Indirect Estimation as an Interim Strategy to Better Data Reporting and Use at WellPoint

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Indirect Methodology at WellPoint

At WellPoint, we refine and apply statistical methodologies that allows the prediction of REL data by utilizing

- Enrollee first and last names matched to proprietary internal and U.S. Census most common ethnic surname lists

- Enrollee residential address for geocoding then matched to Census data

These factors are linked together using logistic regressions to determine the probability that a person is Asian, African American, Hispanic, or White/other

2008 NCQA Innovation in Multicultural Health Care Award and BCBSA BlueWorks Award

Is Indirect Methodology Really Reliable?
Accuracy Rate – Individual Level

Indirect methods show strong potential in identifying the R/E of individual members (86.2% of the validation set identified correctly)

Individual R/E Correctly Predicted

Approach N = 192,096	All Members Accuracy Rate	Over 80% Accuracy Rate	Over 80% Member Count
Surname	**74.5%**	**90.8%**	**130,150**
Geocoding	**62.9%**	**84.4%**	**54,092**
Logistic Model	**86.2%**	**93.8%**	**145,009**

Individual Predictions – Positive Predictive Value

Approach N = 192,096	Hispanic	Asian	African American	White / Other
Surname	**84.4**	**90.2**	**79.7**	**54.3**
Geocoding	**76.4**	**52.0**	**58.6**	**49.5**
Logistic Model	**93.2**	**90.0**	**77.8**	**76.4**

Analysis of HEDIS Health Disparities and Unscreened Members by Volume

Unscreened Mammography Commercial Members & Testing Rates
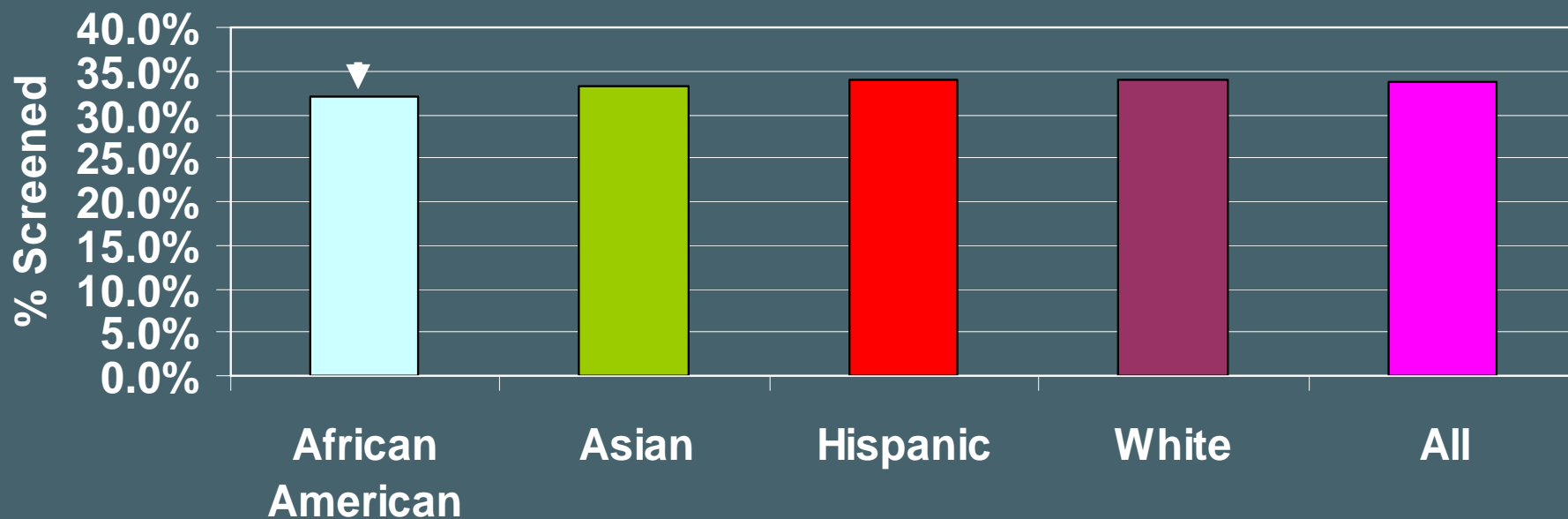### Sept. 1, 2007 - Aug. 31, 2008

Indicates significant difference vs. White rate at a 95% confidence level

Hatched marks indicate number of members screened.

