



Identifying Vulnerable Populations Using Claims Data

Amy Kinner, MA, Health Analytics Manager
Jesse Drummond, PhD, Health Data Analyst

NAHDO Special Edition Web Conference (COVID-19 & Health Data)

March 25, 2020

Claims Data for COVID-19 Response

Disadvantages

- No real-time signals
- No uninsured
- Only care that was billed

Advantages

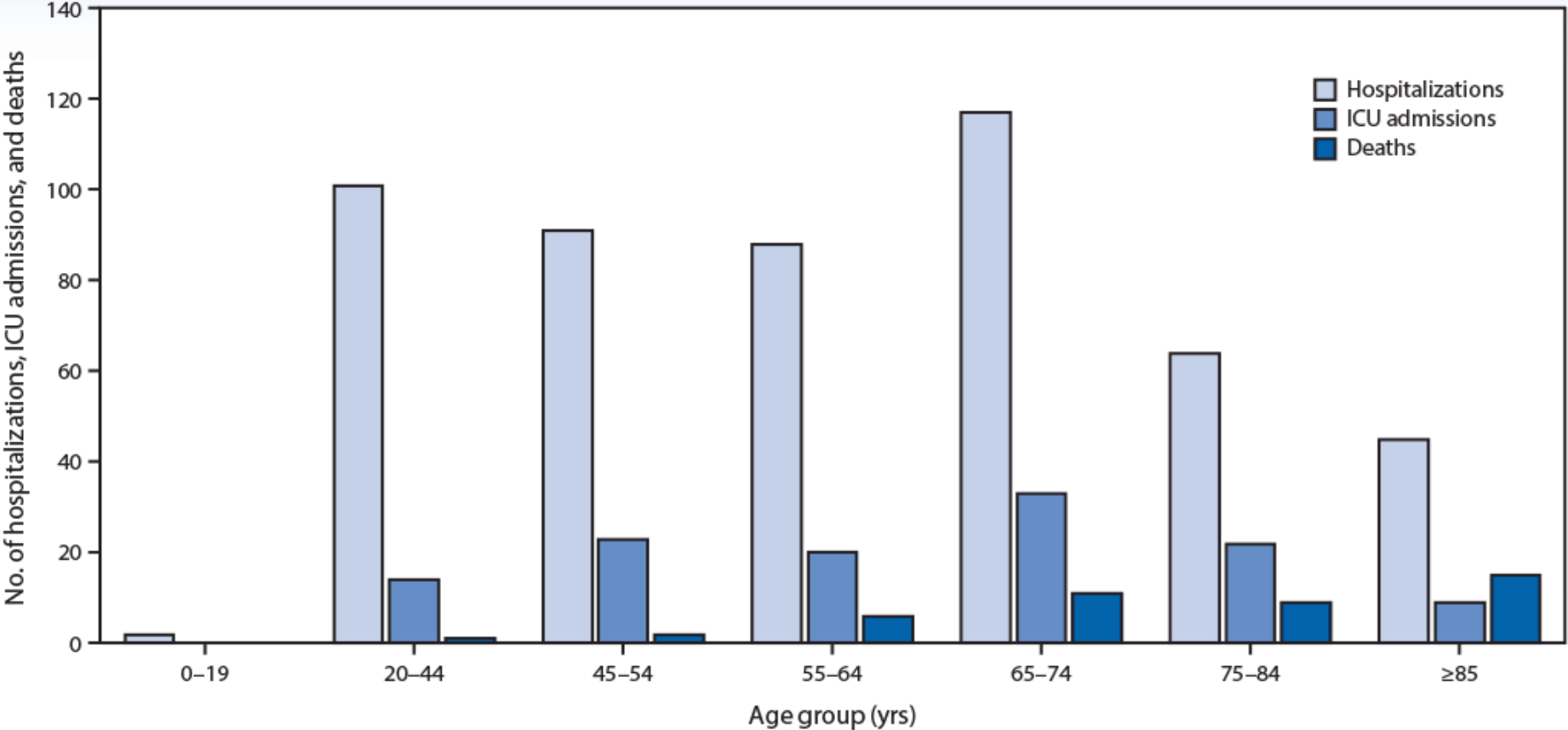
- Multiple settings
- Multiple payers
- Includes cost of care

Who Are the Populations of Concern?

