



Cook County Hospital

Fall 2015 | Amit Goel, Aditi Jain, Anubhav Gupta
Ariana Alisjahbana, Elle Wang, Goutam Murlidhar

Agenda

- Team Overview
- Overview
- Objective
- Challenge
- Methodology
- Key Insights
- HSA Recommendations
- Limitations & Next Steps

Our Team



Amit Goel MBA



Aditi Jain MBA



Anubhav Gupta MIMS



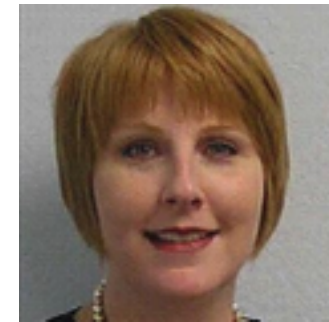
Ariana Alisjahbana
MBA



Goutam Murlidhar
MIMS



Elle Wang
Operations Research



Carol Durham
Accenture Mentor



JOAN POULSEN
HOSPITAL AUXILIARY

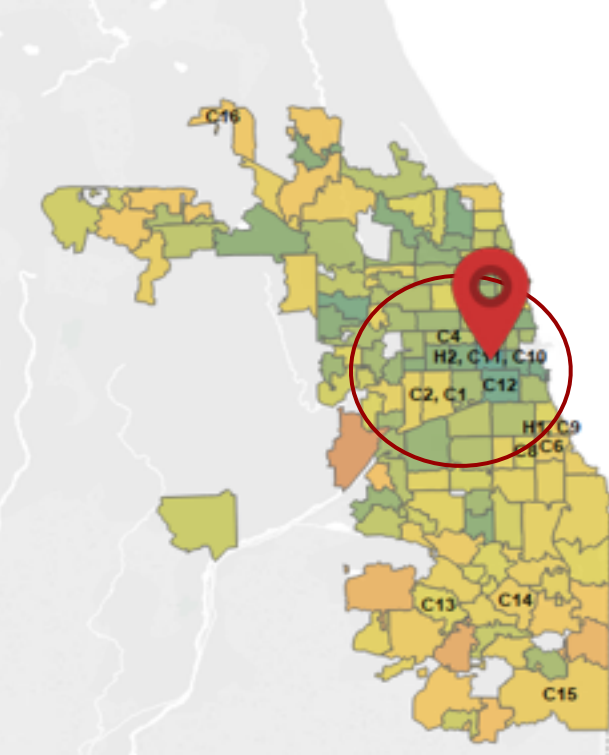
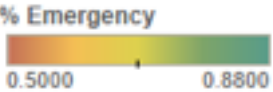
Our Objective: Keeping Cook County Hospital as the safety net hospital for everyone

- **Keeping Cook County's mission alive by improving its payer mix**
- **Reduce cost and improve quality of care**

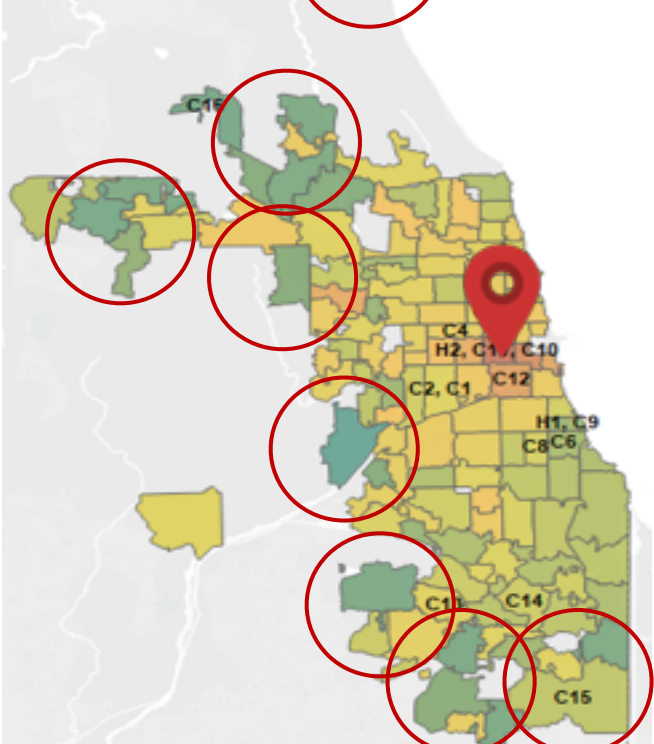


A Tale of Two Hospitals...

Emergency visits (72%)



Elective visits (24%)



Cook County Hospital faces two different challenges

> **Emergency admits** are high volume and costly

Patients with preventable diseases should be treated earlier before they become emergency patients

> **Elective patients** bring revenue but the hospital is losing them

The hospital needs to increase its share of elective patients

We identified two HSAs for Cook County to help solve these challenges

1) Mother and Baby

- a) Open speciality clinics or partner with OB-GYN clinics in the areas far away for hospitals.
- b) Create campaigns targeting African American moms/couples as expanding.



Medicaid is

2) Cook County CHRONIClers

- a) Open or partner with clinics to provide ambulatory care in high risk areas.
- b) Create a community outreach program targeting 40-65 year old adults and raise awareness about available ambulatory care and medicaid eligibility.



Cook County - Data Overview

Individual data point = Hospital Discharge



1.19M

Records in
Truven Db



74K

Unique discharges
over 3 yrs



71.5K

Discharges
for IL over 3 yrs



3

Years of data
(2011-13)

Methodology

Bottom Up
Exploration



Identified
important
features



Defined
HSA



Recommendations

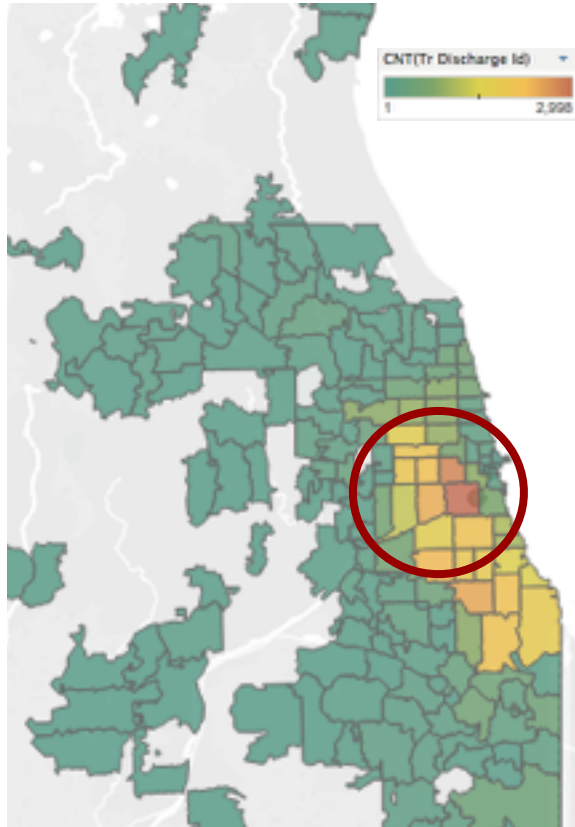
Top Down
Exploration

Repeatable across hospitals

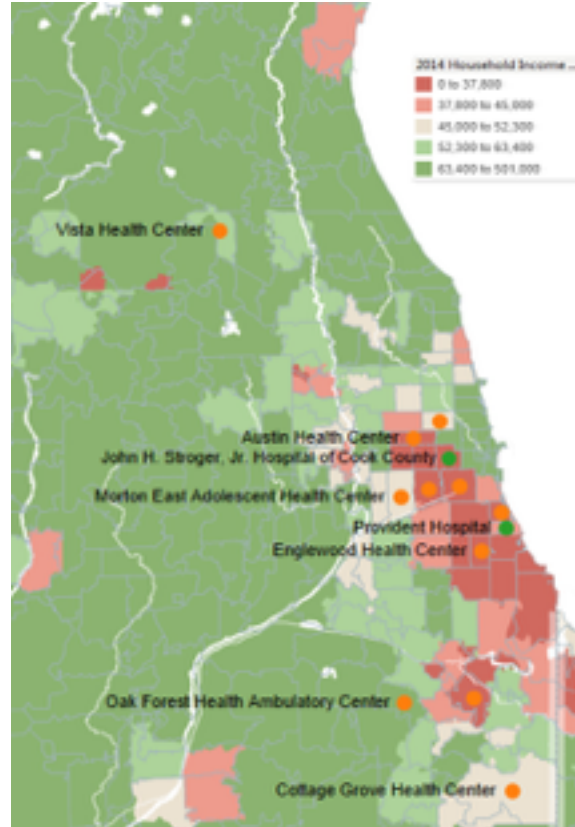
**DATA EXPLORATION
BOTTOM UP & TOP-DOWN**

The majority of Cook County Hospital patients come from low-income zip codes

Total discharges, 2011-13

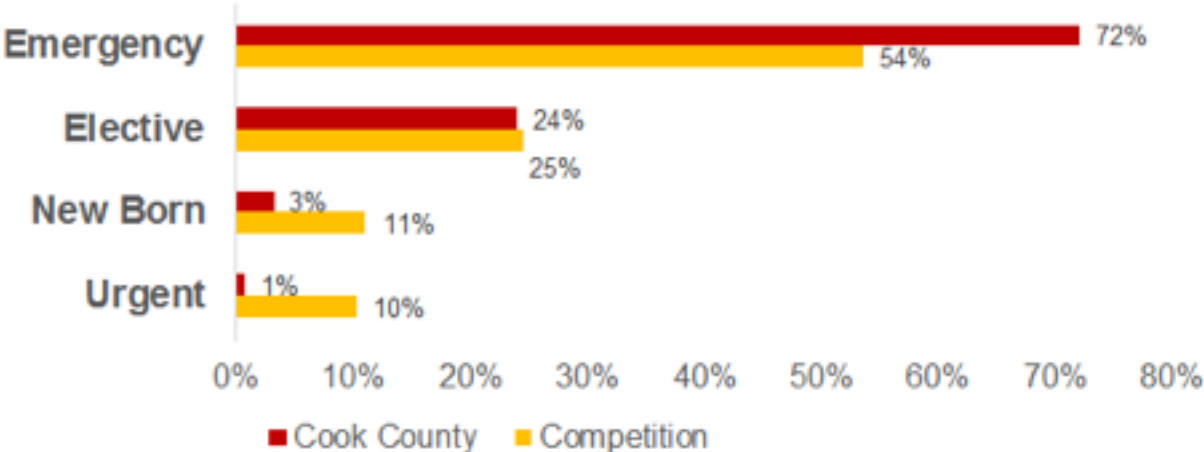


Household income and facility location, 2014



72% of all discharges are Emergency room admits vs. 54% for all other hospitals in the competition.