Legend: ■ Asian ■ African American ■ Latino ■ White / Other
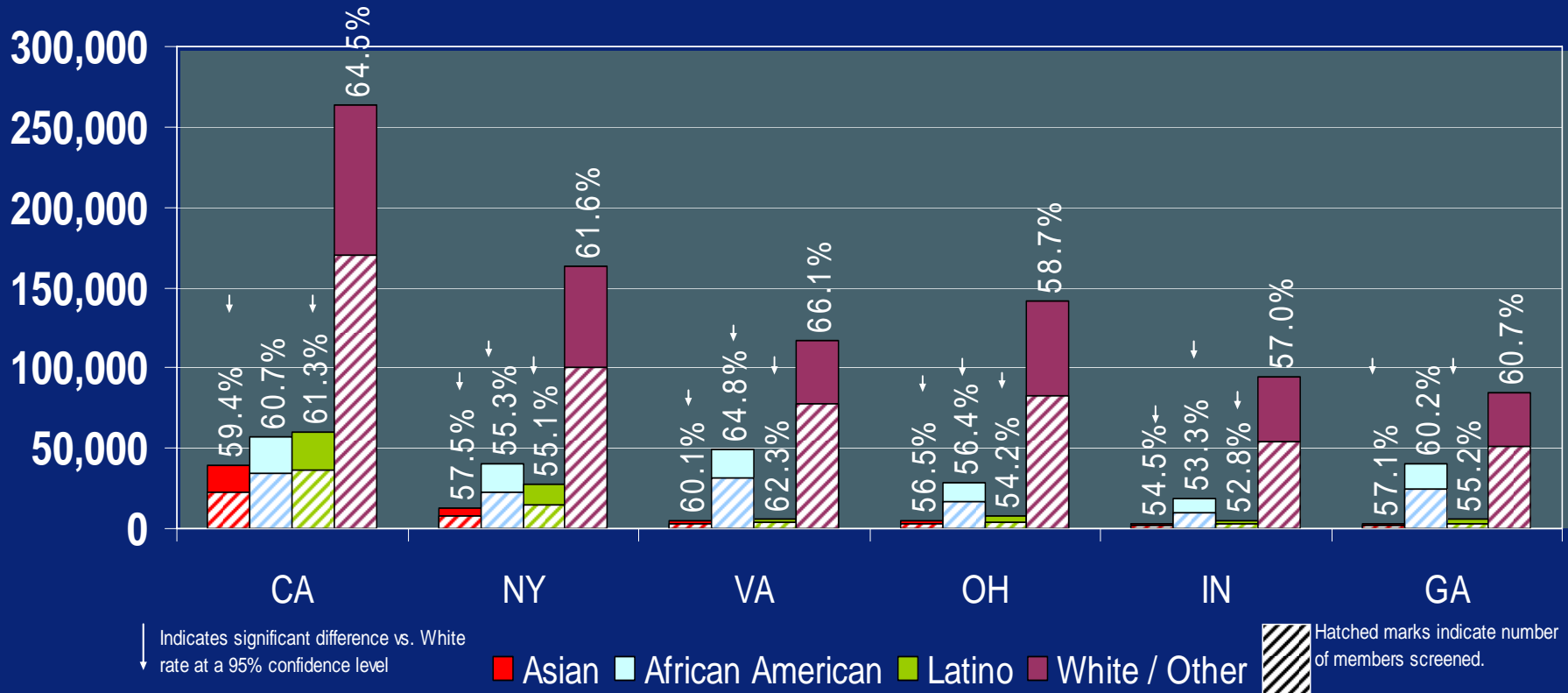
Source: WellPoint Member Health Index/HEDIS Data 9/07 – 8/08

