NEW JERSEY HEALTH CARE QUALITY INSTITUTE

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Camden Coalition of Healthcare Providers

www.camdenhealth.org

Affiliated Accountable Care Organizations

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The Nicholson Foundation

Agenda

- *AACO Welcome & Introductions*
- *Overview of the Camden Coalition*
- *CCHP's Approach to Data*
- *Evolution of Hotspotting Work*
- *Legal Framework*
- *Next Steps for AACO Hotspotting Project*

NEW JERSEY HEALTH CARE QUALITY INSTITUTE

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Improving care and reducing costs through innovative local data systems and hotspotting

Dr. Jeffrey Brenner, Founder and Executive Director
Aaron Truchil, Associate Director of Data, Research and Evaluation
Mark Humowiecki, Director of Governmental Affairs and General Counsel
Camden Coalition of HealthCare

Affiliated Accountable Care Organizations – Hotspotting Webinar
January 9th, 2014

funding for this project provided by:
The Nicholson Foundation

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*The mission of CCHP is to improve the health status of all Camden residents by increasing the **capacity**, **quality** and **access** to care in the city.*

Hotspotting: the ability to identify in a timely manner patients who are heavy users of the system and their patterns of use, so that targeted intervention and follow-up programs can be put in place to address their needs and change the existing, potentially ineffective, utilization pattern.

Data Philosophy

- Obtaining data is based on building long-term trusting relationships
- Outliers tell you more about a system than averages
- Think like an advertiser not an epidemiologist
- Find the stories in the data
- Look at data as an iterative process of exploration and discovery
- Put your data staff close to your clinical staff

Camden Health Database

Data processing/cleaning

Probabilistic matching

Geocoding

Yearly Clams Data
Business Associates Agreements
IRB Agreement

Camden Hospital Utilization 2011 Snapshot

Total hospital revenue
$108 million
$1,396 per capita

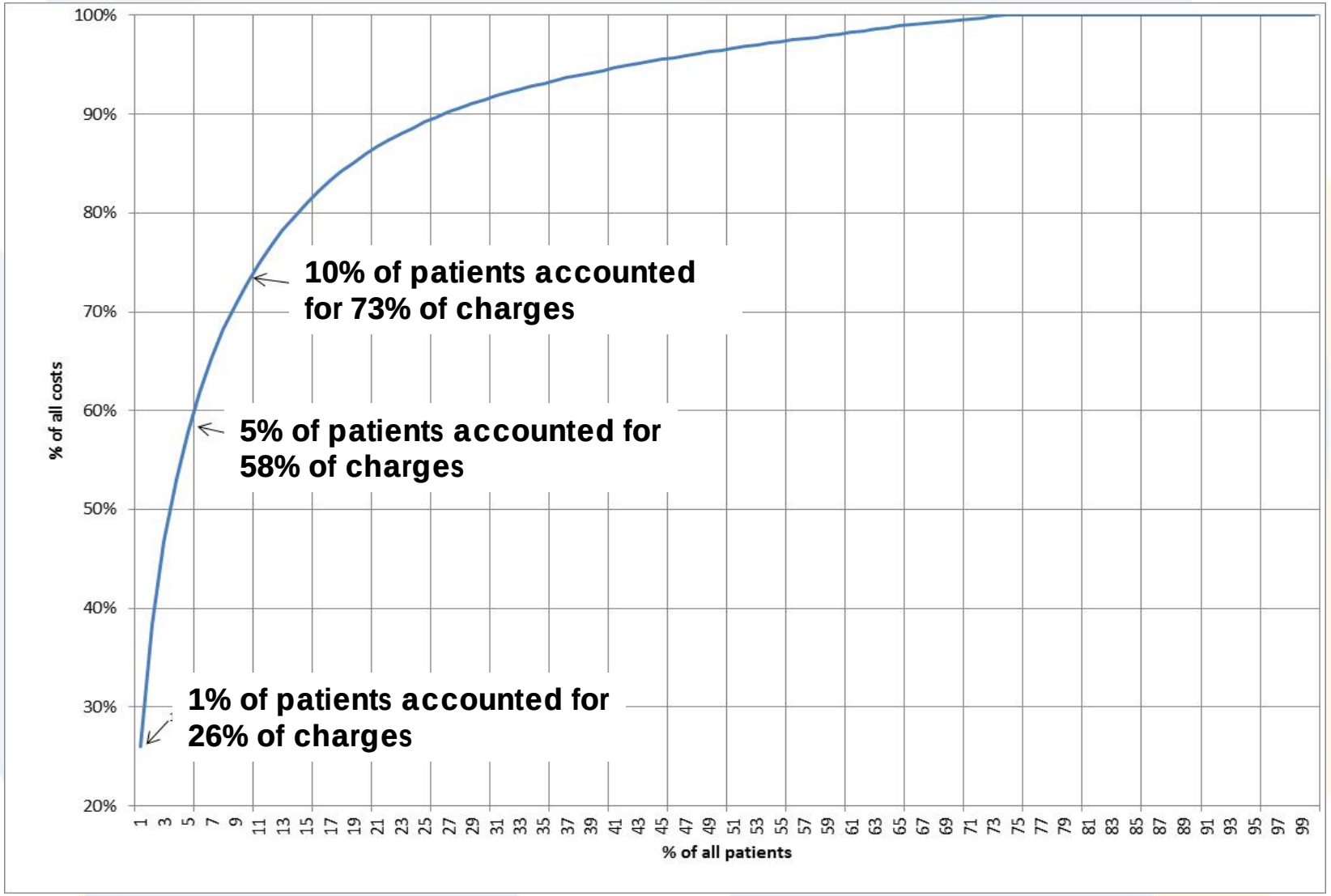
# of hospitals visited…	% of Patients
one hospital	59.1%
two hospitals	28.9%
all three hospitals	12.0%

