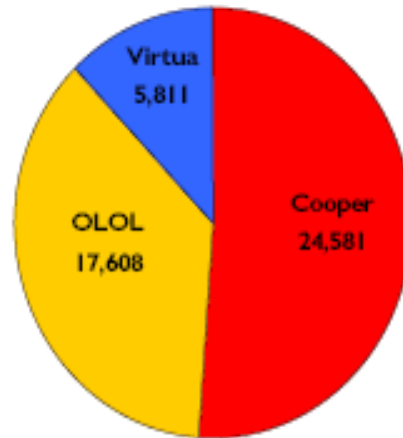


Diabetes Visits by Age

Percent of Population with at least 1 Visit



Diabetes Visits by Hospital



Number of Visits	Total Visits	Total Patients	Charges	Receipts
1 to 10	19,930	4,992	\$606,910,340	\$84,943,020
11 to 20	12,475	875	\$328,629,988	\$43,928,131
Over 20	15,595	428	\$278,015,450	\$34,729,624
TOTAL	48,000	6,295	\$1,213,555,777	\$163,600,775

Hospital Admissions and ER Visits for Diabetes 2002 - 2007

Top 1% of Utilizers (2002-2007)

- 1,035 patients with 39,056 visits
- Between 24 and 324 visits
- Total charges \$375 million
- Total receipts \$46 million + charity care
- Enough \$\$ to fund 50 family physicians or 100 nurse practitioners

More Information

www.camdenhealth.org

www.camconnect.org

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