Breast Cancer Screening in Brooklyn, NY by Race/Ethnicity
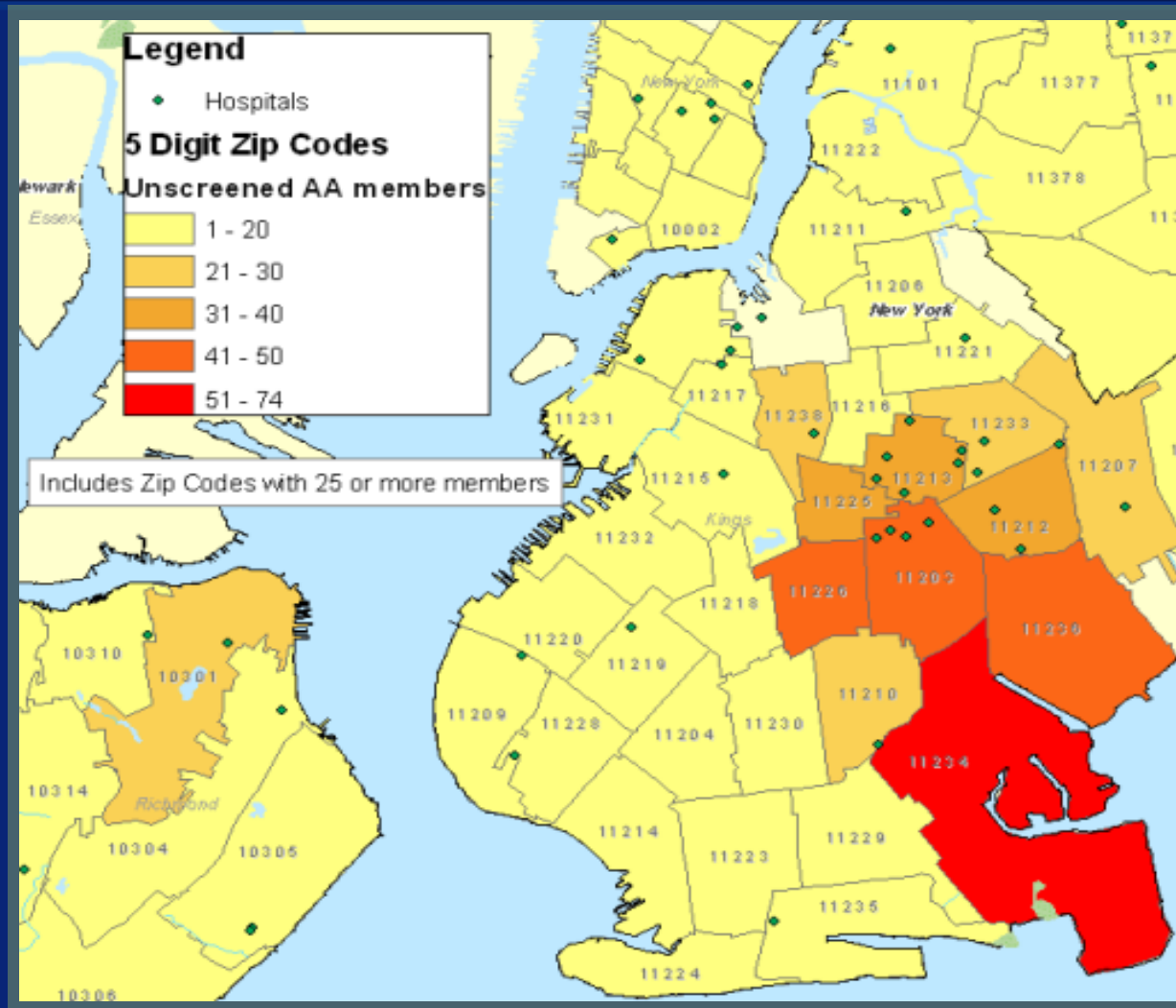
WELLPOINT

Screening Rate by R/E