Primary ED Diagnosis, 2011	Patients	Visits	% of visits	Receipts
Upper respiratory infections (head cold)	4,092	4,858	16.3%	$1,456,464
Sprains and strains	2,980	3,295	11.1%	$1,159,452
Superficial injury; contusion	2,561	2,786	9.4%	$837,132
Abdominal pain	1,986	2,318	7.8%	$926,239
Skin and subcutaneous tissue infections	1,717	2,213	7.4%	$673,115
Urinary tract infection	1,892	2,182	7.3%	$720,050
Back Pain	1,484	1,735	5.8%	$517,997
Asthma	1,058	1,580	5.3%	$675,230
Total		65,992		~$29 million

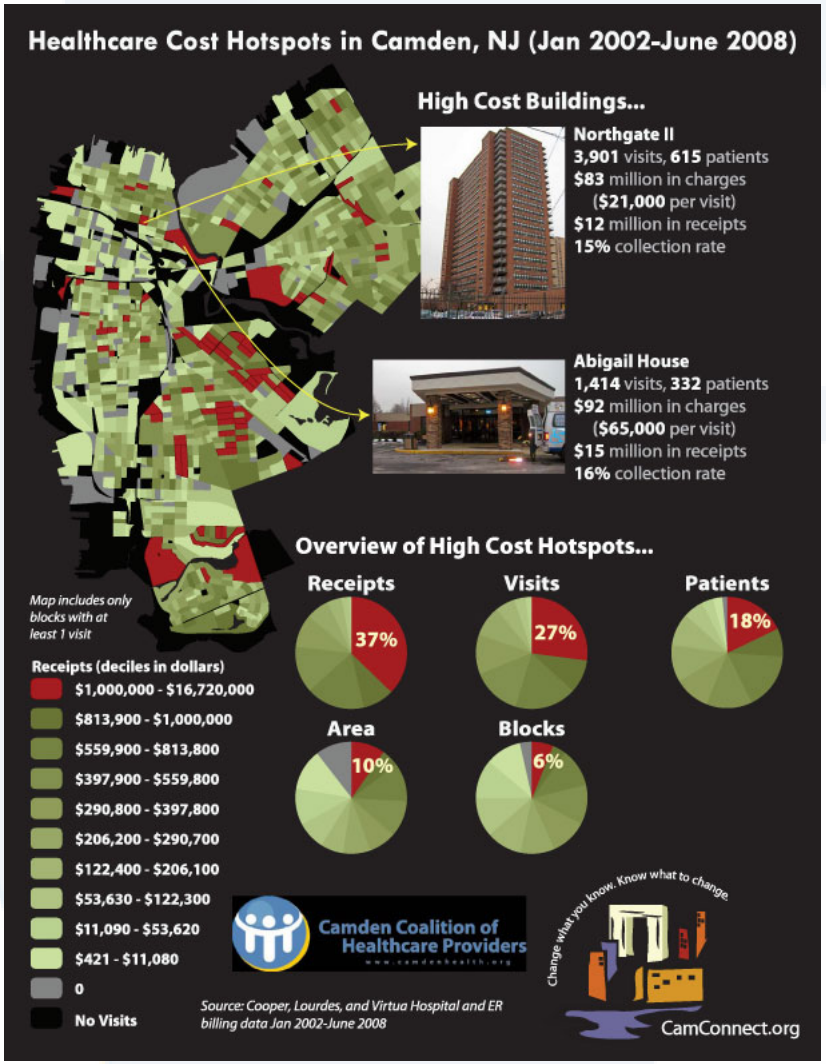
Primary Diagnosis, 2011	Patients	Visits	% of visits	Receipts
Births (mother & child)	1,289	609	6.4%	$1,448,116
Hypertension	401	272	2.9%	$1,558,671
Fluid and electrolyte disorders	255	269	2.8%	$1,657,347
Diabetes	226	257	2.7%	$1,723,413
Congestive heart failure	183	247	2.6%	$2,365,964
Asthma	219	246	2.6%	$1,216,779
Renal failure	195	217	2.3%	$2,278,805
Immunizations/Screening for infectious disease	213	214	2.2%	$608,631
Urinary Tract Infection	151	164	1.7%	$1,180,835
Mental health and substance abuse screening	159	162	1.7%	$547,989
Total	10,343			~$79 million