- According to the CDC and World Health Organization
 - Older Adults
 - People with serious medical conditions:
 - » Heart Disease
 - » Diabetes
 - » Lung Disease
 - » High Blood Pressure
 - » Cancer

Our Understanding is Evolving

FIGURE 2. Coronavirus disease 2019 (COVID-19) hospitalizations,* intensive care unit (ICU) admissions,† and d United States, February 12– March 16, 2020



* Hospitalization status missing or unknown for 1,514 cases.

† ICU status missing or unknown for 2,253 cases.

§ Illness outcome or death missing or unknown for 2,001 cases.

Source: www.cdc.gov/mmwr/volumes/69/wr/mm6912e2.htm

Our Understanding is Evolving

NYC COVID-19 Deaths

Age Group	
- 0 to 17	0 (0%)
- 18 to 44	5 (3%)
- 45 to 64	43 (22%)
- 65 to 74	44 (23%)
- 75 and over	100 (52%)
Sex	
- Female	74 (39%)
- Male	118 (61%)
Borough	
- Bronx	41 (21%)
- Brooklyn	42 (22%)
- Manhattan	30 (16%)
- Queens	61 (32%)
- Staten Island	18 (9%)
Underlying Illness¹	
- Yes	158 (95%)
- No	8 (5%)
- Pending Investigation	26
Total	192

¹ Underlying illnesses include Diabetes, Lung Disease, Cancer, Immunodeficiency, Heart Disease, Hypertension, Asthma, Kidney Disease, and GI/Liver Disease.

Source:
NYC Health Daily Report,
Coronavirus Disease 2019
(COVID-19) Daily
DataSummary

Source:
<https://www1.nyc.gov/assets/doh/downloads/pdf/imm/covid-19-daily-data-summary.pdf>

California Integrated Healthcare Association (IHA) on Serious Illness

- Funded by Gordon and Betty Moore Foundation
- Collaborated with IHA and researchers at Duke Margolis
- Defined serious illness
- Based on CMS Chronic Condition Warehouse definitions
- Mapped by geography
- Commercial, Medicare FFS, Medicare Advantage

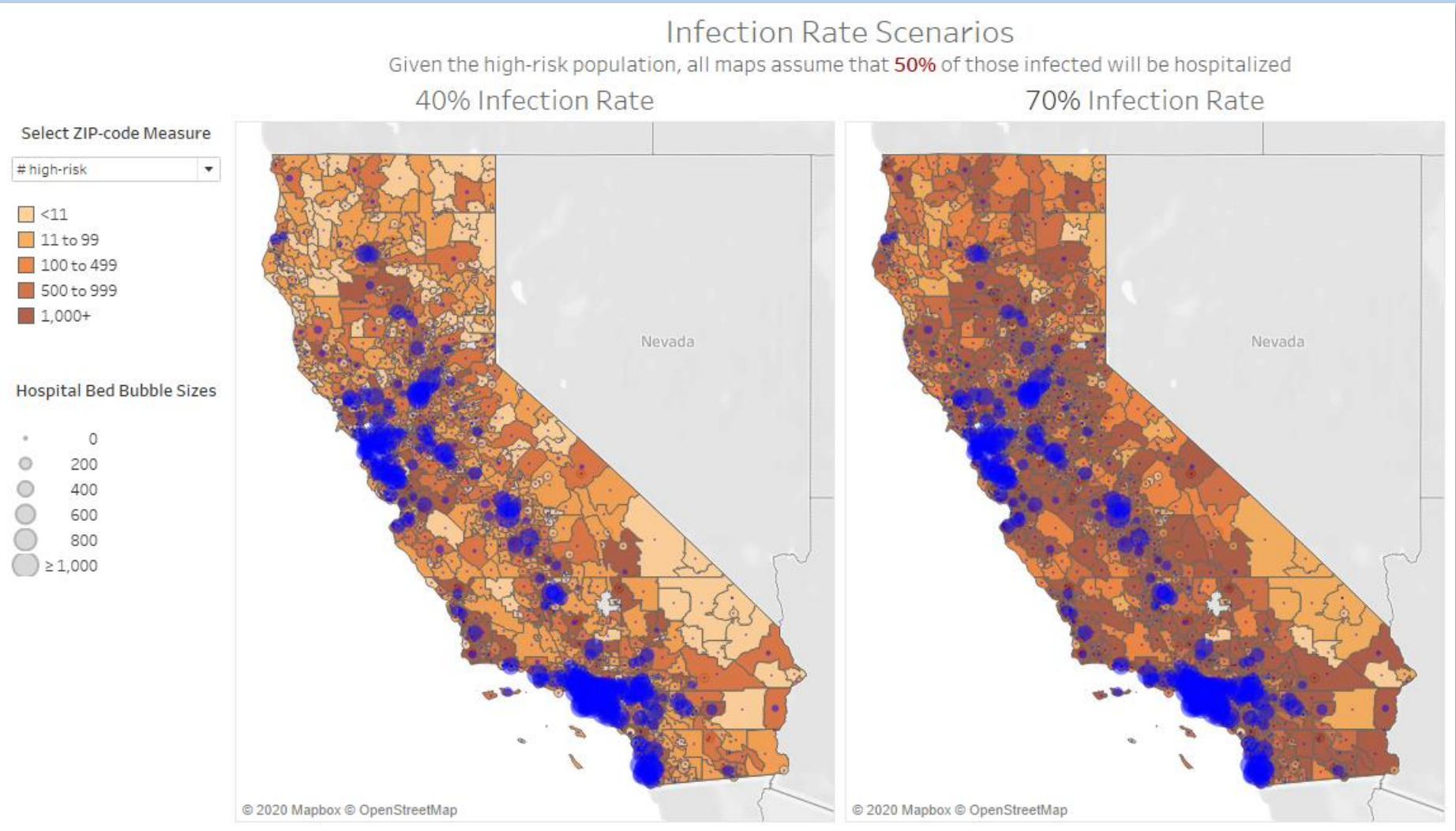
Preliminary Definition of “At Risk”

