

Engaging Public Awareness of Health Disparities: The “Ten Zip Codes” Approach

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SAN ANTONIO'S PUBLIC HEALTH TEAM

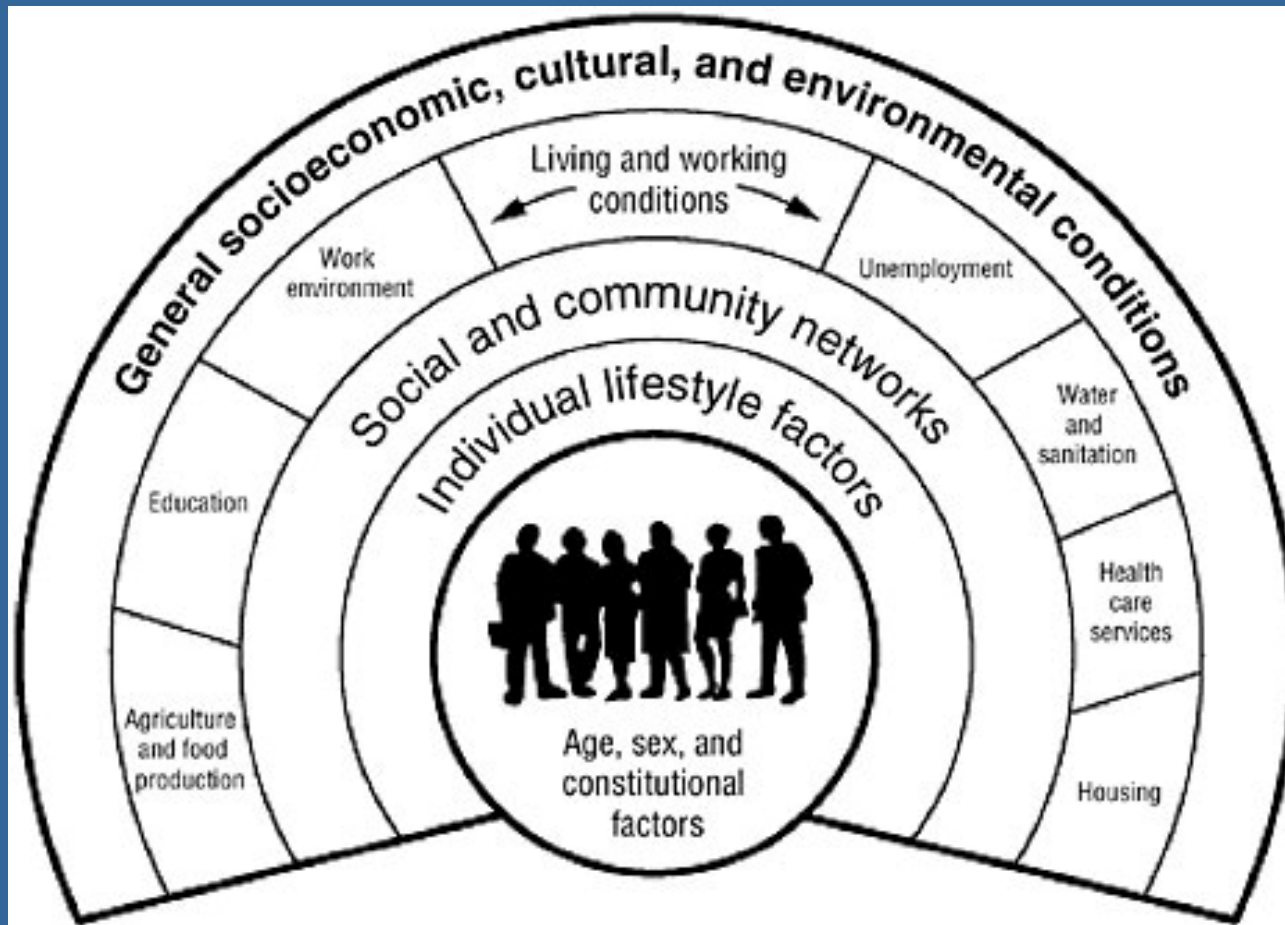
Objectives

- Place public health issues and health disparities in a context of social justice
- Describe the San Antonio Metropolitan Health District's "Ten Zip Codes" model
- Discuss applications of the "Ten Zip Codes" approach to:
 - Communicate public health issues
 - Target public health policies and programs
 - Engage non-traditional partners

Social Justice

- Application of the concept of justice on a social scale
- Movement toward a socially just world, incorporating concepts of human rights and equality
- Central to public health and healthcare fields in addressing health disparities and ethical questions

Social Ecological Model for Health



Reference: Institute of Medicine. (2003). *The Future of the Public's Health in the 21st Century*. Washington, D.C.: National Academies Press. Original source: Dahlgren G, Whitehead M. 1991. *Policies and Strategies to Promote Social Equity in Health*. Stockholm, Sweden: Institute for Futures Studies.

