Exploring Emergency Department Data at Sutter Health

Alice Pressman, PhD, MS

Sutter Health Research, Development and Dissemination

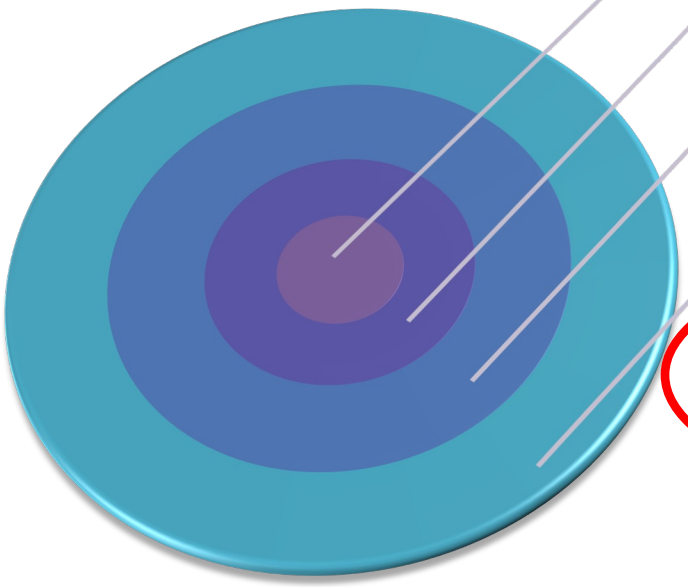
May 21, 2015

Sutter Health
Research, Development & Dissemination

Sutter Health Research, Development and Dissemination (RDD)

To make the best and most affordable care the easiest care to deliver

Areas of Focus for Sutter Health RDD



Individualized medicine: The best match to patient biology

Individualized care: The best match to patient needs and preferences

Population Health: Focusing on the patient beyond encounters

Community Context: Recognizing diversity, assets, and resources that influence what a patient can do

ED utilization data at Sutter Health

2014

~ 700,000 encounters

~ 450,000 individuals

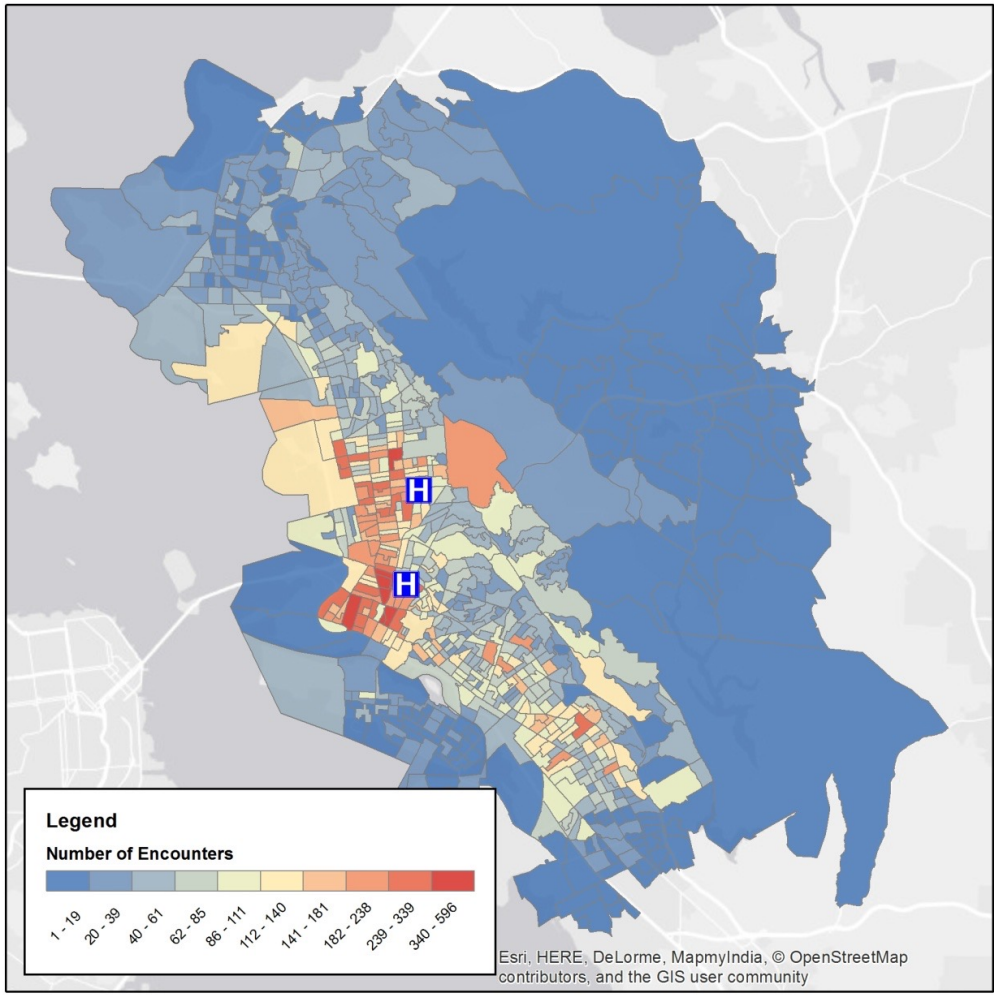
4 facilities in the East Bay region:

~ 150,000 encounters

~ 100,000 individuals

GIS Capabilities at Sutter Health RDD

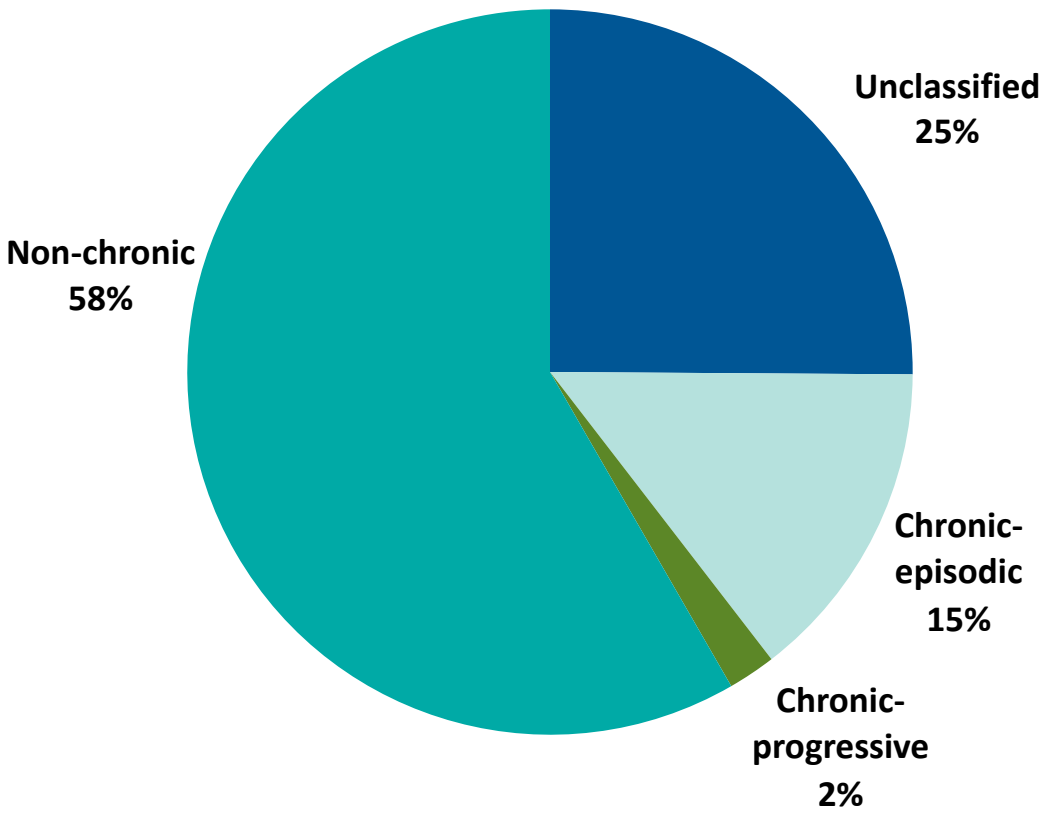
- Longitudinal
- Regional clusters
- Profile sub-groups