"Ambulatory Care Sensitive Conditions" and are often amenable to outpatient management

Camden Cost Curve, 2011

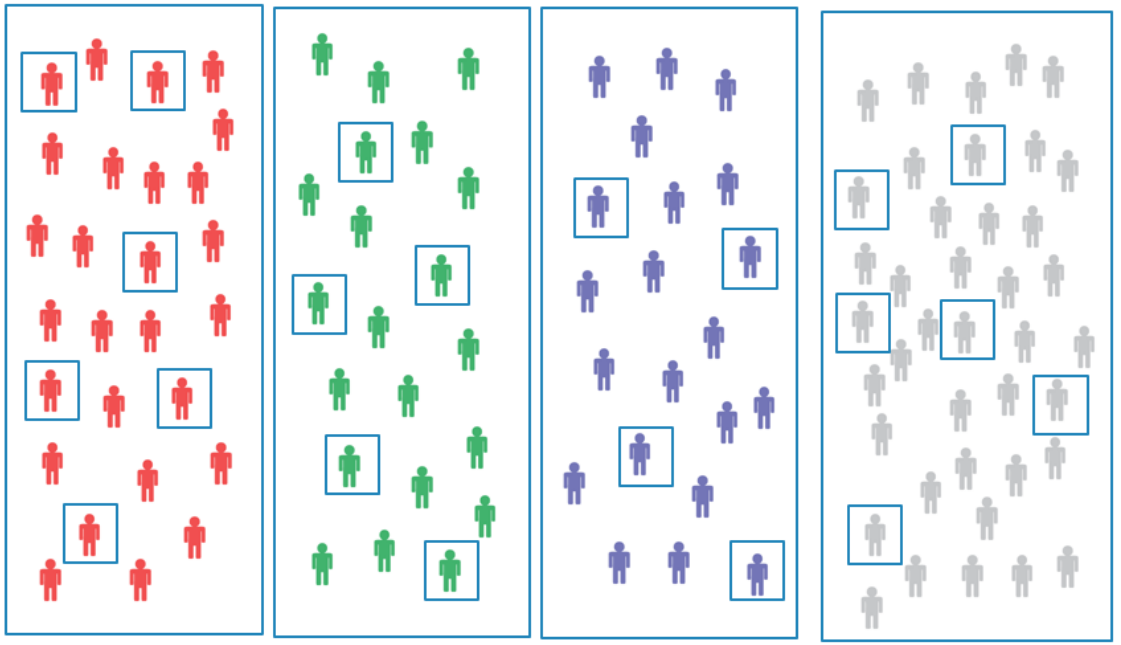


Camden Spatial Analysis of Hospital Costs



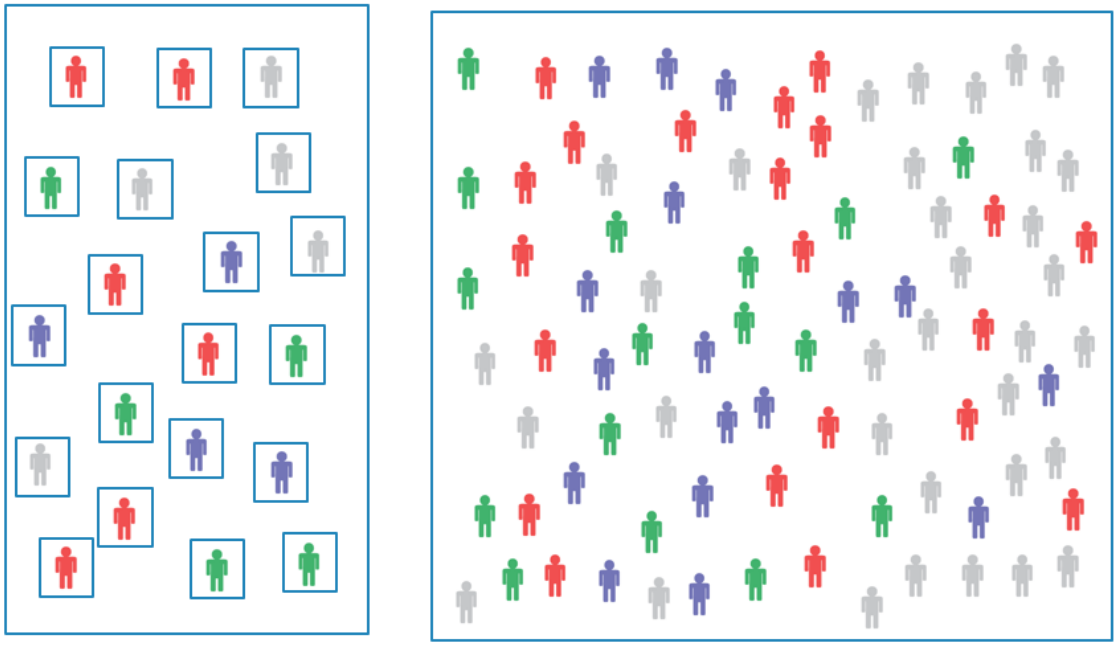