Admit-Type mix of Cook County Hospital vs Competition (2011-13)



% of elective is similar to the competition

Emergency Patients most commonly use Gastroenterology, Cardiology, Pulmonary, and Neurology service lines

Cook County's Service Lines by Payer Code, EMERGENCY only

Service Line	Self Pay	Medicaid	Commercial
MEDICINE	6,187	2,659	356
GASTROENTEROLOGY	3,482	1,262	139
CARDIOLOGY	2,670	1,003	105
PULMONARY	2,661	1,518	189
GENERAL SURGERY	2,213	849	227
NEUROLOGY	1,907	668	115
HEMATOLOGY/ONCOLOGY	1,826	942	83
ENDOCRINOLOGY	754	223	25
ORTHOPEDICS	745	315	102
NEPHROLOGY	688	316	27
SUBSTANCE ABUSE	529	229	10
HIV	430	370	21
GYNECOLOGY	306	83	11
UROLOGY	301	84	15
NEUROSURGERY	290	93	24
PSYCHIATRY	266	118	13
OTOLARYNGOLOGY	198	79	15
OBSTETRICS	102	135	24
VASCULAR SURGERY	100	45	3
CARDIAC SURGERY	86	16	1
NEONATOLOGY	63	61	8
NORMAL NEWBORN	5	6	
REHABILITATION		2	
Grand Total	25,809	11,076	1,513



Service Line
MEDICINE
GASTROENTEROLOGY
CARDIOLOGY
PULMONARY
GENERAL SURGERY
NEUROLOGY



Non-Emergency Patients receive treatment for OBGYN-related service lines

Cook County's Service Lines by Payer Code, ELECTIVE only

Service Line	Commercial	Medicaid	Self Pay
OBSTETRICS	280	2,292	406
GENERAL SURGERY	57	432	1,053
GYNECOLOGY	54	297	961
MEDICINE	48	355	594
HEMATOLOGY/ONCOLOGY	45	591	822
ORTHOPEDICS	25	161	341
CARDIOLOGY	23	165	474
GASTROENTEROLOGY	21	151	339
PULMONARY	18	171	283
UROLOGY	14	121	390
OTOLARYNGOLOGY	13	132	228
ENDOCRINOLOGY	10	53	124
CARDIAC SURGERY	9	40	117
NEONATOLOGY	8	44	33
NEPHROLOGY	6	50	130
NEUROLOGY	6	85	205
NEUROSURGERY	6	123	298
HIV	4	31	49
VASCULAR SURGERY	3	37	128
PSYCHIATRY	1	7	7
SUBSTANCE ABUSE	1	13	19
NORMAL NEWBORN		3	1
REHABILITATION		1	3
Grand Total	652	5,355	7,005

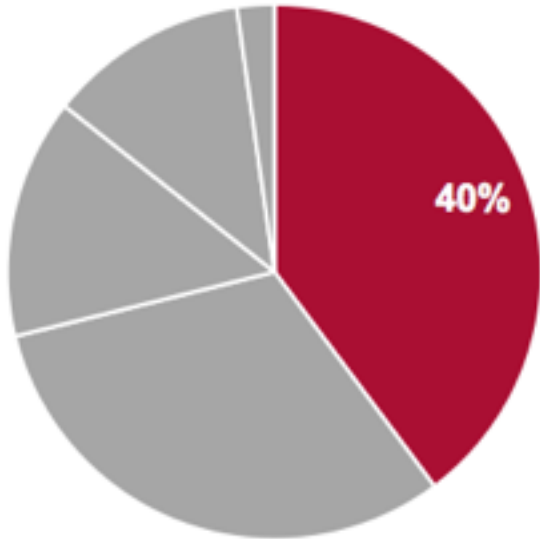


Service Line
OBSTETRICS
GENERAL SURGERY
GYNECOLOGY

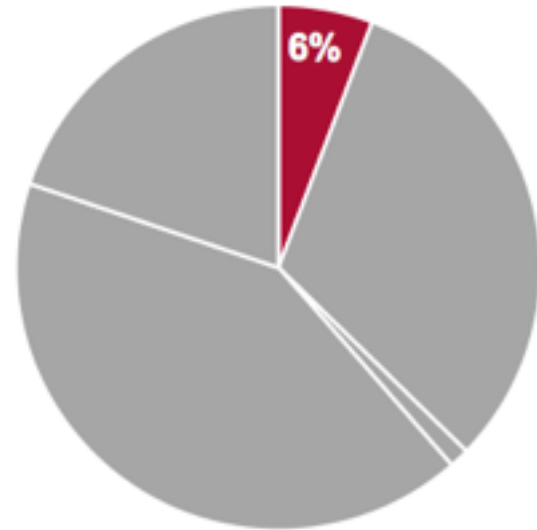


40% of all Cook county discharges are “self-pay” (uninsured) patients vs. 6% of all competitors

Cook County Hospital discharges by payer code, 2013



Competition hospitals' discharges by payer code, 2013



■ Self Pay

countycare
*Don't Just
get by*

I have **regular**
check-ups.

**THE POWER
TO OWN
YOUR HEALTH.**

CALL 312-864-8200 TO APPLY

CountyCare is an Illinois Medicaid Program for eligible adults.



www.countycare.com

In January 2013, Cook County expanded Medicaid, through
"County Care"

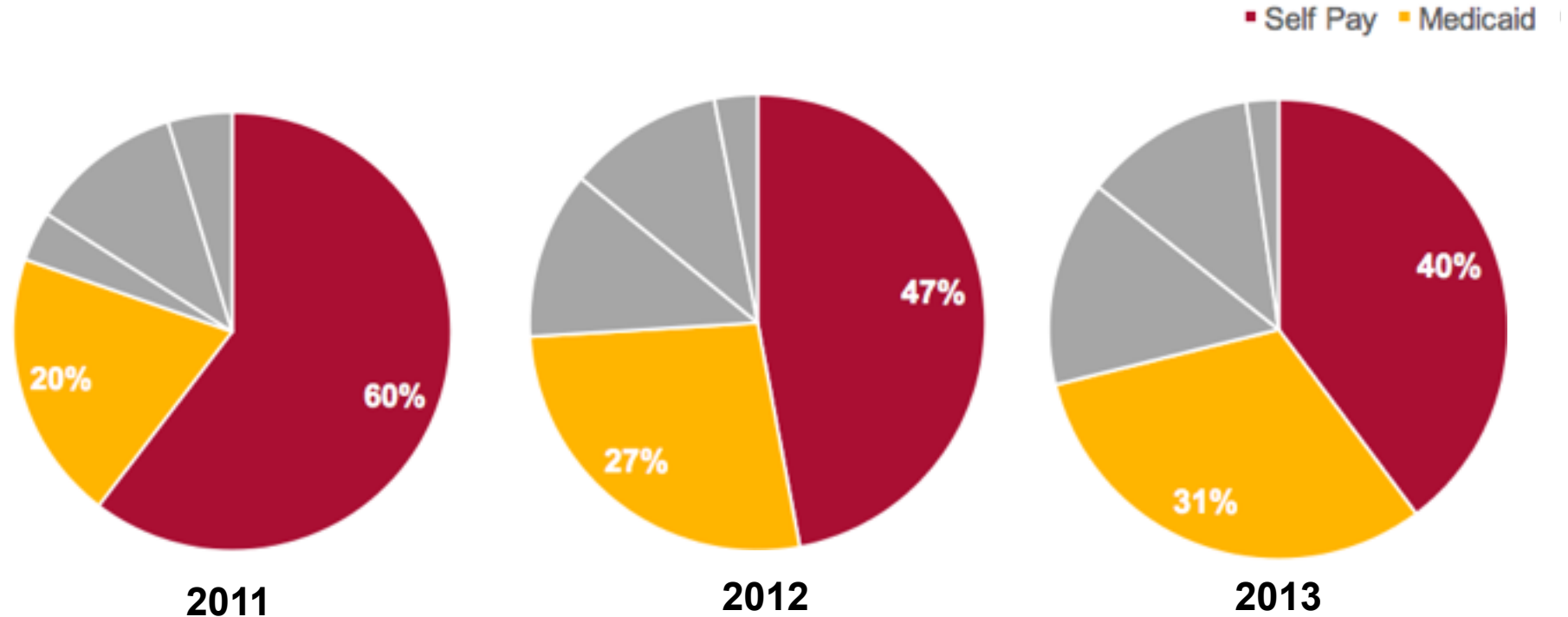
Self Pay patients will eventually become Medicaid patients; However, Cook County is losing some of these new Medicaid patients to the competition



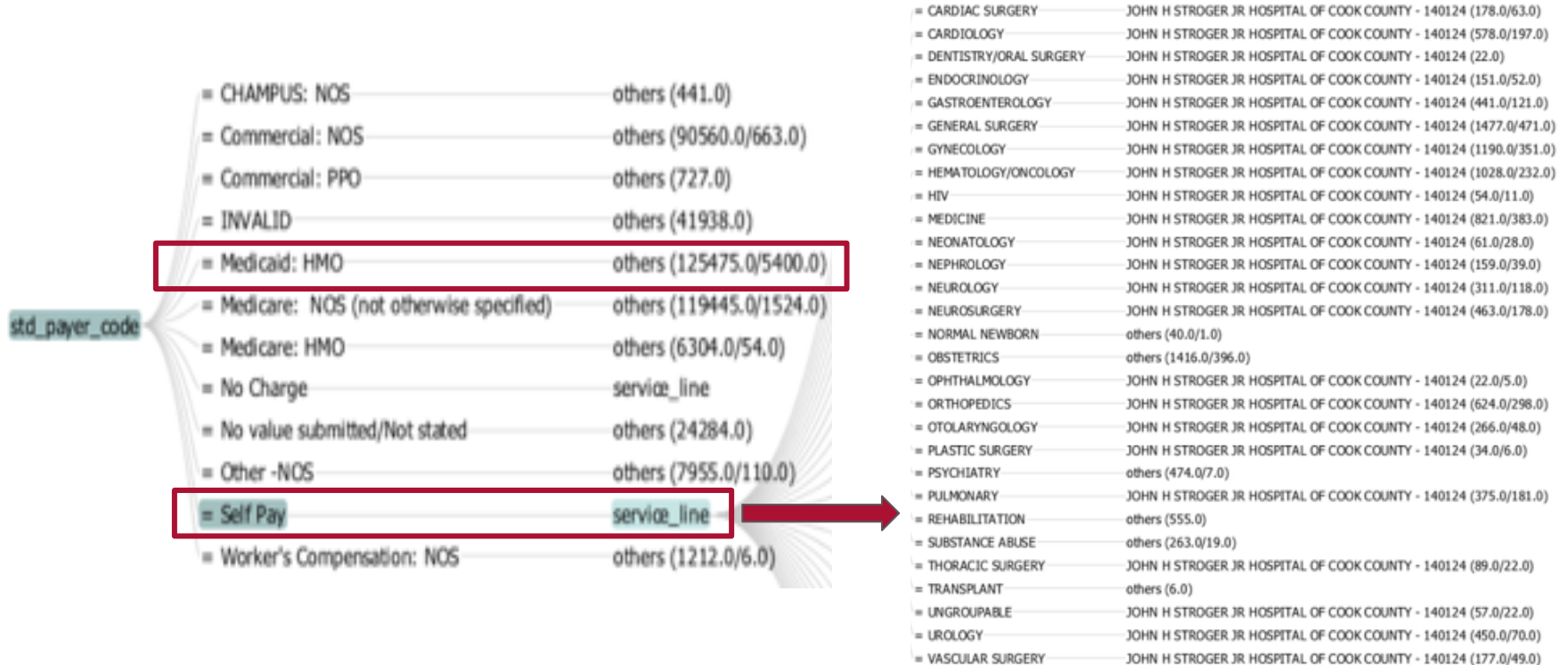
Leakage

Market Share of Self Pay & Medicaid is decreasing over three years.