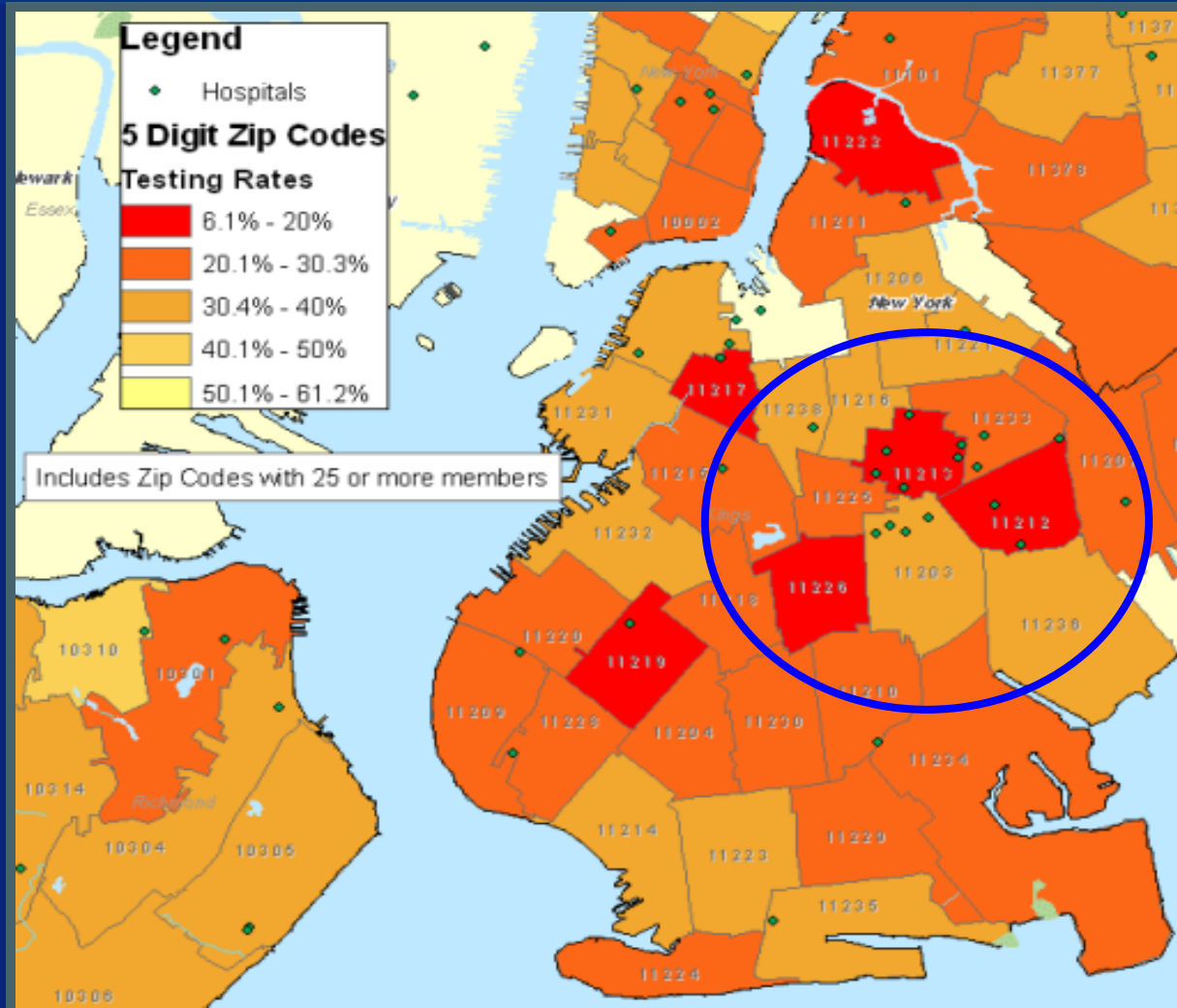↓ Indicates that the differrence is statistically significant at a 95% confidence level.