Several buildings, each year, are responsible for between $1 and $3 million in hospital costs.

6% of city blocks account for 18% of patients and 37% of receipts.



Traditional Intervention Paradigm

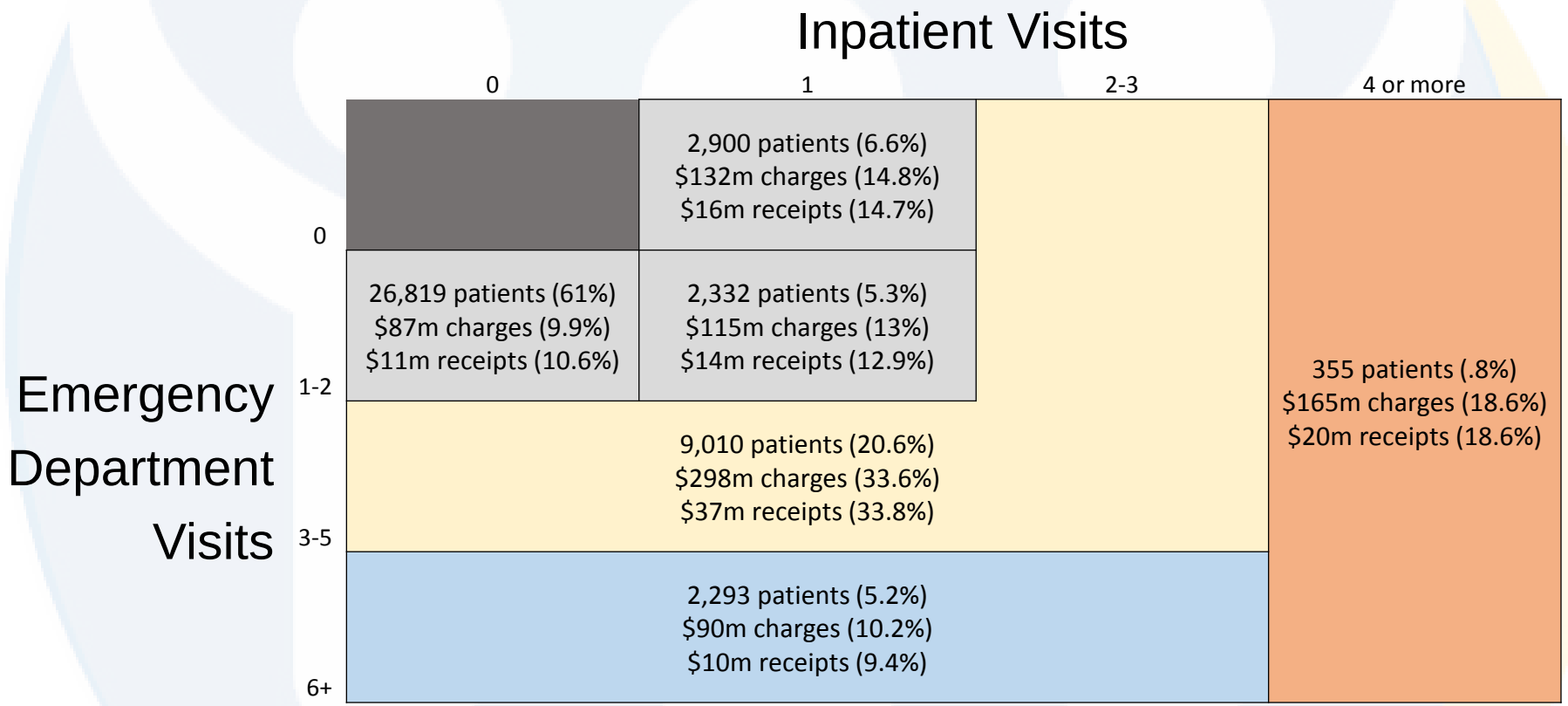
Diabetes COPD Multi-CC No-CC High Utilizer