Cook County Hospital discharges by payer code, 2011-13



Self Pay patients will eventually become Medicaid patients; However, Cook County is losing some of these new Medicaid patients to the competition



HSA DEFINITIONS

Three HSAs based on Service Lines

1. Mother and Baby (12% of discharges)

GYNECOLOGY OBSTETRICS NEONATOLOGY NORMAL NEWBORN



1. CHRONICs of Cook County (38% of discharges)

CARDIOLOGY ENDOCRINOLOGY GASTROENTEROLOGY PSYCHIATRY
PULMONARY SUBSTANCE ABUSE NEUROLOGY

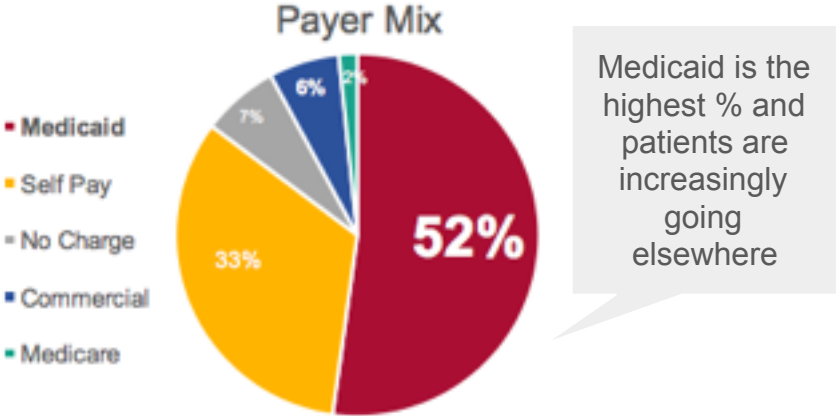


1. The Others

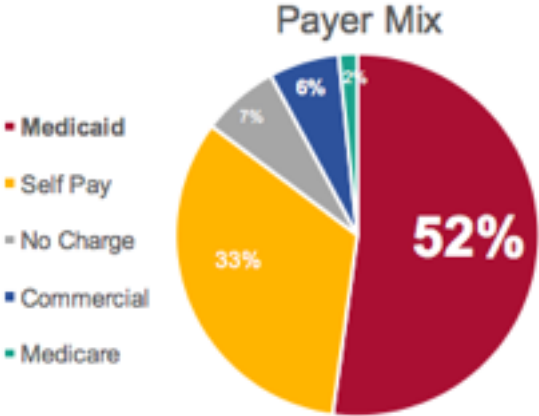
HSA 1: Gynaecology & Obstetrics Patients

GYNECOLOGY OBSTETRICS NEONATOLOGY NORMAL NEWBORN

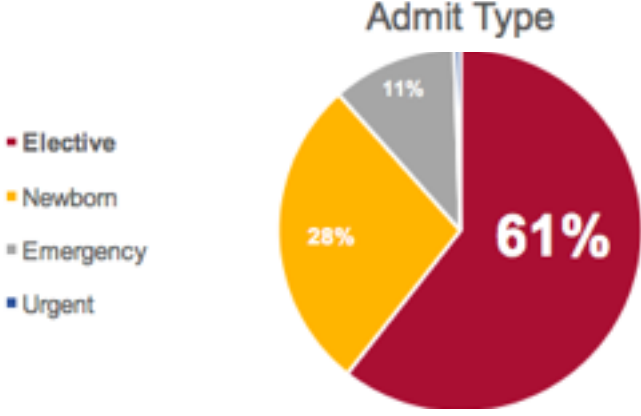
HSA#1 in Summary: Medicaid, Elective, Female, African American



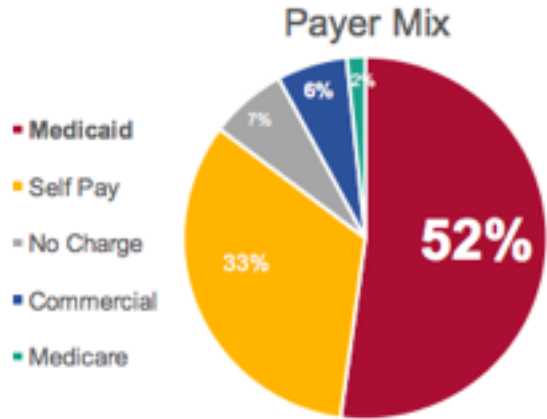
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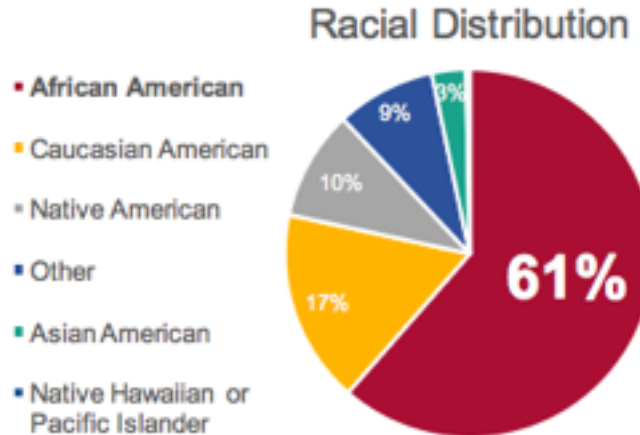
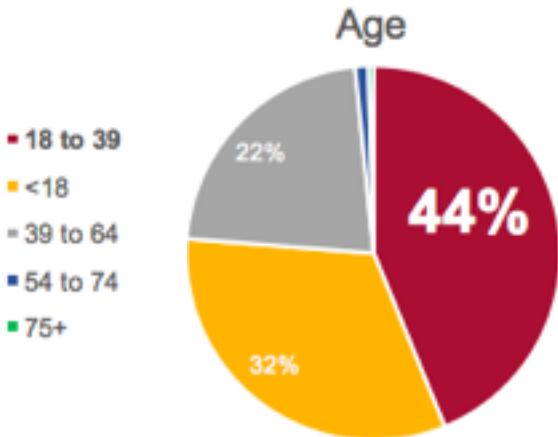
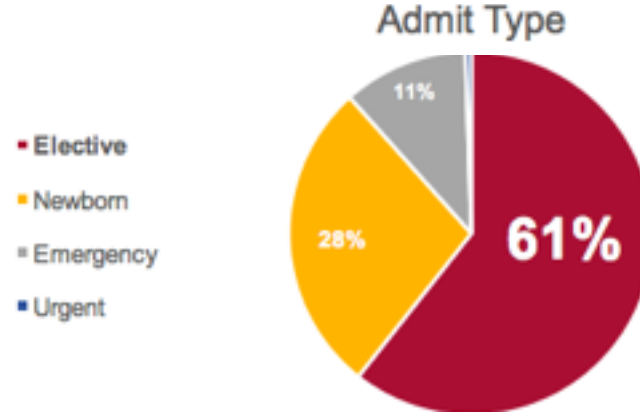
Medicaid is the highest % and patients are increasingly going elsewhere