Source: WellPoint HEDIS 2008 (2007 Data) and 2007 Claims Data

Brooklyn Mammography Rates: Unscreened African-American Members
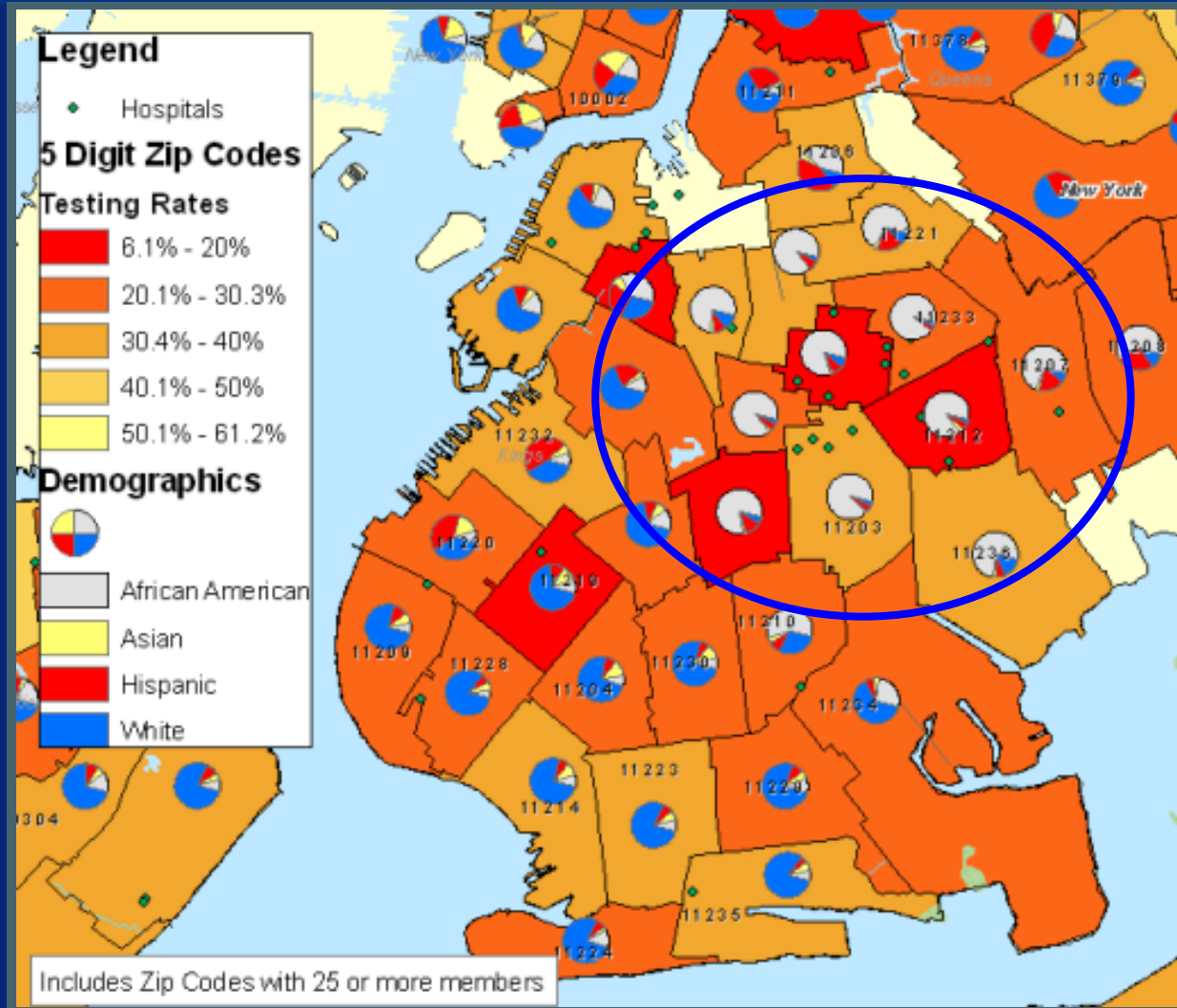