Hotspotting Intervention Paradigm

Diabetes COPD Multi-CC No-CC High Utilizer

Patient "Typology", 2011



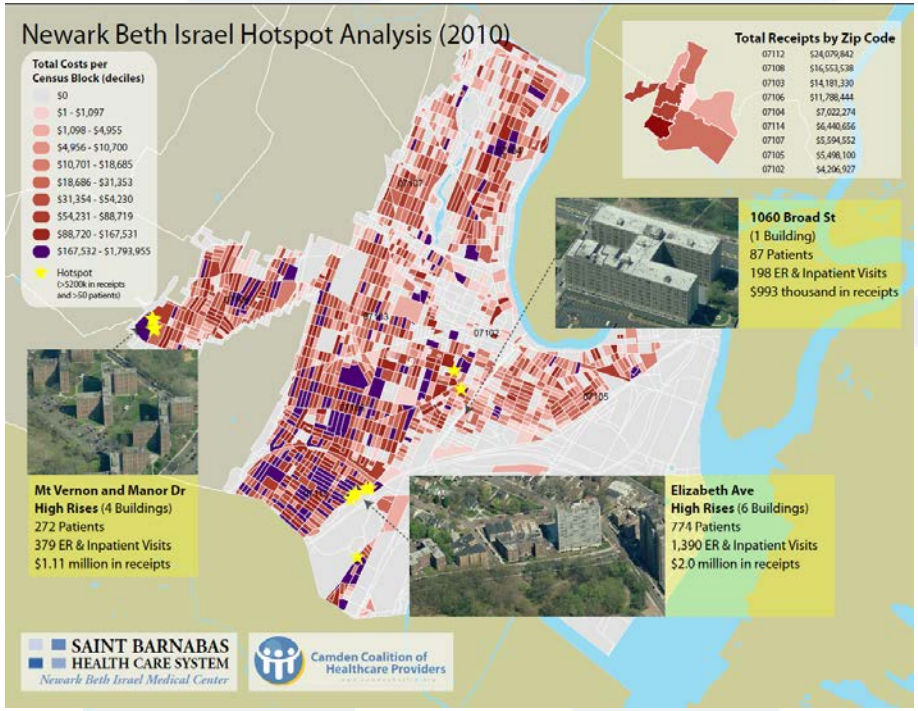
High Inpatient Utilizers
215 patients (1%)

Mean # ED visits	Mean # IP visits	Mean total LOS	Mean % of all unique primary ICD classified as chronic	Mean % of IP that are 60 day readmissions	Mean total charges	Mean total receipts	Median Age
4.48	5.33	54.71	34%	55%	$673,592	$73,143	57