Sutter Health
Research, Development & Dissemination

Method #1 - Classifying Encounters

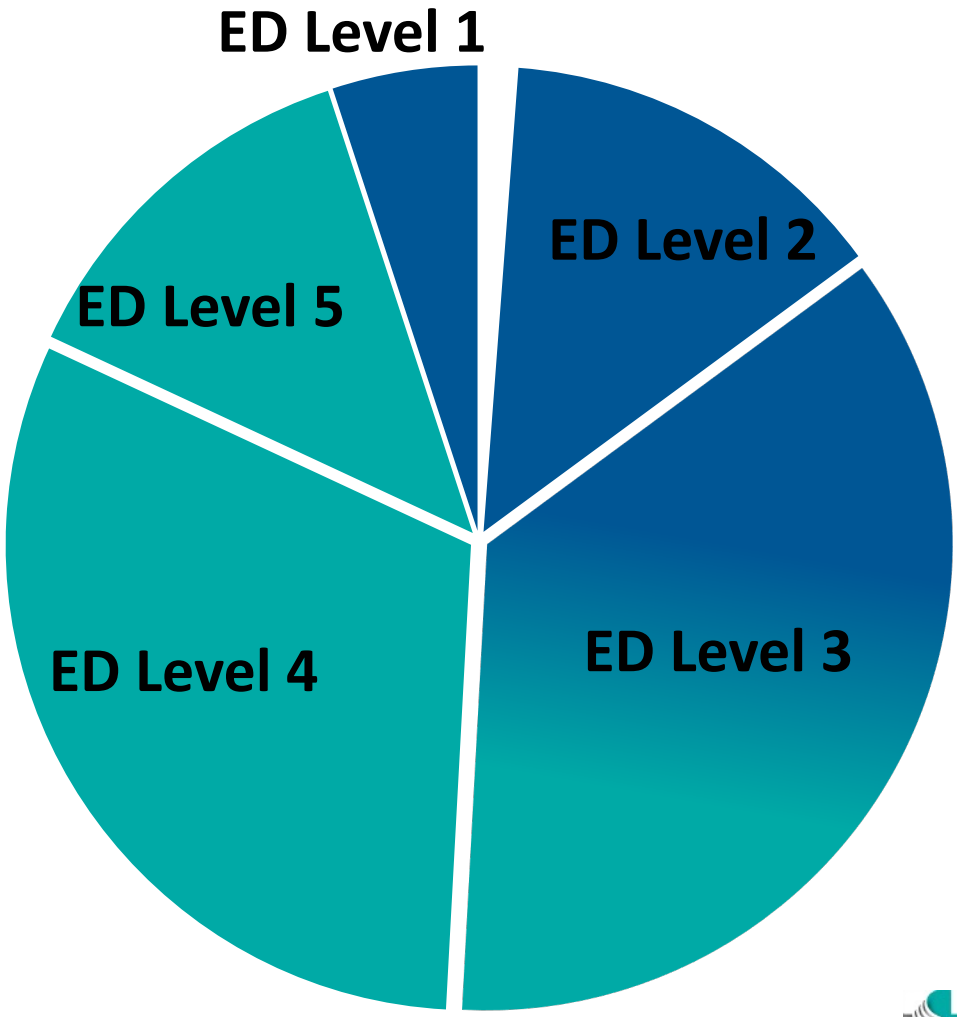
Total ED Encounters



Sutter Health
Research, Development & Dissemination

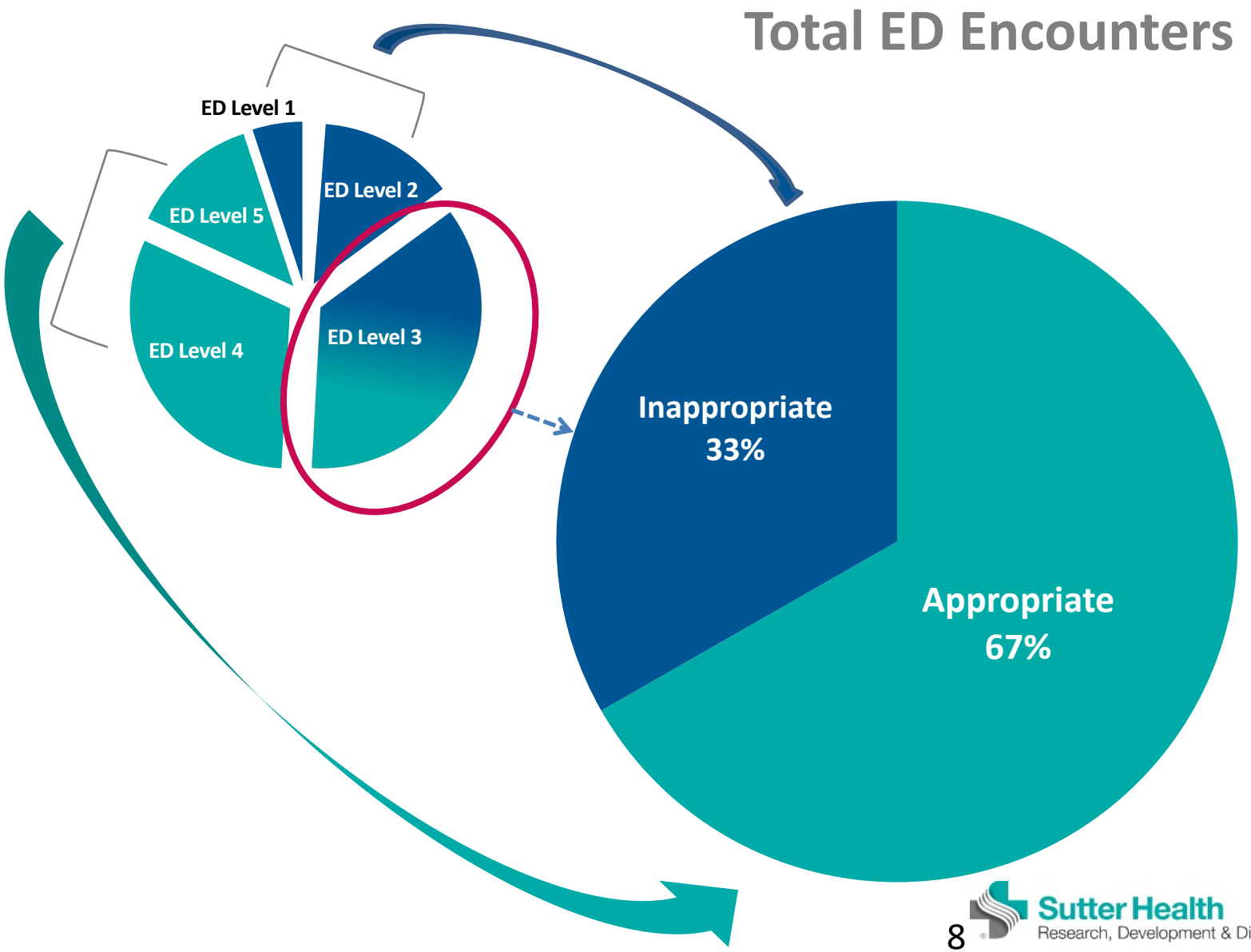
Method #2 - Classifying Encounters

Total ED Encounters



Sutter Health
Research, Development & Dissemination

Method #2 - Classifying Encounters

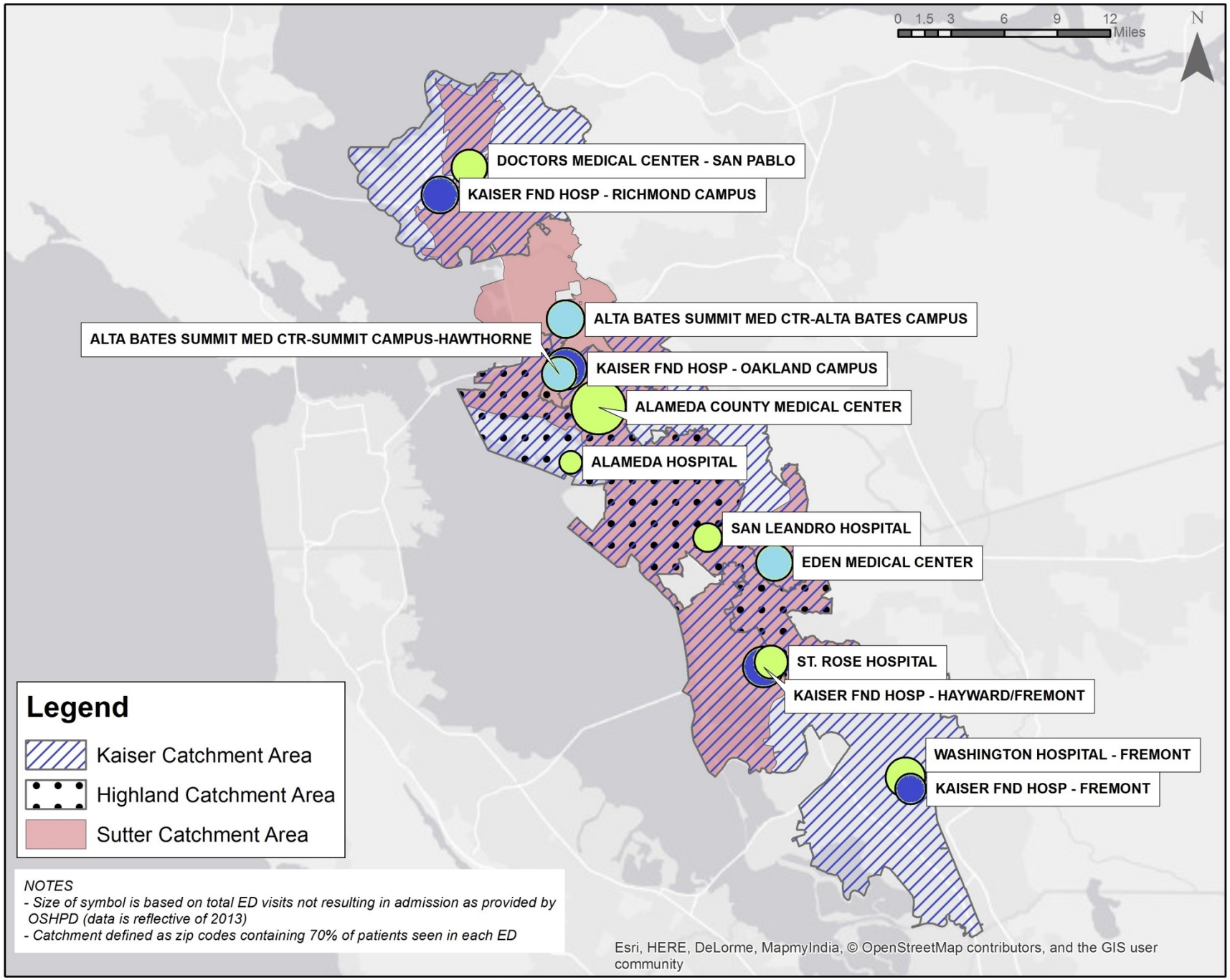


Method #3 - Classifying Patients

Frequent Utilization:

3+ visits in a 6-month period

~10% of ED patients in East Bay


0 1.5 3 6 9 12
Miles
N
DOCTORS MEDICAL CENTER - SAN PABLO
KAISER FND HOSP - RICHMOND CAMPUS
ALTA BATES SUMMIT MED CTR-ALTA BATES CAMPUS
ALTA BATES SUMMIT MED CTR-SUMMIT CAMPUS-HAWTHORNE
KAISER FND HOSP - OAKLAND CAMPUS
ALAMEDA COUNTY MEDICAL CENTER
ALAMEDA HOSPITAL
SAN LEANDRO HOSPITAL
EDEN MEDICAL CENTER
ST. ROSE HOSPITAL