Source: WellPoint HEDIS 2008 (2007 Data) and 2007 Claims Data

Brooklyn Mammography Rates: African-American Members By Zip Codes


Source: WellPoint HEDIS 2008 (2007 Data) and 2007 Claims Data

Brooklyn Mammography Rates: Analysis of Racial Composition by Zip

Source: WellPoint HEDIS 2008 (2007 Data) and 2007 Claims Data

Mapping Analyses Help Identify Health Disparities "Hot Spots"
Unscreened Minorities Living Near Hospitals

Brooklyn, NY
Mammography Testing - Unscreened African American Members
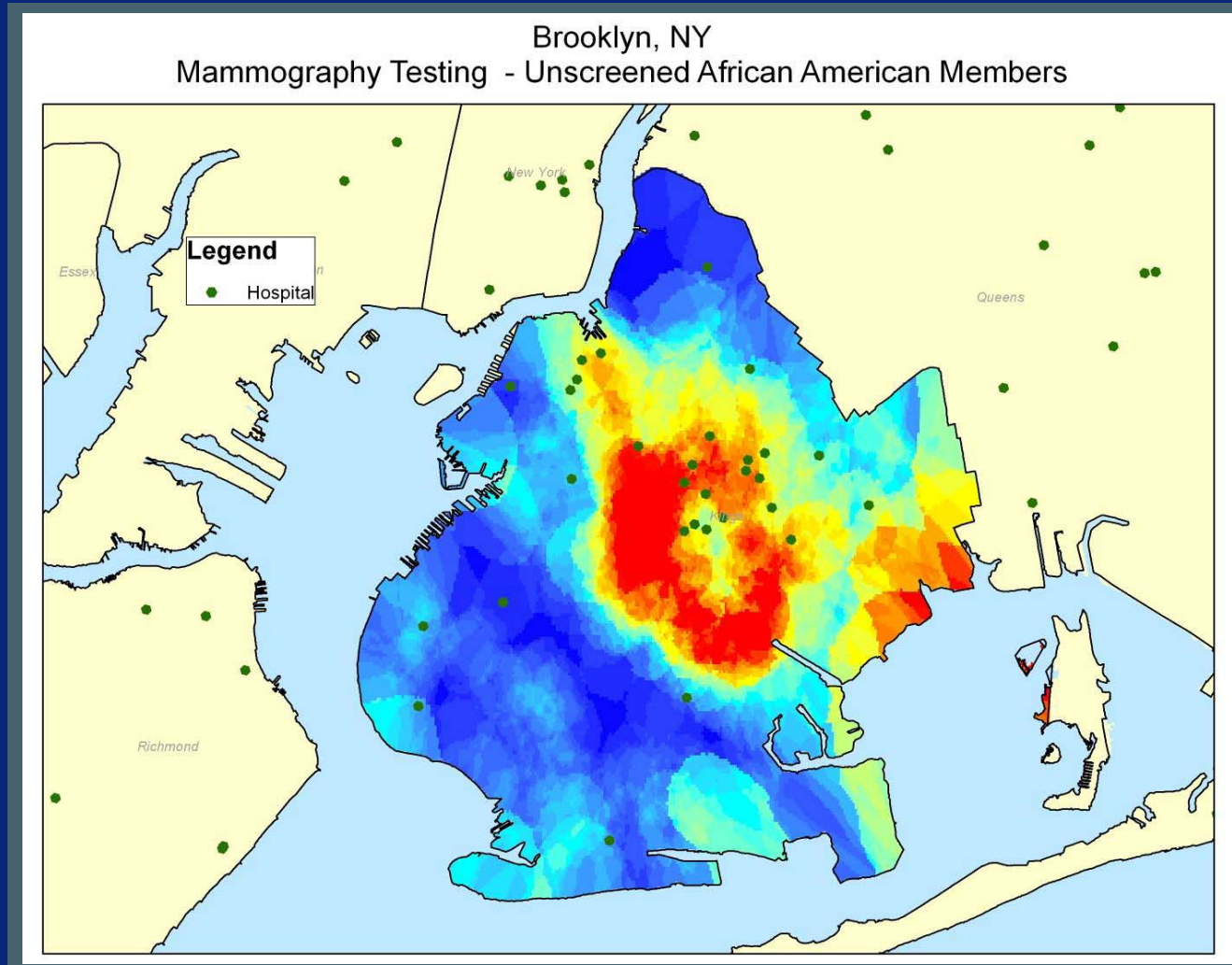
Source: De-identified Sample from WellPoint HEDIS 2007 (2006 Data)