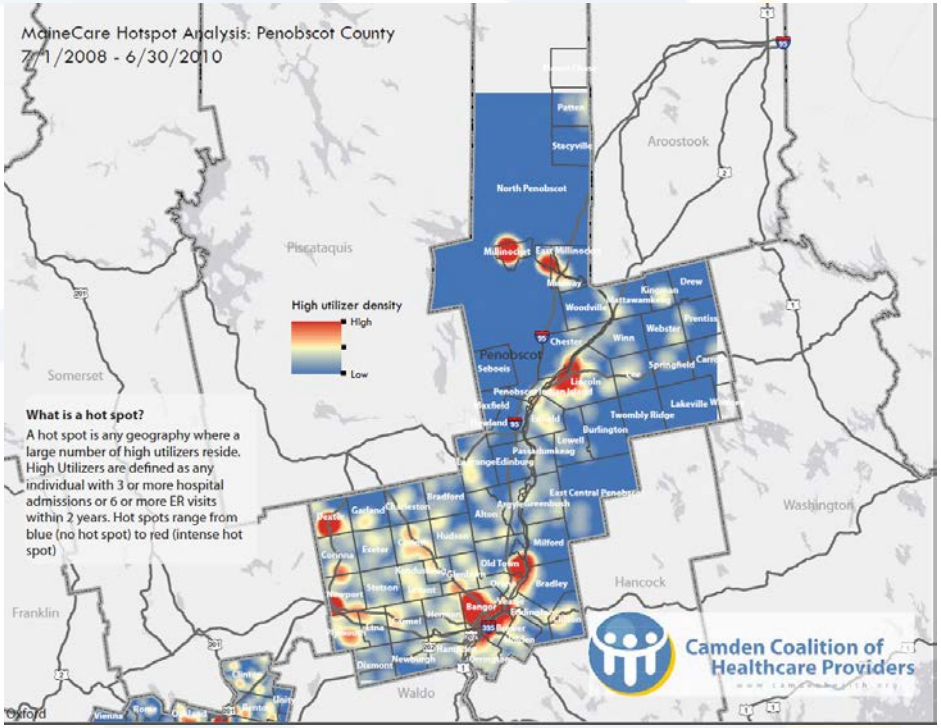
% total	% total ED	% total IP	% total LOS	% total charges	% total receipts	% total 60 readmits	Total charges	Total receipts
.8%	1.5%	13.0%	27.5%	20.0%	18.8%	23.0%	$144,148,652	$15,652,705

	Patients	Percent
RESPIRATORY ABNORM NEC	34	2.2
CHEST PAIN NOS	29	1.9
SHORTNESS OF BREATH (Begin 1998)	28	1.8
REHABILITATION PROC NEC	26	1.7
ABDOM PAIN NOS (Begin 1994)	25	1.6
SEPTICEMIA NOS	23	1.5
ACUTE RENAL FAILURE NOS	21	1.4
URIN TRACT INFECTION NOS	21	1.4
PNEUMONIA ORGANISM NOS	19	1.2
ACUTE ON CHRONIC SYSTOLIC HEART FAILR(Begi	17	1.1

Hotspotting in Other Communities



Newark



Maine (Medicaid)

MaineCare Hotspotting Report

MaineCare Hospital Utilization Analysis for Cumberland, Kennebec and Penobscot Counties: 7/1/2008 - 6/30/2010

Total Patients, Visits, and Costs*, ED and Inpatient

Emergency Room

Year	Patients	Visits	Charged	Allowed	Paid
FY09	35,270	73,821	$63,973,283	$47,651,409	$25,681,140
FY10	37,931	78,723	$72,429,885	$54,342,377	$30,072,805

Inpatient

Year	Patients	Visits	Charged	Allowed	Paid
FY09	7,310	12,877	$167,713,214	$152,870,768	$98,025,526
FY10	7,691	12,880	$186,698,504	$168,151,559	$106,692,703

Fiscal years (FYs) begin 7/1 and ends 6/30

Data Source: All ED and Inpatient claims for Cumberland, Kennebec, and Penobscot counties for the period beginning 7/1/2008 and ending 6/31/2010, extracted from the MaineCare State database.

42% of Maine's population lives within these 3 counties

Concentration of Total ED and Inpatient Costs*

Top % by cost	Patients	Total Paid (in millions) Amount	Percent	Inpatient Visits	Percent	Emergency Department Visits	Percent
1 percent	614	$82.2	31.6%	3,260	15.3%	4,951	3.3%
5 percent	3,069	$154.7	59.4%	8,765	41.1%	17,552	11.7%
10 percent	6,138	$190.9	73.3%	12,578	59.0%	29,925	19.9%
20 percent	12,276	$226.5	86.9%	17,980	84.3%	49,415	32.8%
30 percent	18,414	$240.6	92.4%	19,627	92.0%	74,839	49.7%
40 percent	24,552	$247.4	95.0%	19,894	93.3%	94,249	62.6%
60 percent	36,828	$255.0	97.9%	20,189	94.7%	119,857	79.6%
80 percent	49,104	$258.9	99.4%	20,397	95.6%	136,402	90.6%
100 percent	61,380	$260.5	100.0%	21,327	100.0%	150,492	100.0%

20% of patients account for 86.9% of costs

Distribution of ED & Inpatient Visits

Inpatient

Visits	Patients	Percent	Total Paid (in millions)	per Patient
1	10,190	74.6%	$80.6	$7,912
2	2,038	14.9%	$39.8	$19,507
3-5	1,136	8.3%	$48.1	$42,299
6-10	248	1.8%	$27.0	$108,704
11-20	51	0.4%	$8.0	$157,319
>20	4	0.0%	$1.3	$324,204
All	13,667		$204.7	$14,979
High Utilizers	1,439	10.5%	$84.3	$58,605