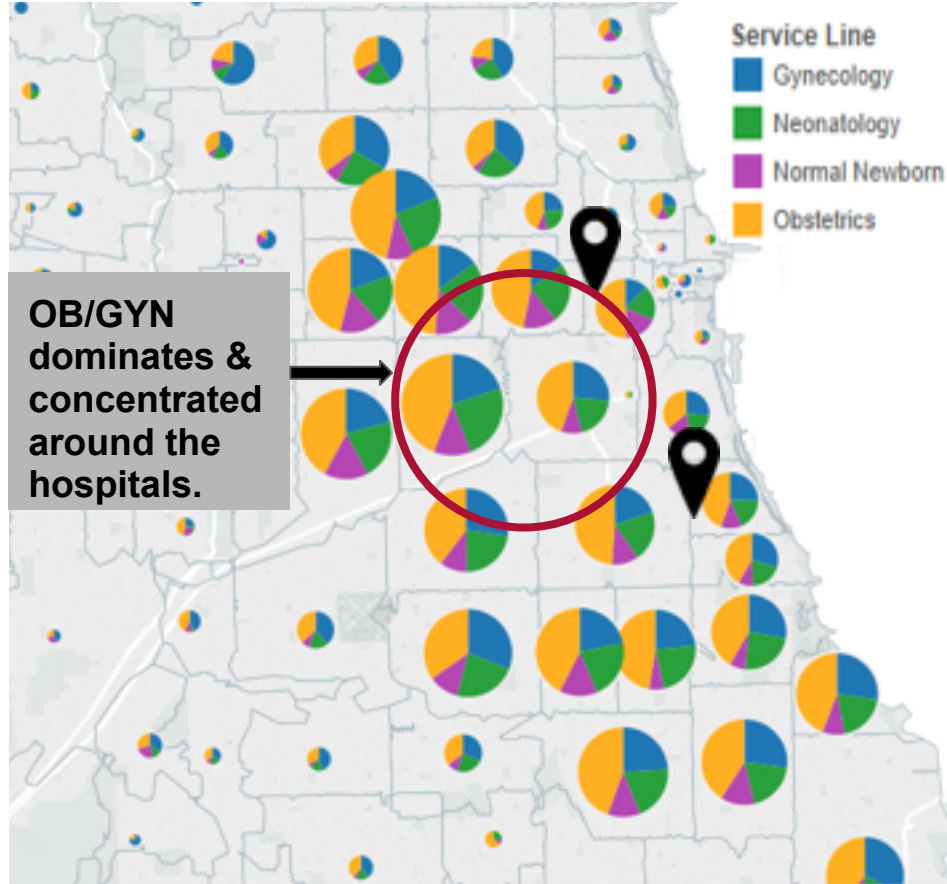
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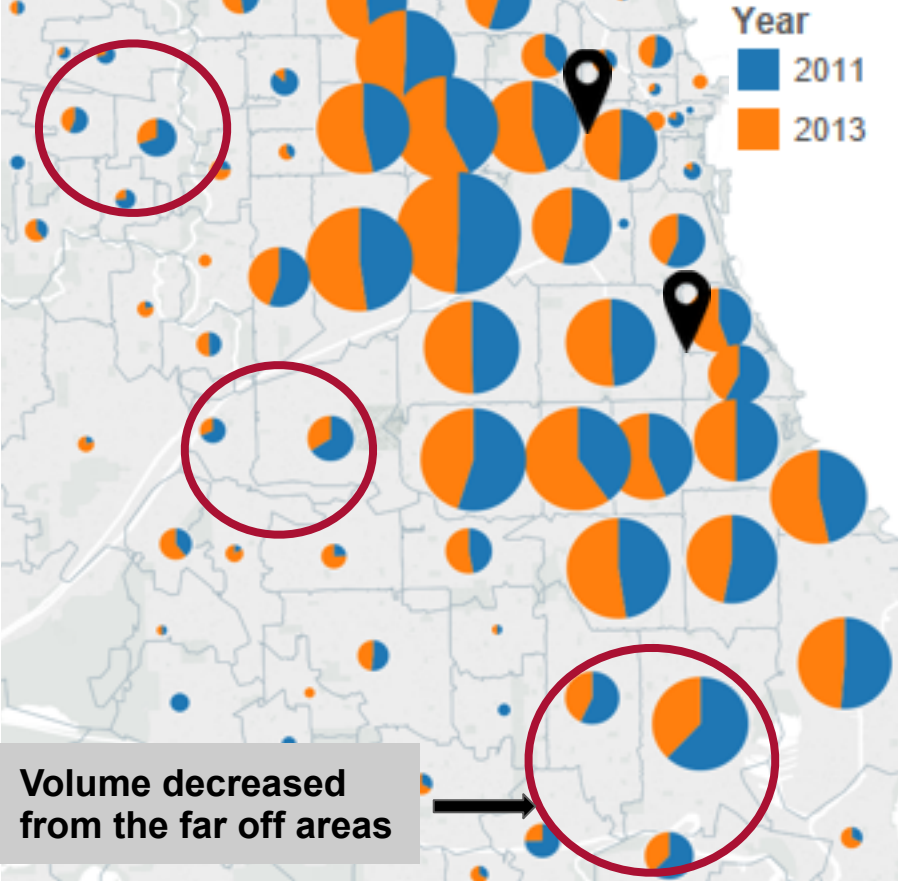
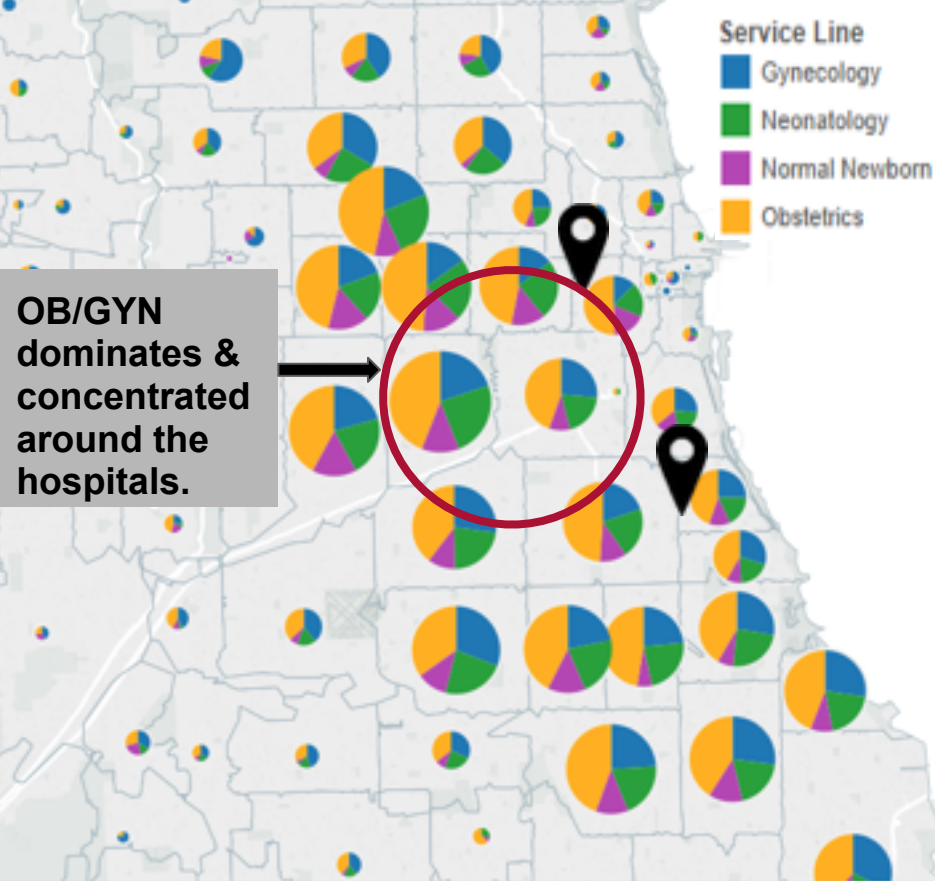
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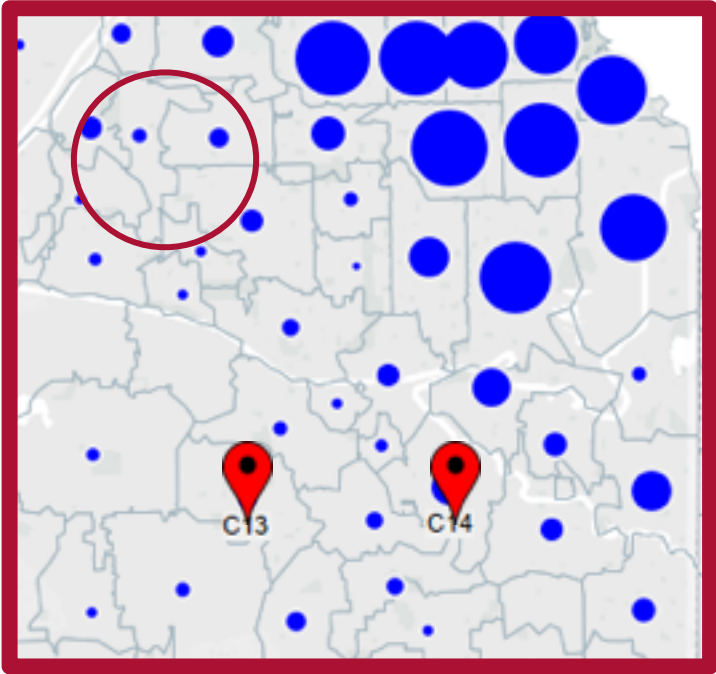
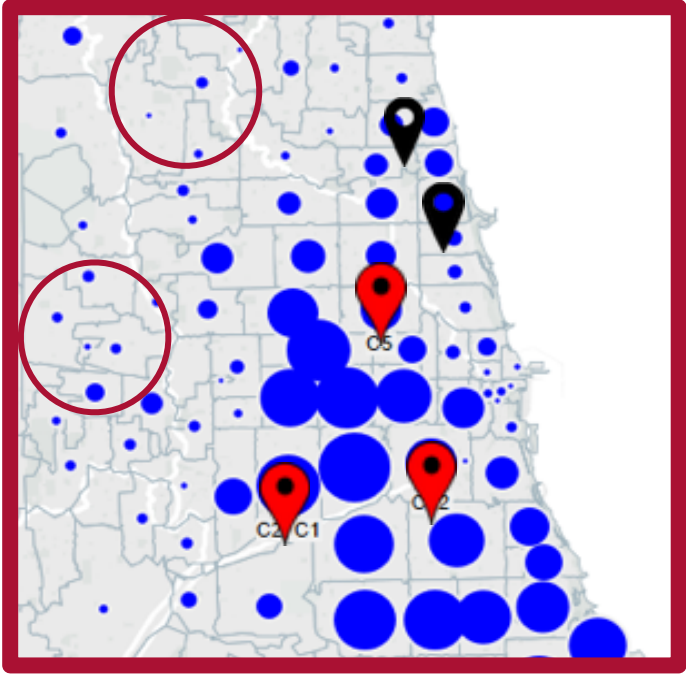
HSA#1- Volume is concentrated around the hospital; % discharges decreased from the far off areas.



HSA#1- Volume is concentrated around the hospital; % discharges decreased from the far off areas.



Recommendations for HSA #1: Open speciality clinics or partner with OB-GYN clinics in the far off areas (circled)



Create campaigns targeting African American moms/couples as medicaid is expanding.