# Drilling Down to Neighborhoods and Partnering to Meet the Greatest Needs

Palm Springs-Indio Hot Spot - Unscreened Members
LDL Screening by Block Group - Kriging Applied
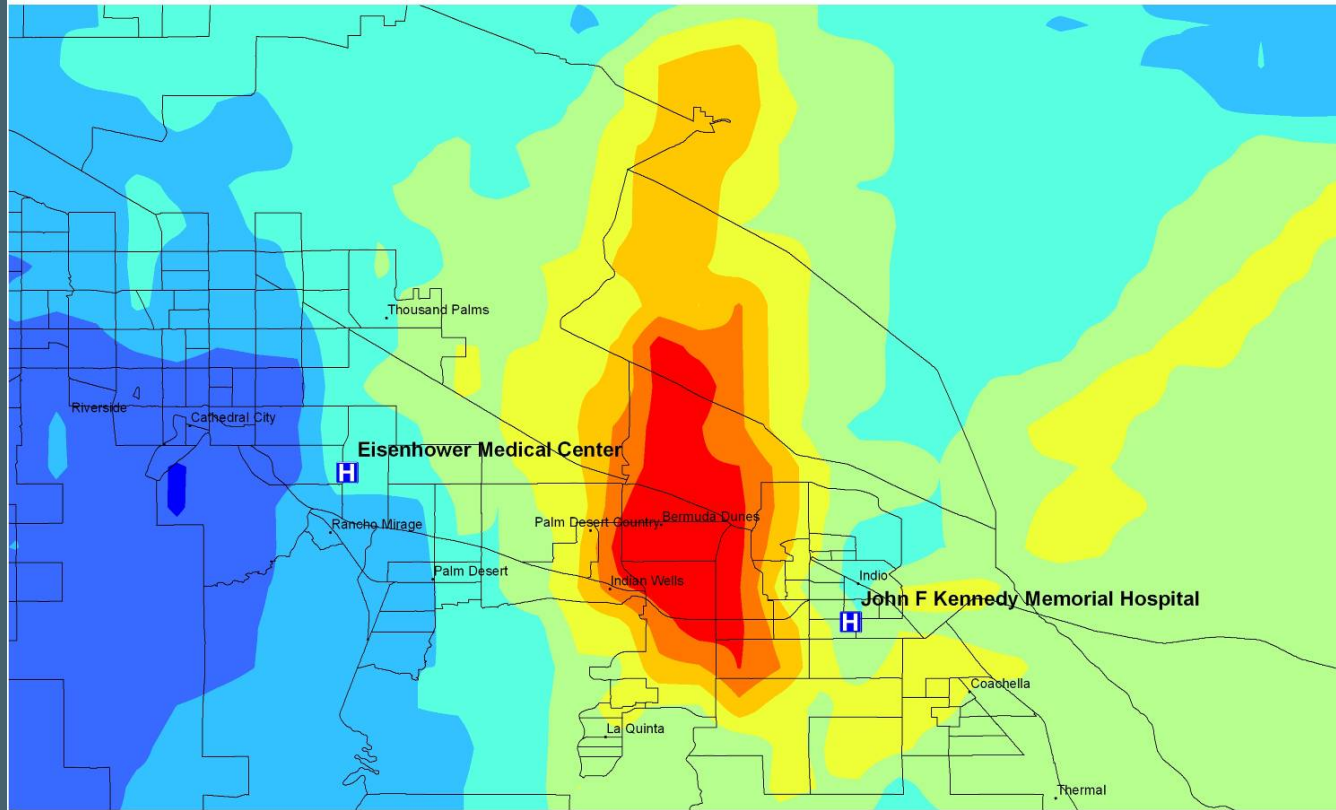
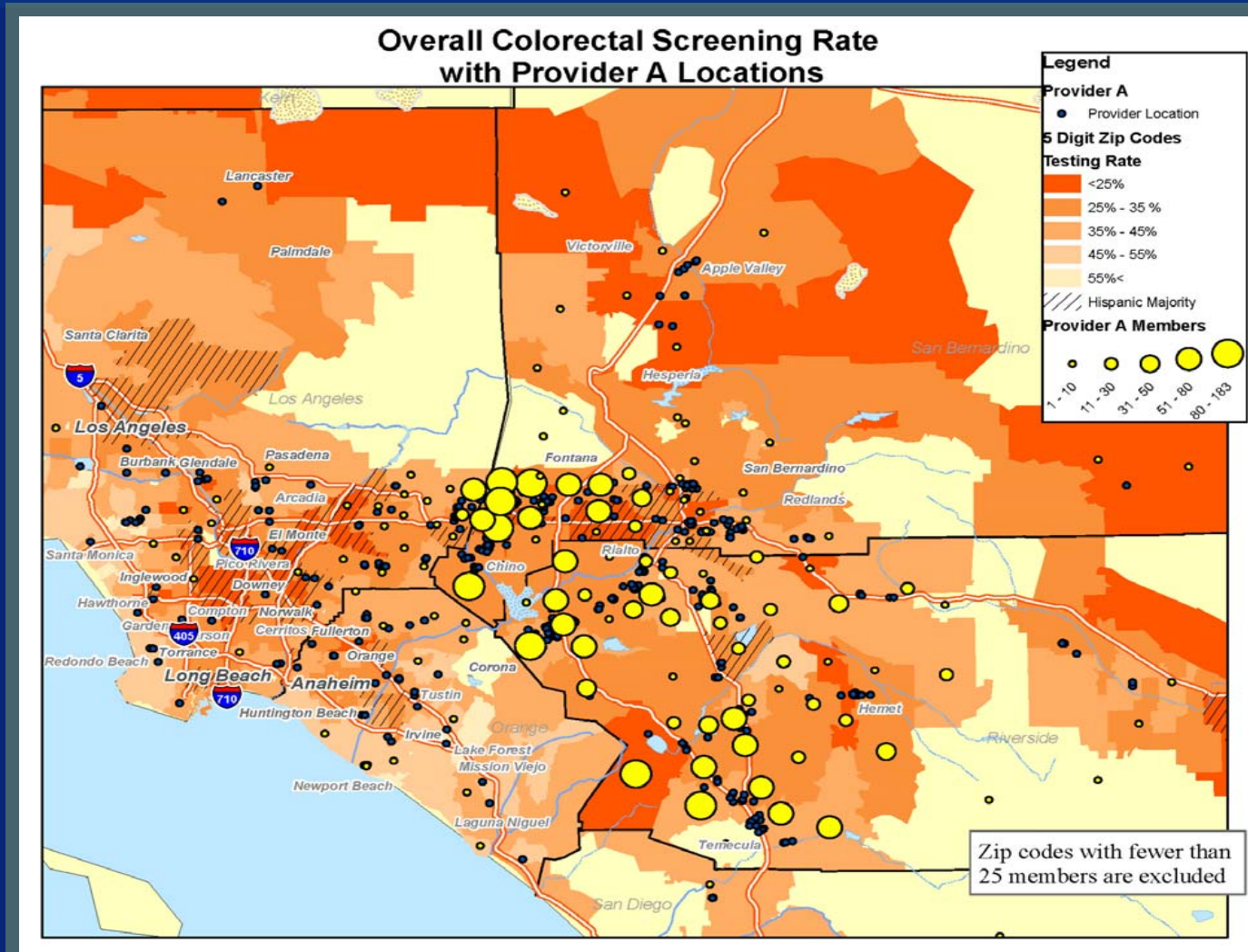Source: De-identified Sample from WellPoint HEDIS 2009 (2008 Data)

Do Demographics Influence Disparity Hotspots?