- Definition included people 60+ years of age with:
 - Chronic obstructive pulmonary disease (COPD)
 - Asthma
 - Cancers
 - Diabetes
 - Acute myocardial infarction (AMI), atrial fibrillation (AF), ischemic heart disease, heart failure
 - Stroke
 - Functional disabilities
- + Everyone 80 years and older

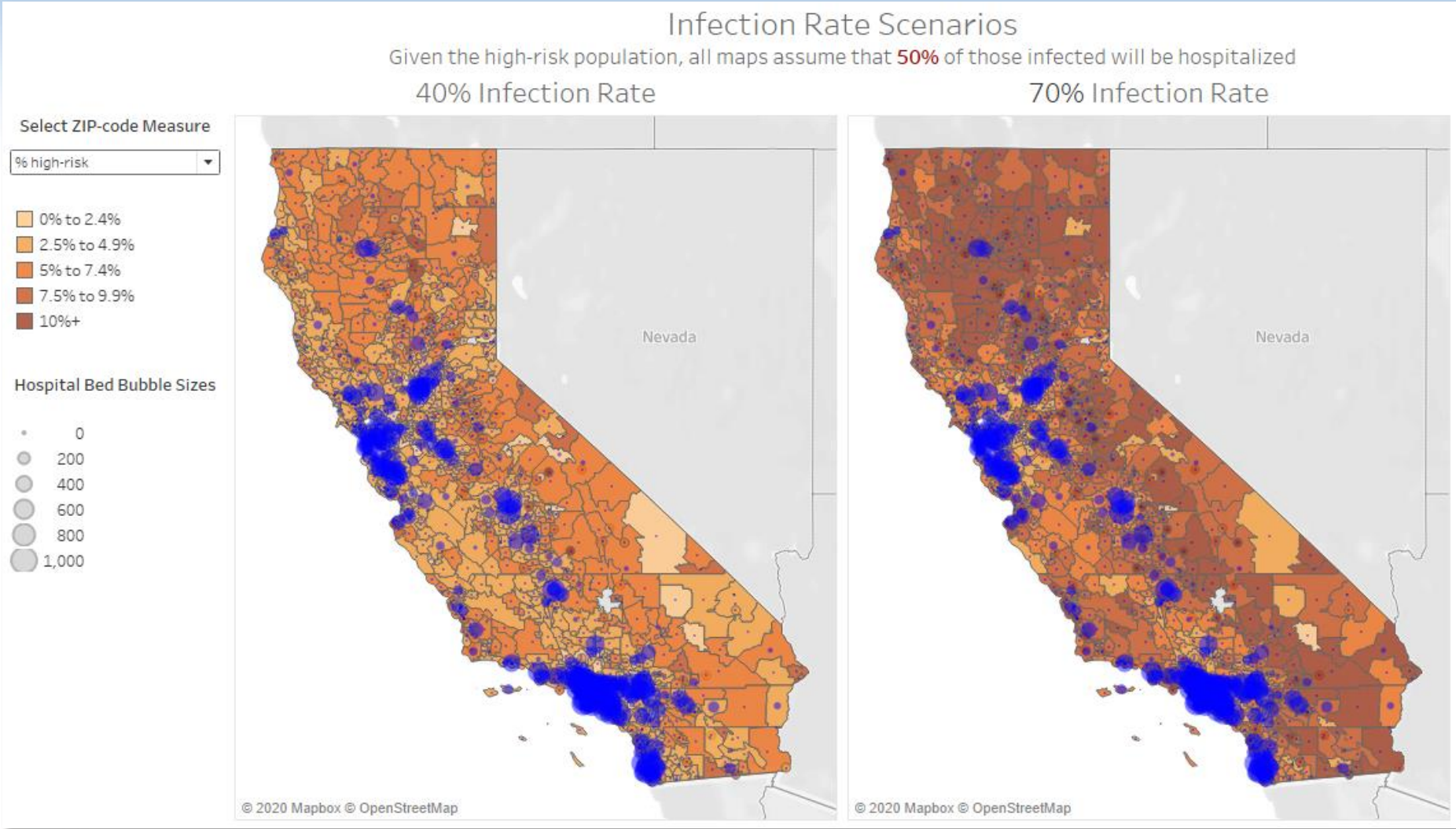
Use Cases