HSA 2: High PQI Service Lines

CARDIOLOGY

ENDOCRINOLOGY

GASTROENTEROLOGY

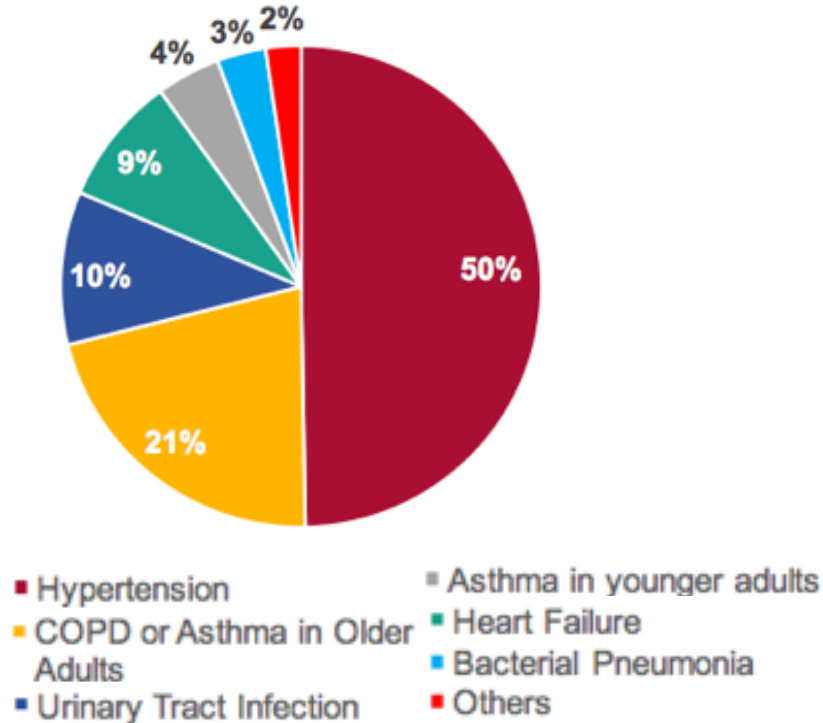
PSYCHIATRY

PULMONARY

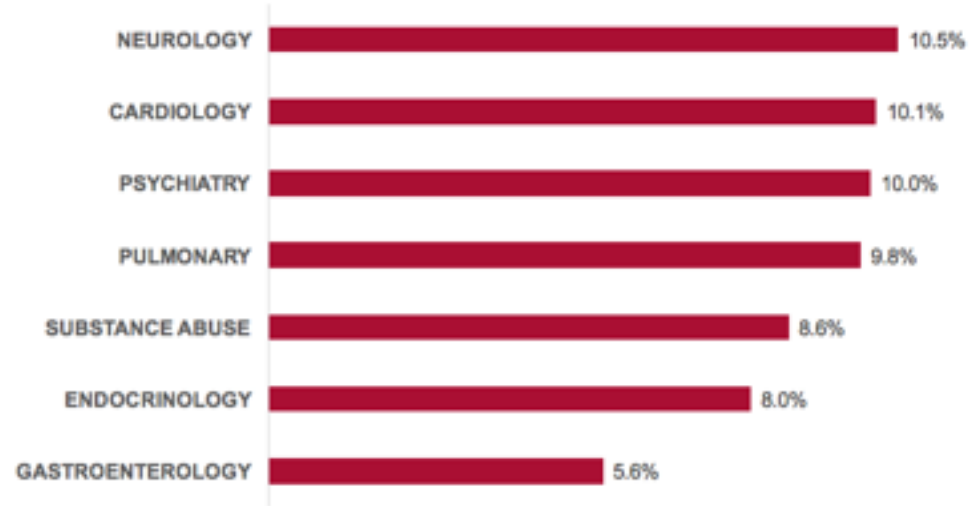
SUBSTANCE ABUSE NEUROLOGY

Three conditions account for 80% of all preventable discharges

Most common TAPQ codes, 2011-13

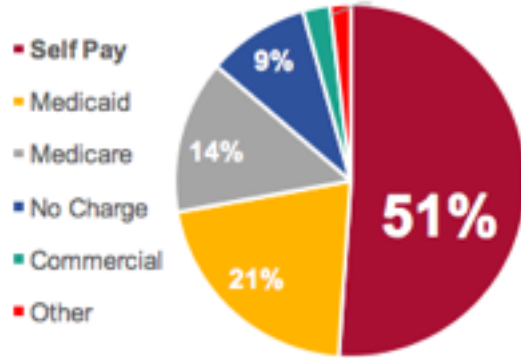


Most common service lines with high PQI, 2011-13



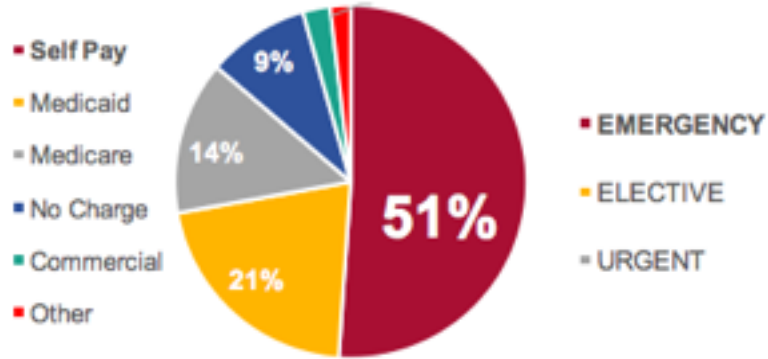
HSA#2 in summary: Self-pay, Emergency, Male, and African American

Payer Mix

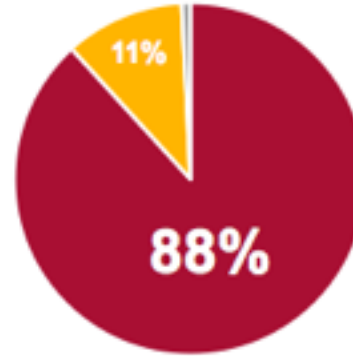


HSA#2 in summary: Self-pay, Emergency, Male, and African American

Payer Mix

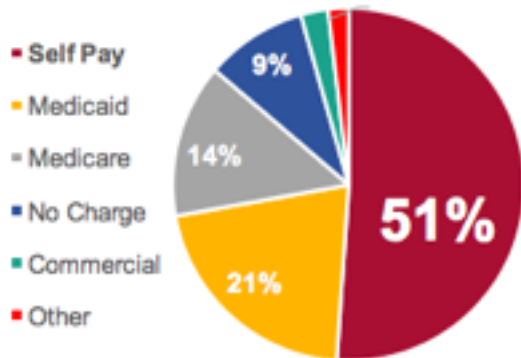


Admit Type

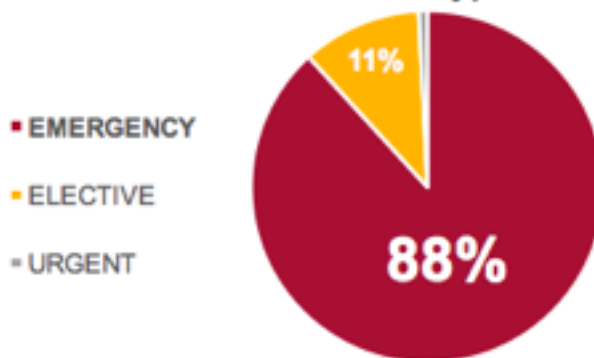


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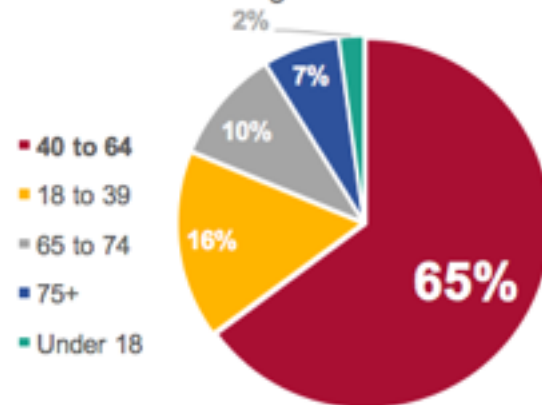
Payer Mix



Admit Type

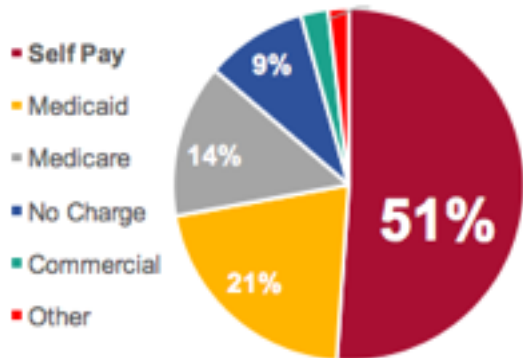


Age Distribution

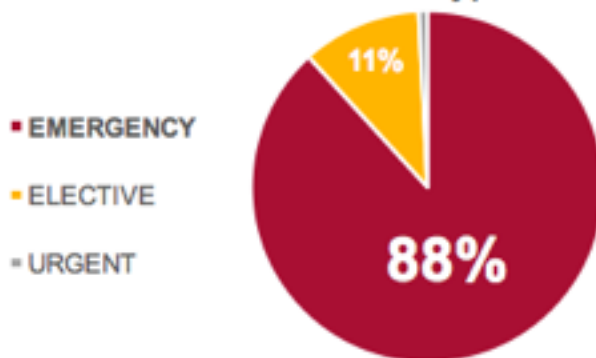


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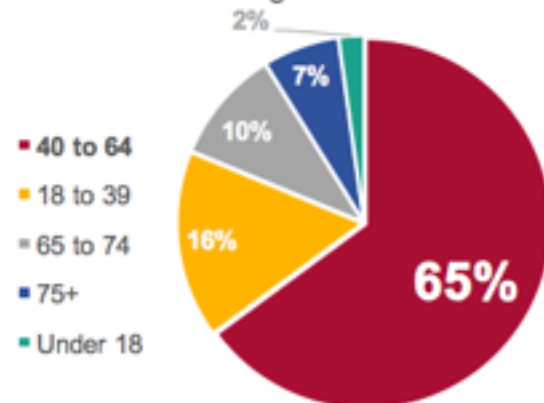
Payer Mix