KAISER FND HOSP - HAYWARD/FREMONT
WASHINGTON HOSPITAL - FREMONT
KAISER FND HOSP - FREMONT
Legend
Kaiser Catchment Area
Highland Catchment Area
Sutter Catchment Area
NOTES
- Size of symbol is based on total ED visits not resulting in admission as provided by OSHPD (data is reflective of 2013)
- Catchment defined as zip codes containing 70% of patients seen in each ED
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Data-Driven Critical Findings

Individuals who have ANY encounters in the ED for inappropriate reasons as defined by our algorithm tend to be:

Inappropriate use
non-white (59%)
non-Hispanic (77%)
young (median age=34)
insured
(31% private; 50% public)

Data-Driven Critical Findings

Individuals who have ANY encounters in the ED for inappropriate reasons as defined by our algorithm tend to be:

Inappropriate use	No inappropriate use
non-white (59%)	non-white (56%)
non-Hispanic (77%)	non-Hispanic (77%)
young (median age=34)	young (median age=43)
insured (31% private; 50% public)	insured (35% private; 45% public)

Data-Driven Critical Findings

Individuals who have ANY encounters in the ED for inappropriate reasons as defined by our algorithm tend to be:

Inappropriate use	No inappropriate use
non-white (59%)	**non-white** (56%)
non-Hispanic (77%)	**non-Hispanic** (77%)
young (median age=34)	**young** (median age=43)
insured (31% private; 50% public)	**insured** (35% private; 45% public)

…slightly younger, but otherwise just like everyone else who visits the ED

Acknowledgements

Swati Kumar – Project Manager

Sarah Robinson – GIS Analyst

Anjali Franco – Sr. Statistical Analyst

Maria Moreno – Investigator

Research funded by a grant from

The Better Health East Bay

East Bay Hospital Consortium funded by a grant from

The California Health Care Foundation