Emergency Department

Visits	Count	Percent	Total Paid (in millions)	Per Patient
1	26,504	46.8%	$9.5	$358
2-3	19,095	33.7%	$15.7	$823
4-5	5,914	10.4%	$9.2	$1,551
6-10	3,805	6.7%	$10.6	$2,783
11-25	819	1.4%	$4.1	$5,006
26-50	265	0.5%	$2.1	$7,673
51-100	100	0.2%	$1.0	$10,329
100-200	144	0.3%	$2.2	$15,089
>200	35	0.1%	$1.0	$28,890
All	56,687		$55.8	$983
High Utilizers	5,168	9.1%	$20.9	$4,134

*Costs throughout this report reflect claim payments and do not consider any off-claim settlements or adjustments. General acute hospital payments are estimated based on a proportion (cost to charge ratio) of the allowed amount on the claim.

Camden Coalition of Healthcare Providers - MaineCare Analysis | 1

Available at:

http://www.maine.gov/dhhs/oms/pdfs_doc/vbp/CCHP_04062012_MaineCare_Report_pdf.pdf

Building a hotspotting "on ramp"

- Free the data
- Simple, not fancy, data solutions
- An analyst in every office
- Gradual and iterative solutions

Hotspotting Toolkit

www.healthcarehotspotting.com @medhotspotting

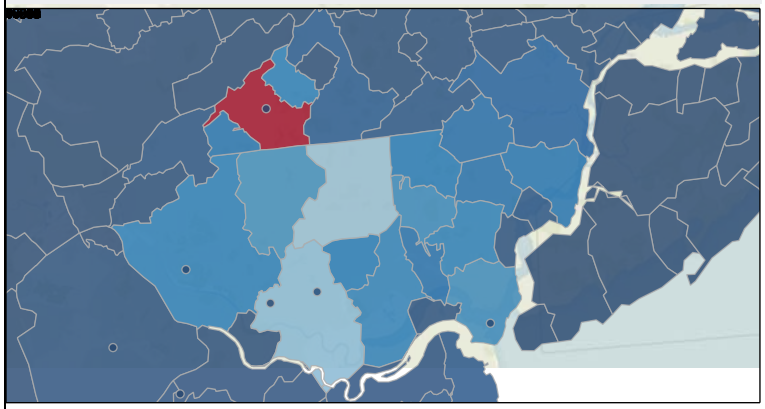
THE COMMONWEALTH FUND

Hotspotting in Tableau

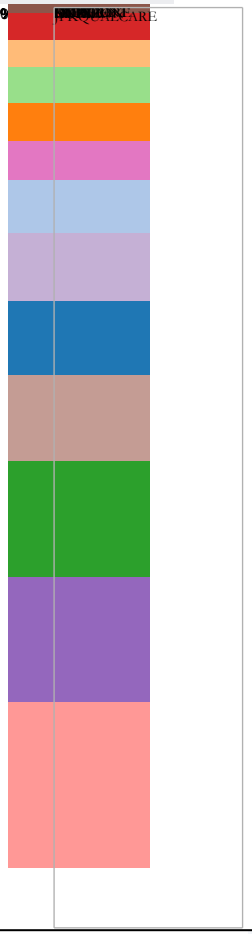
Tableau Hotspotting

of Patients Statified by ED and Inpatient Visits

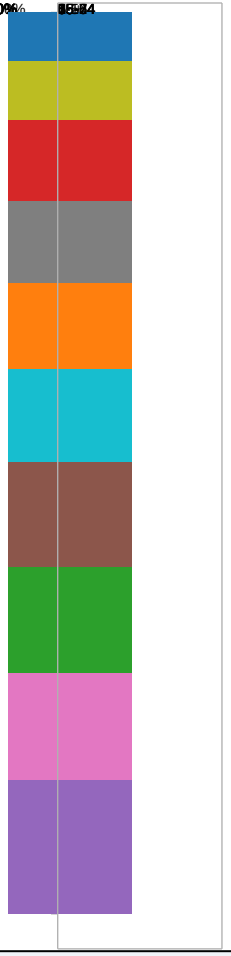
Patients by Zipcode