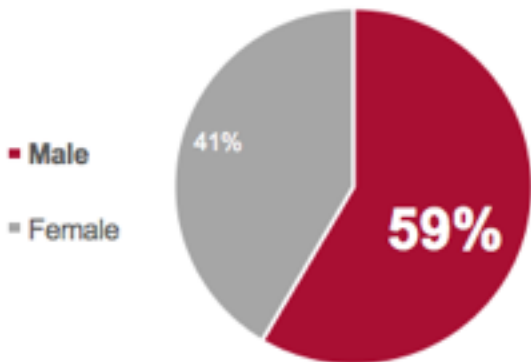
Admit Type



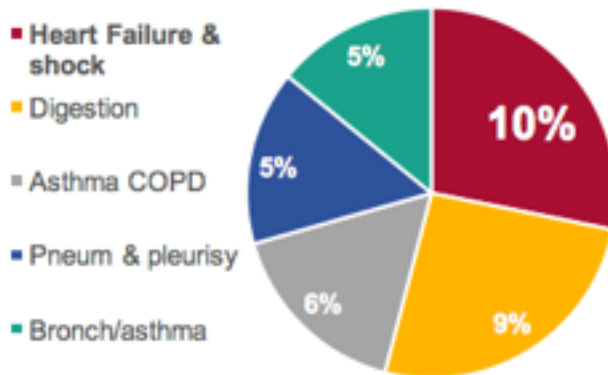
Age Distribution



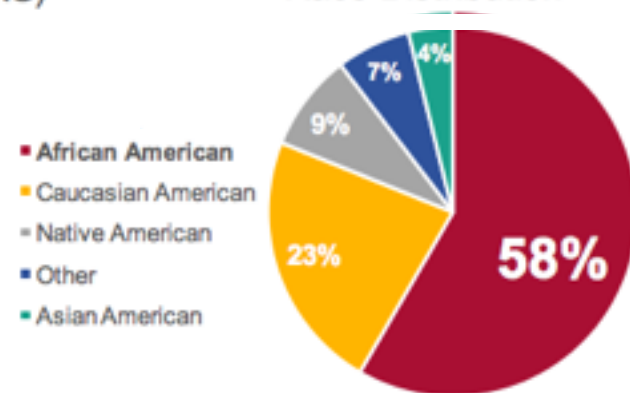
Gender Distribution



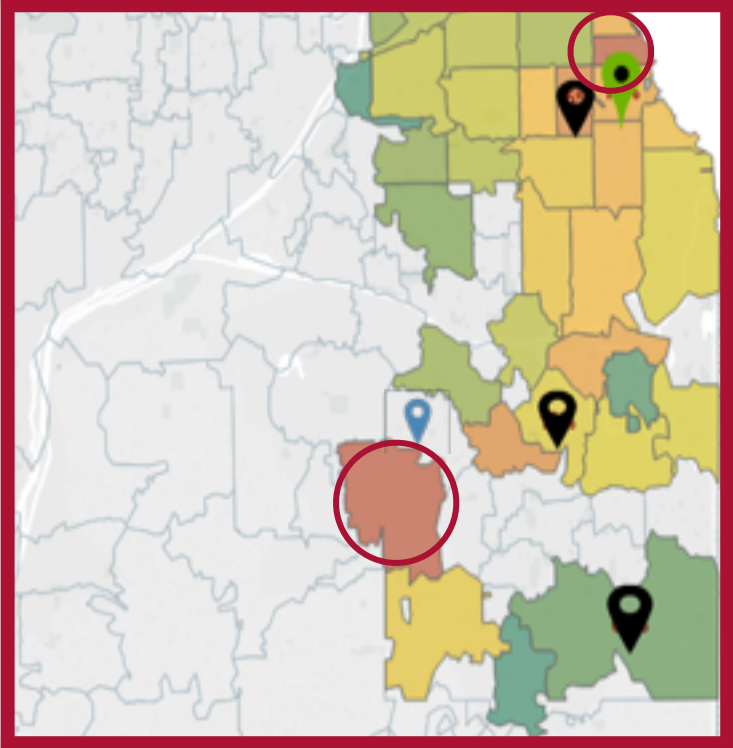
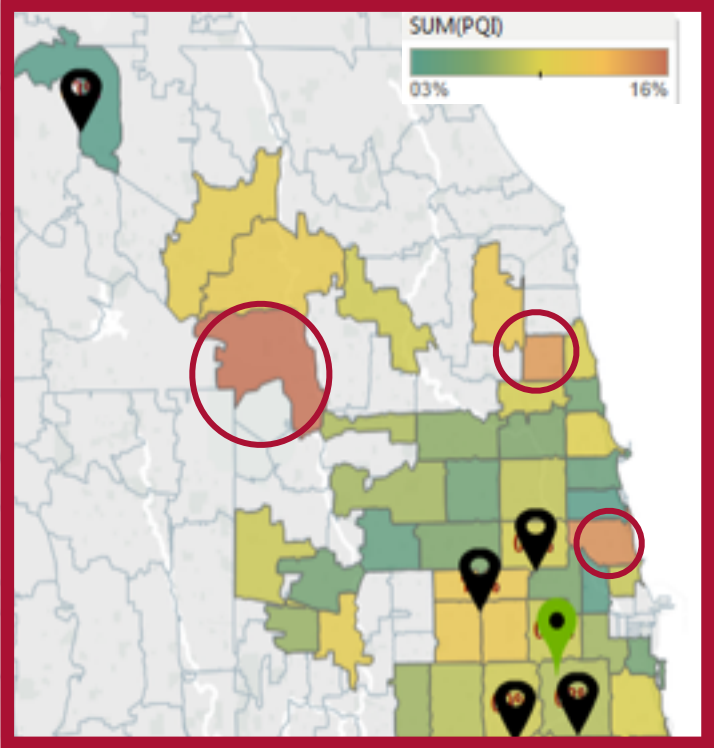
Top Diagnosis-Related Group (DRG)



Race Distribution



Open or partner with clinics to provide ambulatory care in high risk areas (circled)



* zipcode with less than 50 discharges were ignored
** PQI for a zipcode calculated as preventable/total discharges



Applicability, limitations, and next steps

This process is applicable to other hospital groups, HOWEVER...

- Models targeted to Public hospitals, mostly focused on Cook County
- A big assumption is that a larger scale rollout of medicaid will prompt patients to come to clinics before their illness become an emergency.

QUESTIONS?

APPENDIX

Cook County - at a glance

2

Second largest
county in the US

5

Million county
inhabitants



2

County Public
Hospitals

11

County Public
Clinics

Top Service lines varies for Cook County hospital vs for competitors

Cook County's top discharges by serviceline

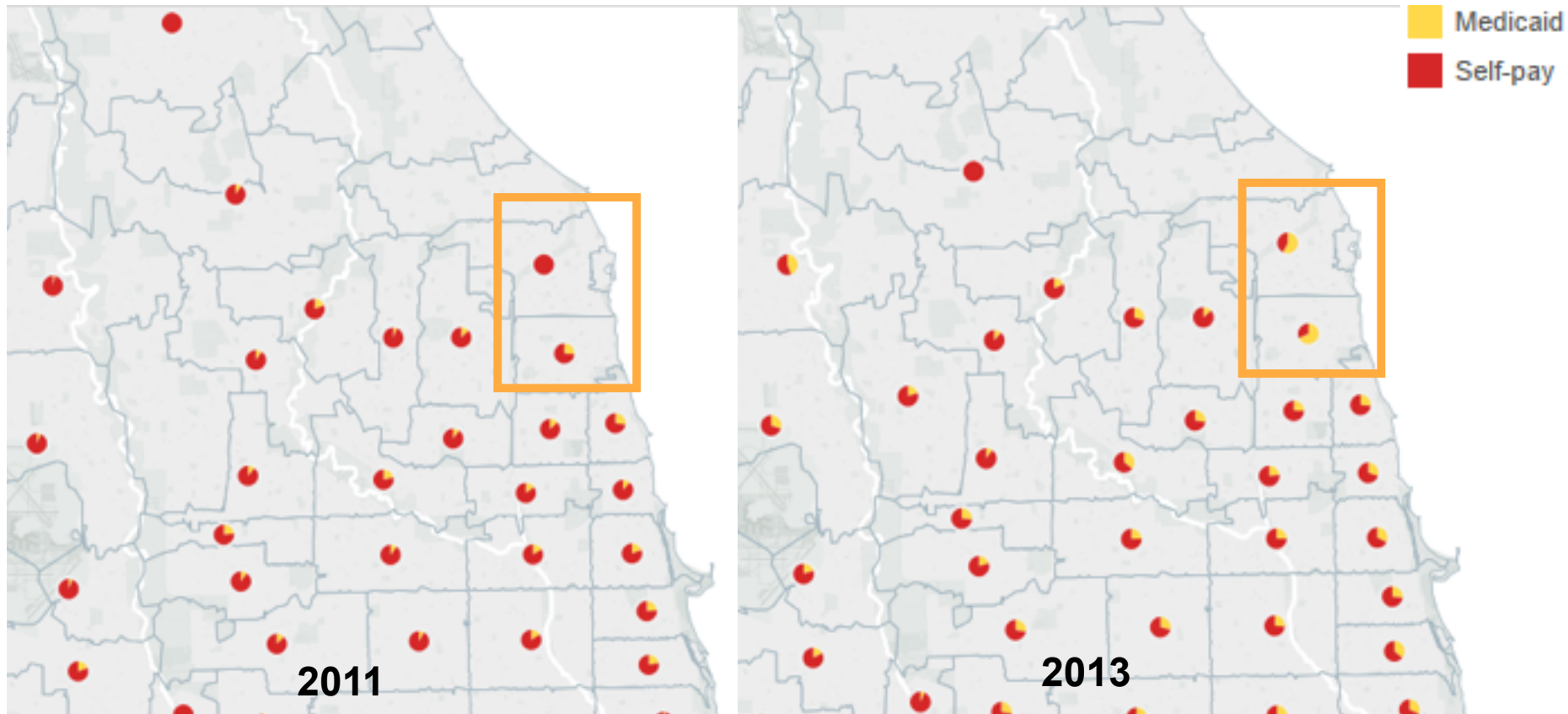
1. Medicine	
20%	
2. Gastroenterology	11%
3. Pulmonary	
10%	
4. Cardiology	
9%	
5. Oncology	9%
6. General Surgery	9%
7. Neurology	
6%	
8. Obstetrics	
5%	
* Unique to Cook County	
9. Gynecology	4%
10. Orthopedics	3%

Competitors' top discharges by serviceline

1. Medicine	14%
2. Obstetrics	11%
3. Pulmonary	8%
4. Cardiology	8%
5. Psychiatry	7%
6. Gastroenterology	7%
7. Normal Newborn	6%
8. General Surgery	6%
9. Neonatology	5%
10. Neurology	4%

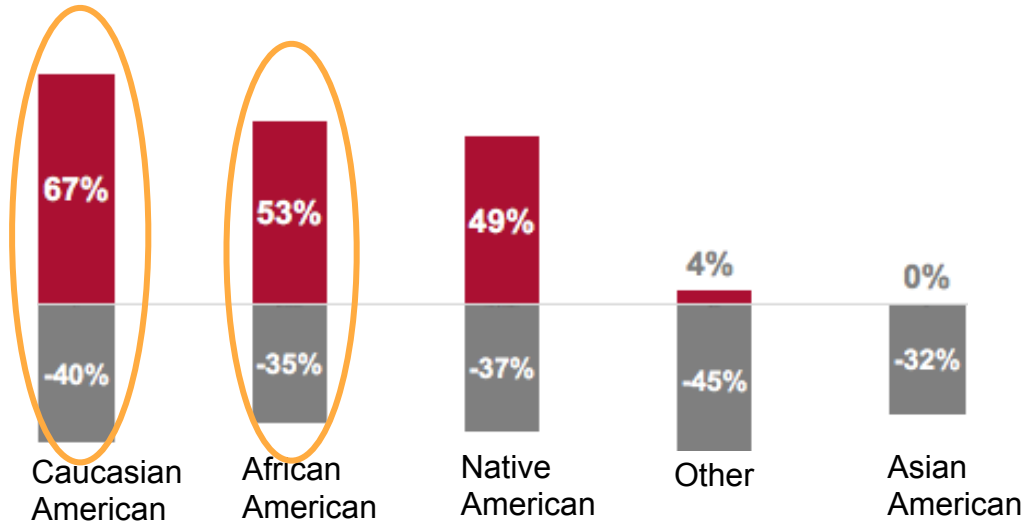
***Unique to other Hospitals**

Self-Pay or uninsured discharges decreased over 3 years; Medicaid / County Care discharges expanded