- With states, identify areas of concern (high numbers of people at risk / beds available)
- Relevant now but also ongoing monitoring – What happens later?
- Potential issues with deferred care for chronically ill patients
- Evaluation of impact of COVID-19 as time goes on

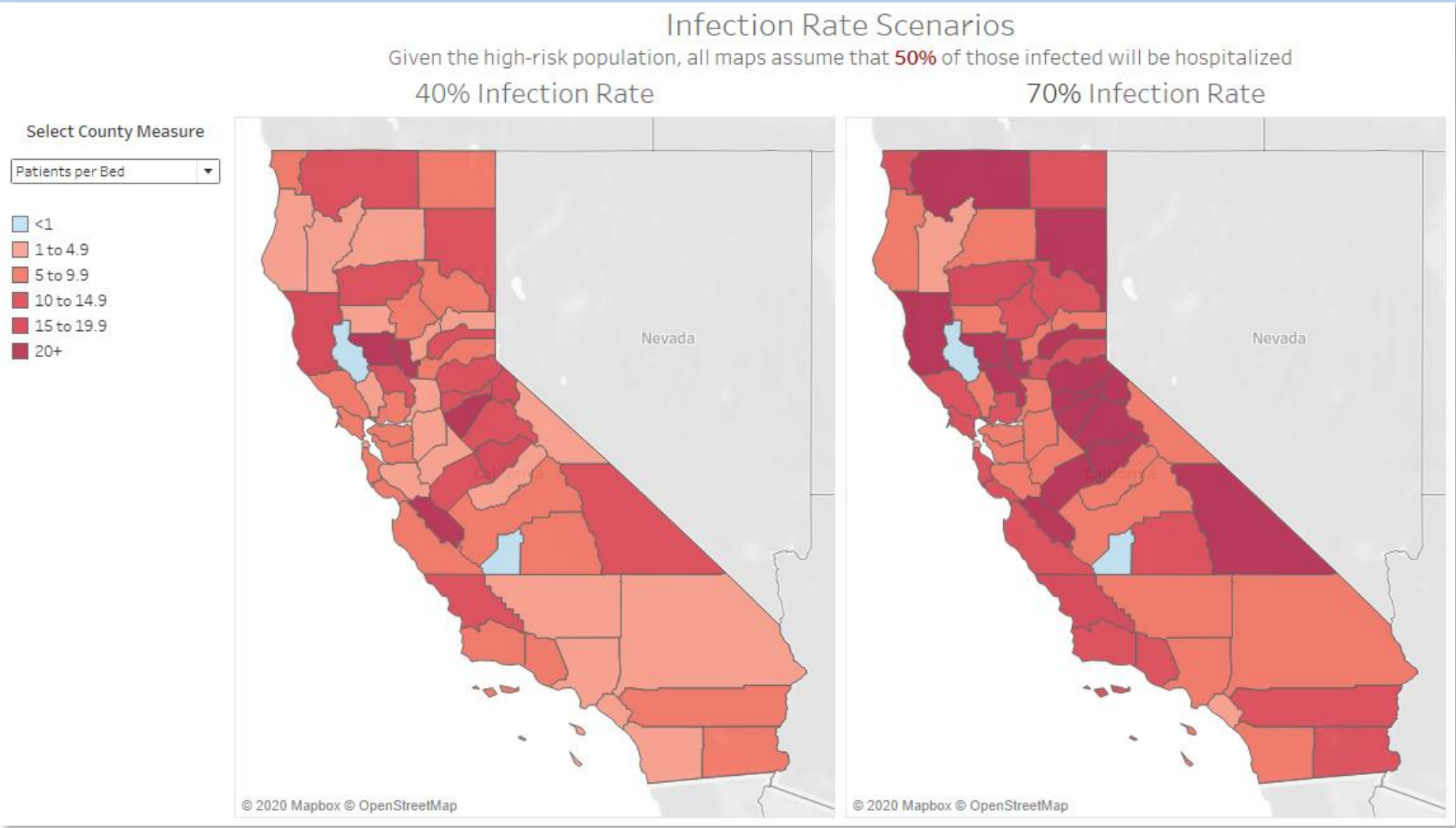
Patients at High Risk by ZIP Code (#)