Palm Springs-Indio Hot Spot - Unscreened Members
LDL Screening by Block Group - Kriging Applied
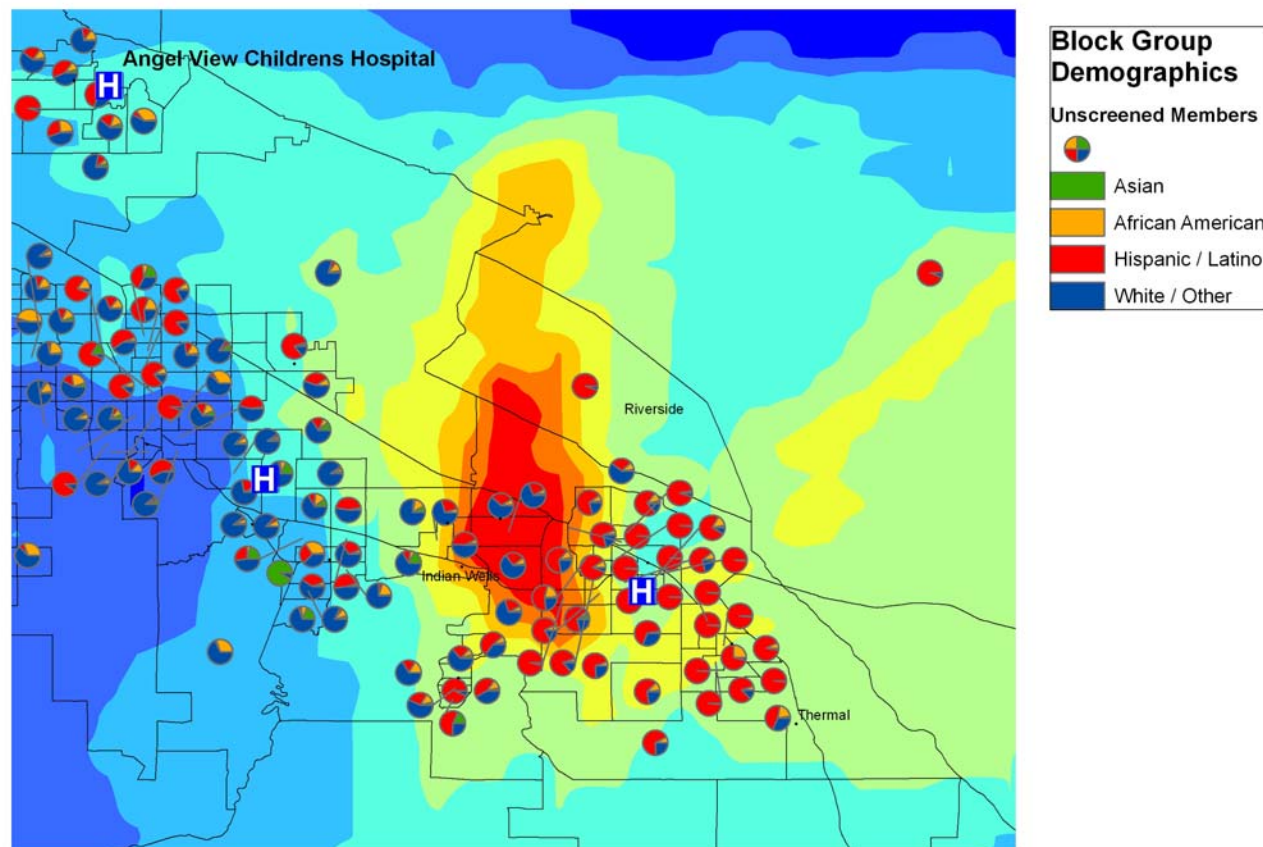
Source: De-identified Sample from WellPoint HEDIS 2009 (2008 Data)

Overlay of Provider Locations and Patient/Member Volume Can Further Identify Potential Intervention Areas

Source: De-identified Sample from WellPoint HEDIS 2007 (2006 Data)

Using Geocoding to Determine Language

California plan needed to determine the language needs of members in response to California State Senate Bill 853

Problems

- Little Internal data exist
- Paper and telemarketing surveys could not efficiently collect language preference for many languages

Solution

- Census data linked by geocoding
- Census has data on English proficiency and languages spoken by Census Tract
- Provides Reasonable Estimates

Future

- Model is currently being developed
- Development version predicts Spanish, Chinese, & English/Other
- 76.5% of members language correctly predicted

Applications of Indirect REL Data in Health Plan Activities

WellPoint's affiliated health plans use REL data and maps to:

- Identify hotspots of unscreened members

- Study provider access for minority members

- Identify individual minority members and aggregate regions for culturally/linguistically appropriate health screening reminders and health education materials

- Determine member threshold language needs to meet regulatory requirements

- Collaborate with network medical groups in quality improvement discussions

- Forge strategic alliances with industry stakeholders like the American Cancer Society and pharmaceutical firms to jointly work towards collaborative quality initiatives to reduce the gap in care

- Engage elected government officials to encourage open dialogues on the issue of health disparities

We hope that sharing such transparency and engagement tools will improve the health of our communities and the quality of care overall

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