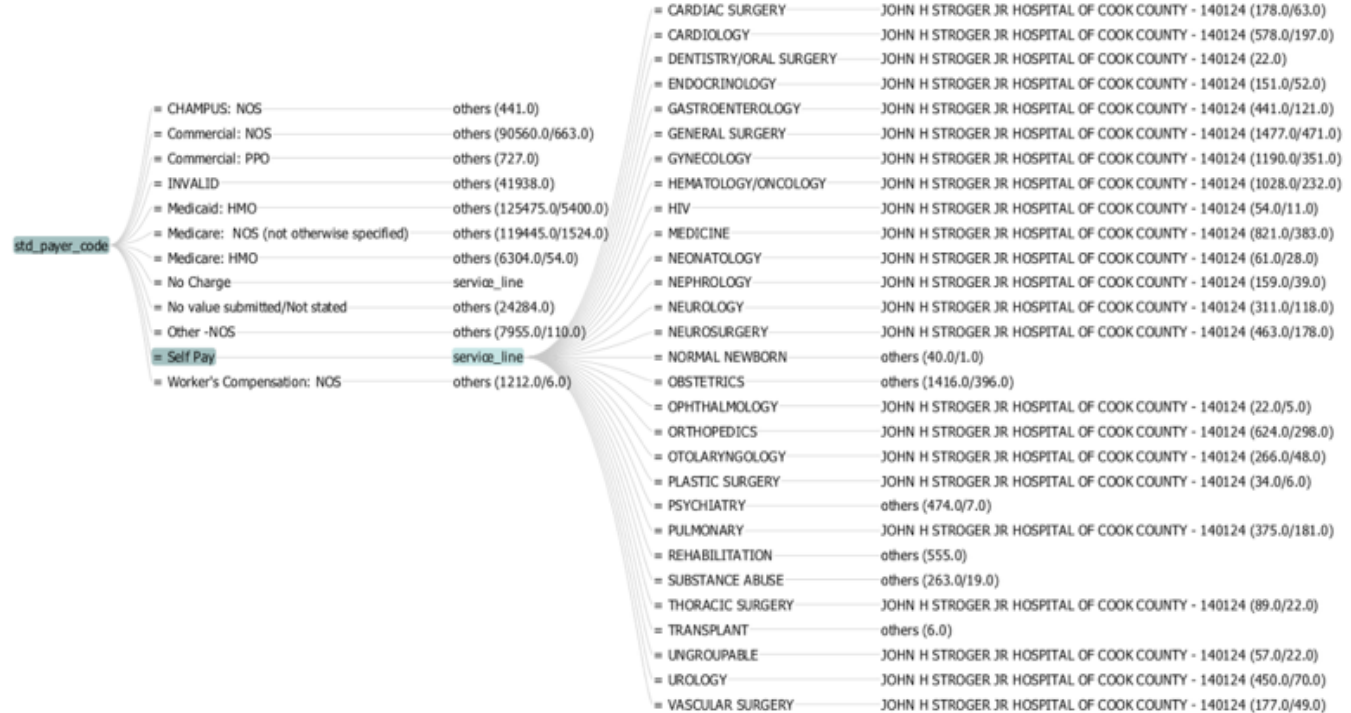
Self Pay discharges are going down across all races. However, Medicaid growth is highest among Caucasian Americans

% Change in discharges for select payer codes, 2011-2013



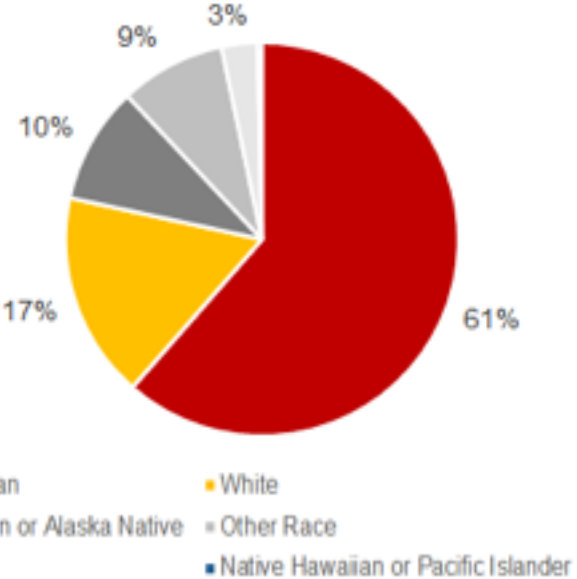
■ Medicaid ■ Self Pay

Self Pay patients will eventually become Medicaid patients; However, Cook County is losing some of these new Medicaid patients to the competition

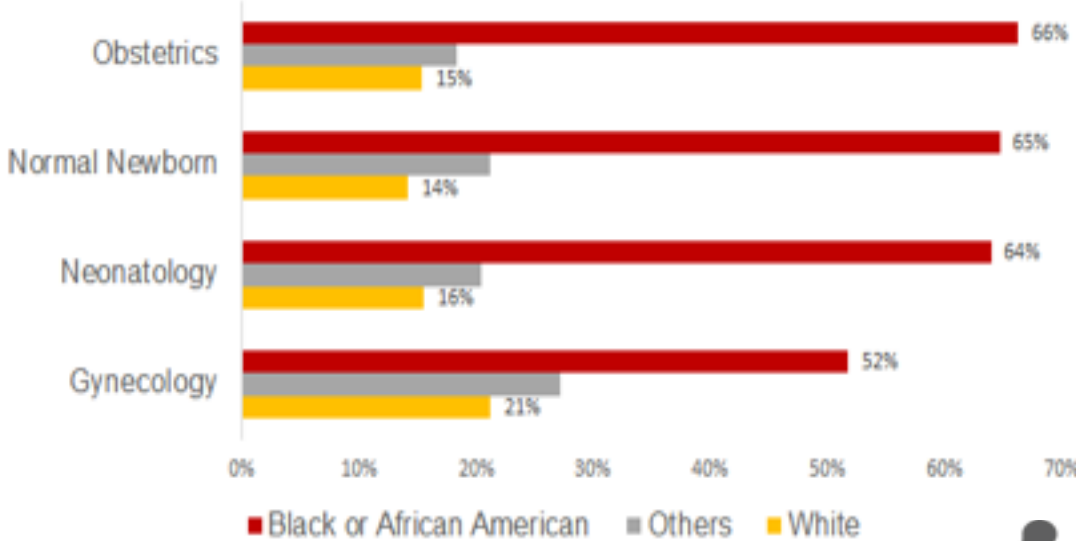


HSA#1- Patients are predominantly African American & Caucasian American; follows the overall trend of the Cook County Hospital.

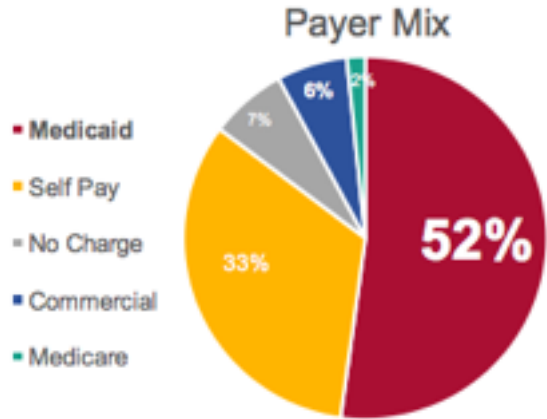
Discharges by Race 2011-13



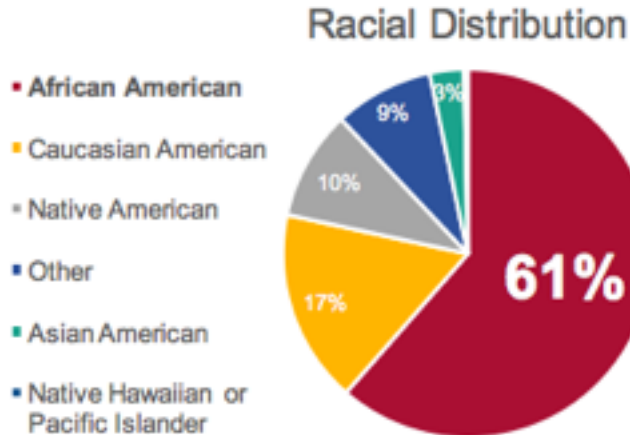
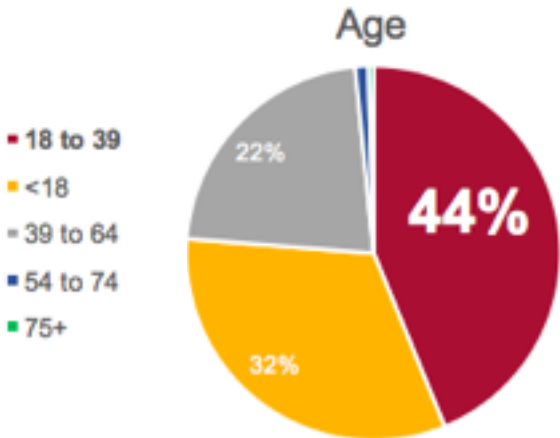
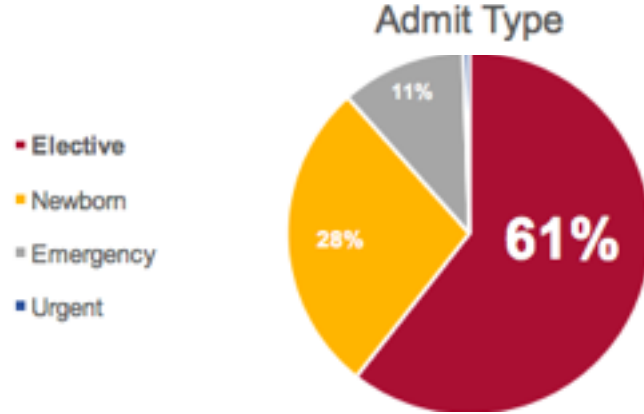
Discharges by Race & Serviceline 2011-13