Patients at High Risk by ZIP Code (%)



Patients per Hospital Bed by County



Statistics by County

County	All Members	Covid Severe Risk Flag	Beds by County	Covid flag (40% IR)	% All members (40% IR)	Beds (150%)	People/bed (40% IR)	Overflow Pts (40% IR)
San Benito	22,019	4,060	0	812	3.69%	0	812.00	812
Colusa	7,240	1,652	0	330	4.56%	0	330.40	330
Sutter	32,068	9,526	14	1,905	5.94%	21	90.72	1,884
Calaveras	18,216	5,196	25	1,039	5.70%	38	27.71	1,002
Alpine	351	93	0	19	5.30%	0	18.60	19
Mariposa	7,254	2,215	18	443	6.11%	27	16.41	416
Mendocino	38,682	8,597	75	1,719	4.44%	113	15.28	1,607
Siskiyou	18,215	5,329	50	1,066	5.85%	75	14.21	991
El Dorado	88,976	17,105	162	3,421	3.84%	243	14.08	3,178
Lassen	8,638	2,547	25	509	5.90%	38	13.58	472
Amador	18,187	5,042	52	1,008	5.54%	78	12.93	930
Nevada	44,039	11,953	129	2,391	5.43%	194	12.35	2,197
Yolo	80,240	11,436	125	2,287	2.85%	188	12.20	2,100
Inyo	8,617	2,229	25	446	5.17%	38	11.89	408
Tuolumne	22,985	7,291	84	1,458	6.34%	126	11.57	1,332
Merced	80,767	19,738	230	3,948	4.89%	345	11.44	3,603
Tehama	18,644	6,066	76	1,213	6.51%	114	10.64	1,099
San Luis Obispo	120,873	30,156	389	6,031	4.99%	584	10.34	5,448
Marin	138,491	23,654	381	4,731	3.42%	572	8.28	4,159
Plumas	7,236	1,934	32	387	5.35%	48	8.06	339
Santa Cruz	115,988	21,662	368	4,332	3.74%	552	7.85	3,780
Placer	197,956	36,369	622	7,274	3.67%	933	7.80	6,341
Santa Barbara	169,266	39,330	678	7,866	4.65%	1,017	7.73	6,849
Sonoma	260,689	42,328	761	8,466	3.25%	1,142	7.42	7,324
Del Norte	8,148	2,674	49	535	6.56%	74	7.28	461
Ventura	366,049	72,726	1,333	14,545	3.97%	2,000	7.27	12,546
Imperial	56,904	14,333	268	2,867	5.04%	402	7.13	2,465
San Mateo	343,889	50,506	1,054	10,101	2.94%	1,581	6.39	8,520
Tulare	122,360	30,273	639	6,055	4.95%	959	6.32	5,096
Monterey	135,467	31,817	673	6,363	4.70%	1,010	6.30	5,354
Butte	83,694	24,174	529	4,835	5.78%	794	6.09	4,041
Solano	216,664	30,981	685	6,196	2.86%	1,028	6.03	5,169
Modoc	3,422	892	20	178	5.21%	30	5.95	148
Riverside	827,319	146,625	3,343	29,325	3.54%	5,015	5.85	24,311
Contra Costa	526,661	71,418	1,741	14,284	2.66%	2,612	5.47	11,672



Reliable data. Informed decisions. Strategic advantage.

75 Washington Avenue
Suite 1E
Portland, ME 04101

207 623-2555

www.OnpointHealthData.org