Insurance Distribution

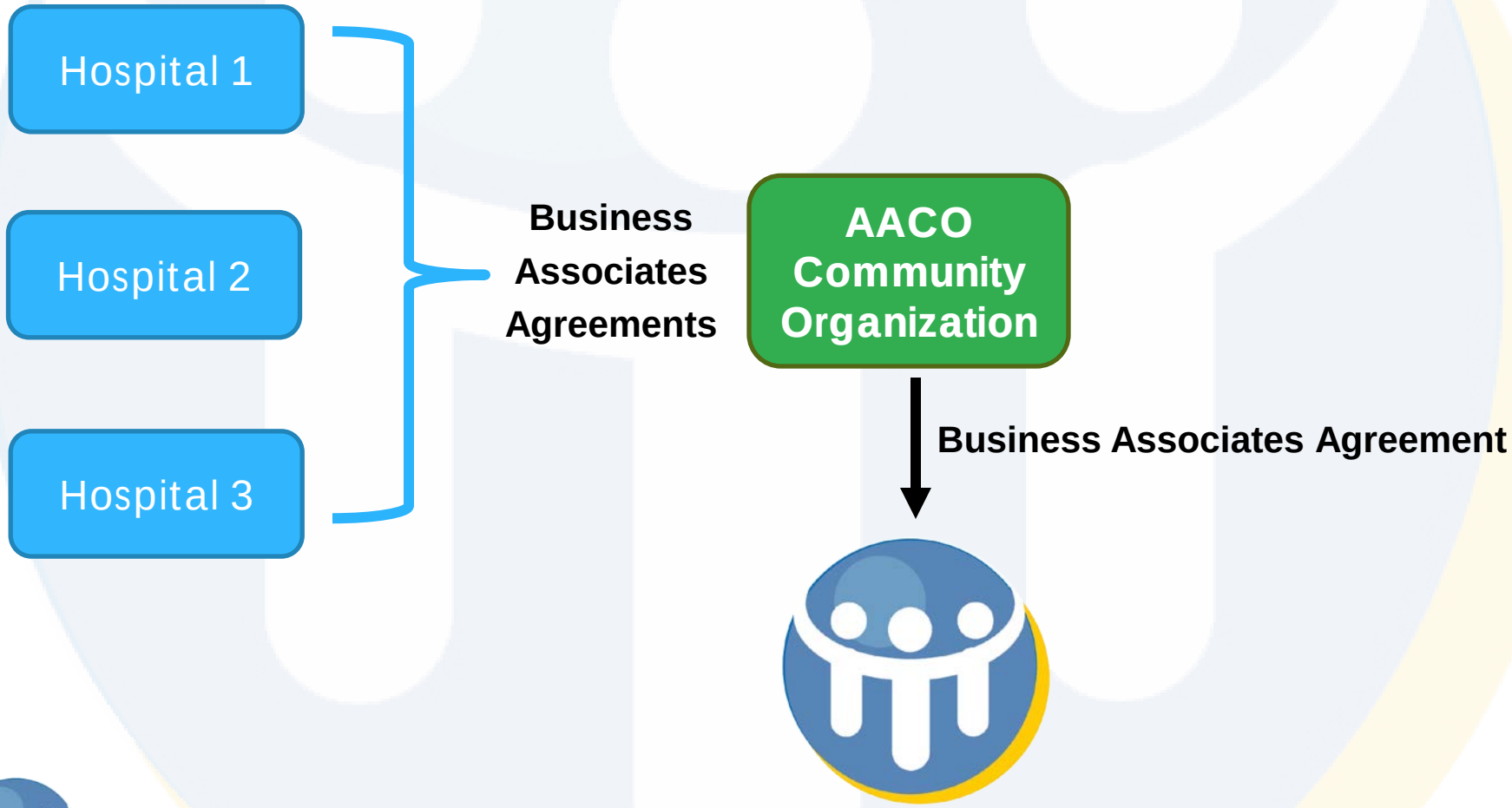


Age Distribution



Facts

Legal Framework for Hotspotting



Project Next Steps...

CCHP Hot Spotting Overview Webinar	January 9, 2014
Participants letter of intent must be submitted	February 10, 2014
Participant communities will be selected and informed of the decision	March 3, 2014
CCHP lead conference call to answer questions	March 20, 2014
MOU to be signed by	May 5, 2014
Participants provide encrypted claims data to CCHP for analysis	June 6, 2014
CCHP will return Hot Spotting Data Analysis to participants	July 7, 2014
CCHP AACO Trenton Conference to Present all Hot Spotting Data to participants	July 31, 2014
CCHP Tableau Training Webinar	August 14, 2014

Letter of Intent

Must be submitted by February 10th, 2014

Must include the following:

- Key internal stakeholders to be included in the project
  - *It is recommended that a senior project manager be assigned to the project. This individual will be responsible for obtaining the hospital claims data for their community hospitals.*
- An assessment of the participating community's ability to obtain this data from hospitals and other providers.

Can also include:

- Key external stakeholders (i.e. other community groups, providers, etc., who can support the project)