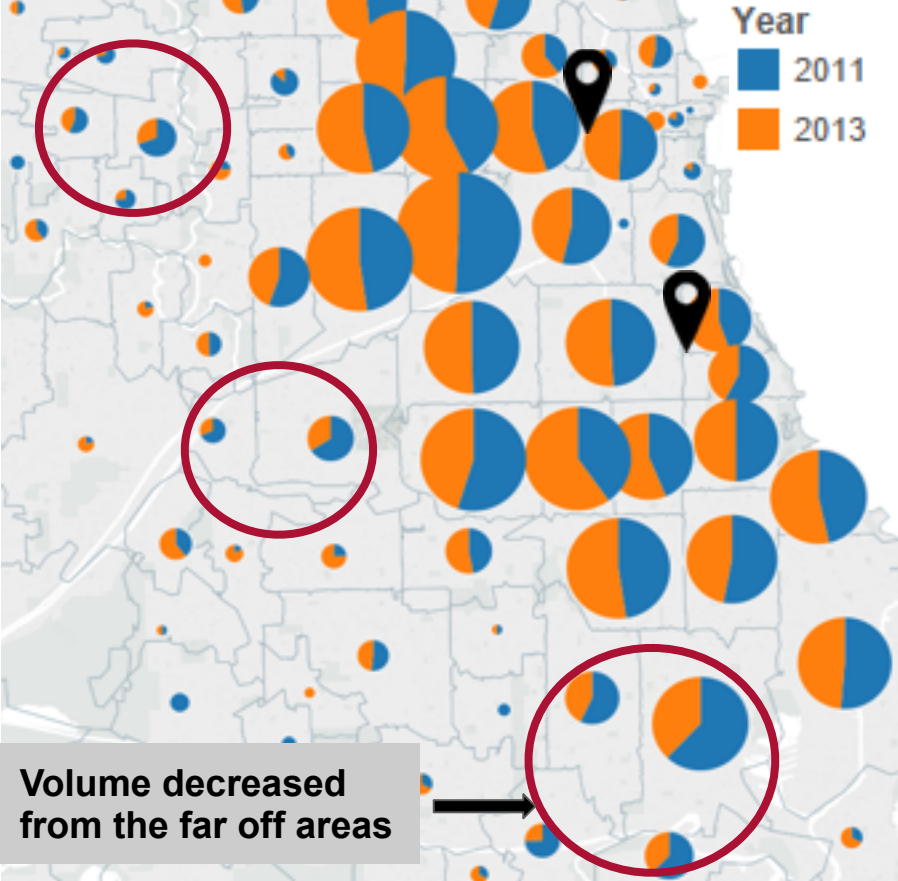
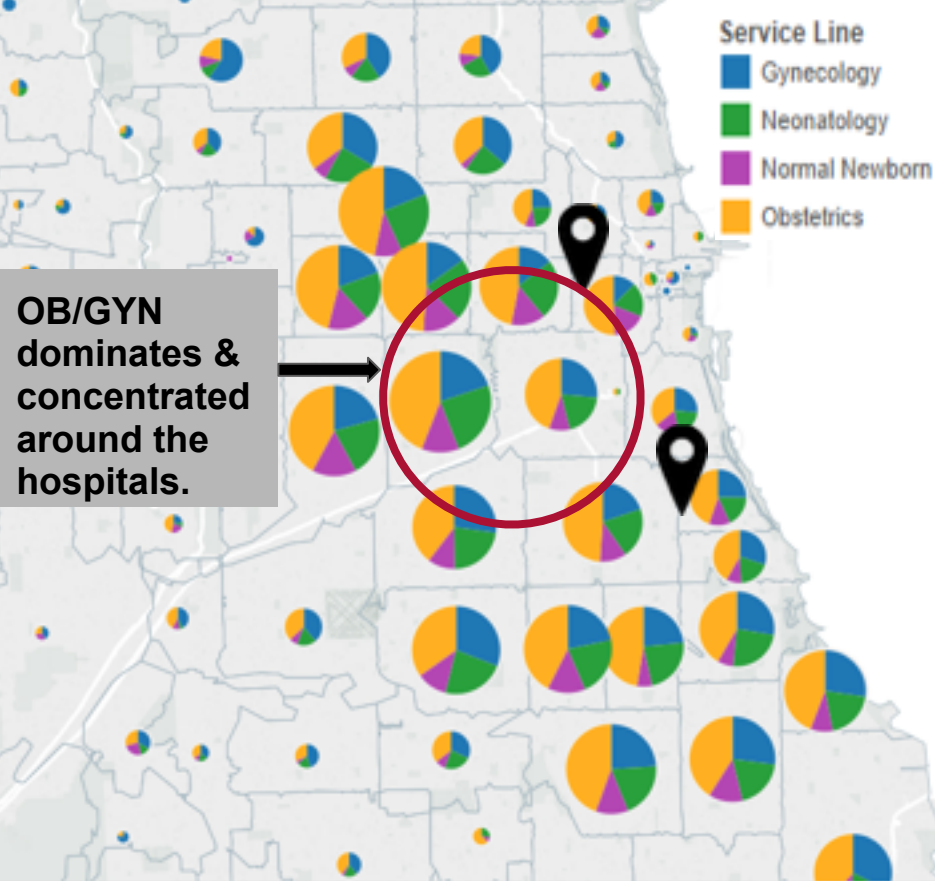
HSA#1 in Summary: Medicaid, Elective, Female, African American



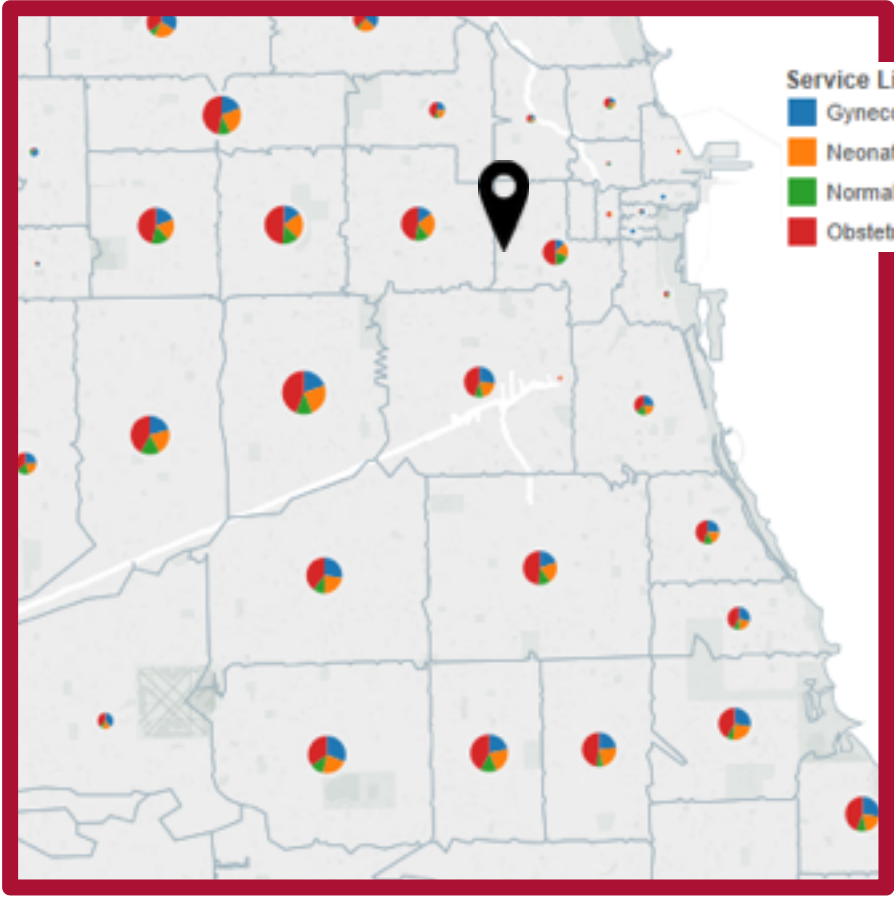
Medicaid is the highest % and patients are increasingly going elsewhere



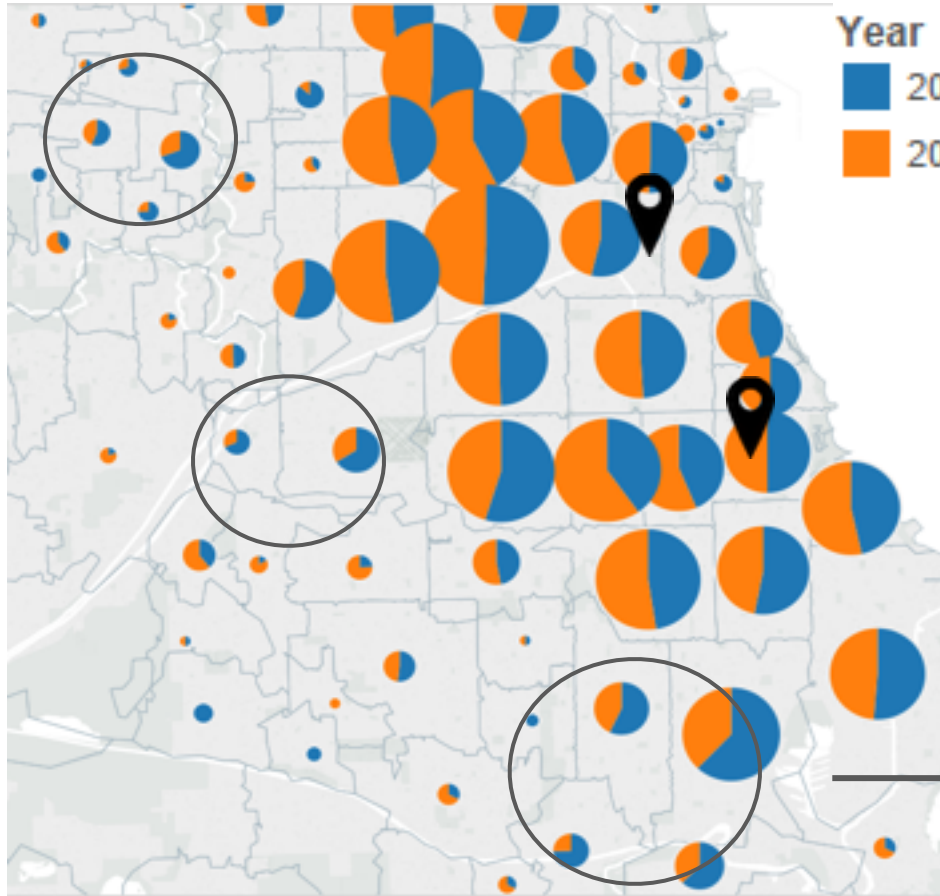
HSA#1- Volume is concentrated around the hospital; % discharges decreased from the far off areas.



HSA#1- OB/GYN dominates in all zipcodes; volume concentrated around the hospital



HSA#1- % of discharges decreased from far of areas between 2011-13



Year
2011
2013

Volume decreased from far of areas