Health Disparities

- HP2020 Overarching Goals:
 - Achieve health equity, eliminate disparities, and improve the health of all groups.
 - Create social and physical environments that promote good health for all.
- Despite goals, clear disparities exist for racial and ethnic minorities across the spectrum of health concerns
- Persons in poverty, with low educational attainment, and low literacy have poor access to services and worse health outcomes

Challenge: Communicating Health Disparities Effectively

- Broad range of health inequities in communities are difficult to convey, especially to those outside the public health community
- Challenging to draw focus to areas of need given multiple layers of disparity, including race/ethnicity, income, health status and neighborhood
- Inclusion of both social determinants and health outcomes as relevant factors

Pattern Recognized in San Antonio

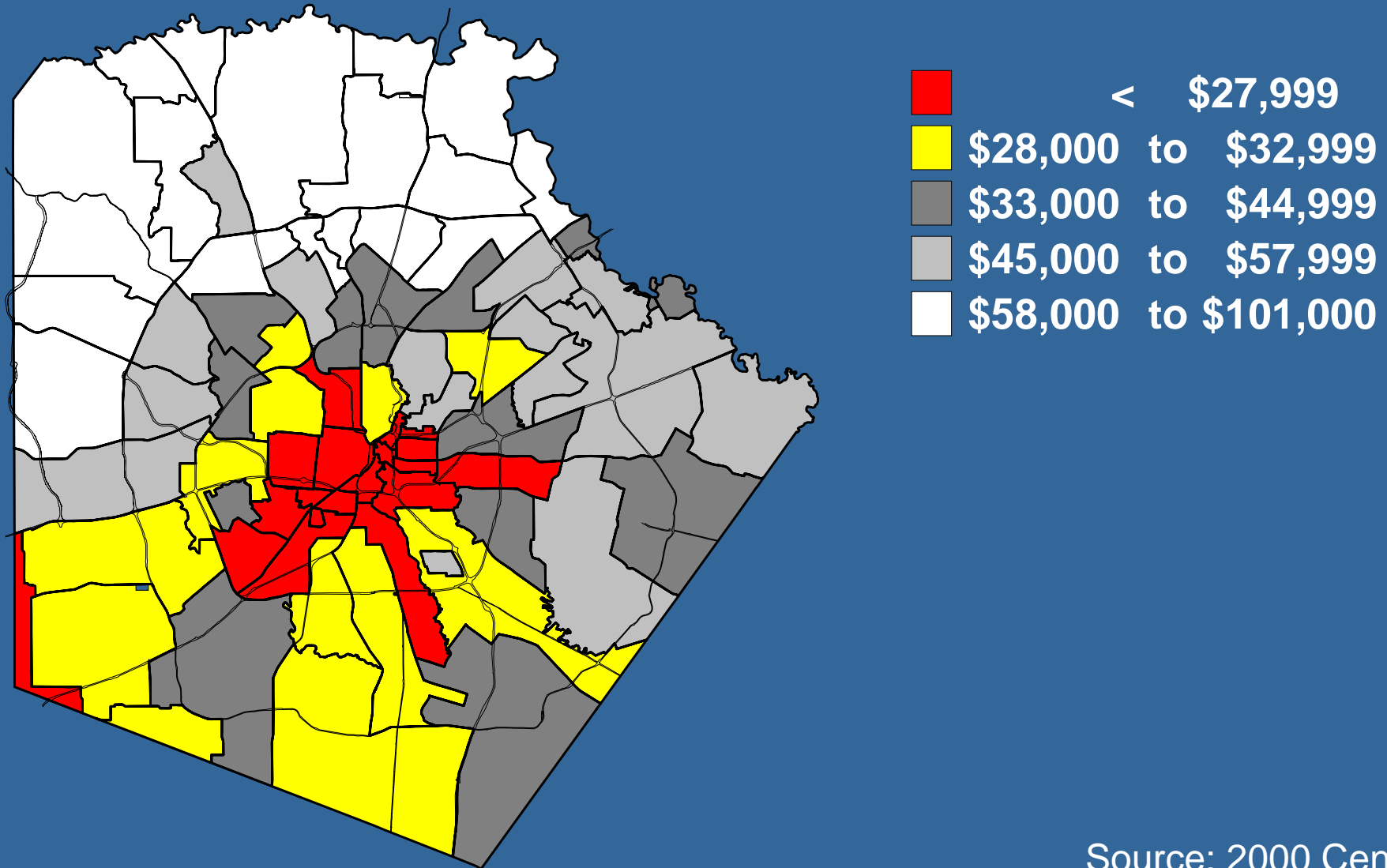
- Additional data analysis, community resource mapping, and use of GIS technology showed a strong pattern of disparity in selected zip codes
- Disparities persist in some neighborhoods across types of health issues and over time including both:
 - Social and community health factors
 - Health outcomes

Selected Zip Codes Show Concentration of Health Issues

- Poverty
- Crime
- Low educational attainment
- Limited availability and access to health services
- Obesity
- Premature death
- Risk factors for poor maternal outcomes
- Lower childhood vaccination coverage
- Others...

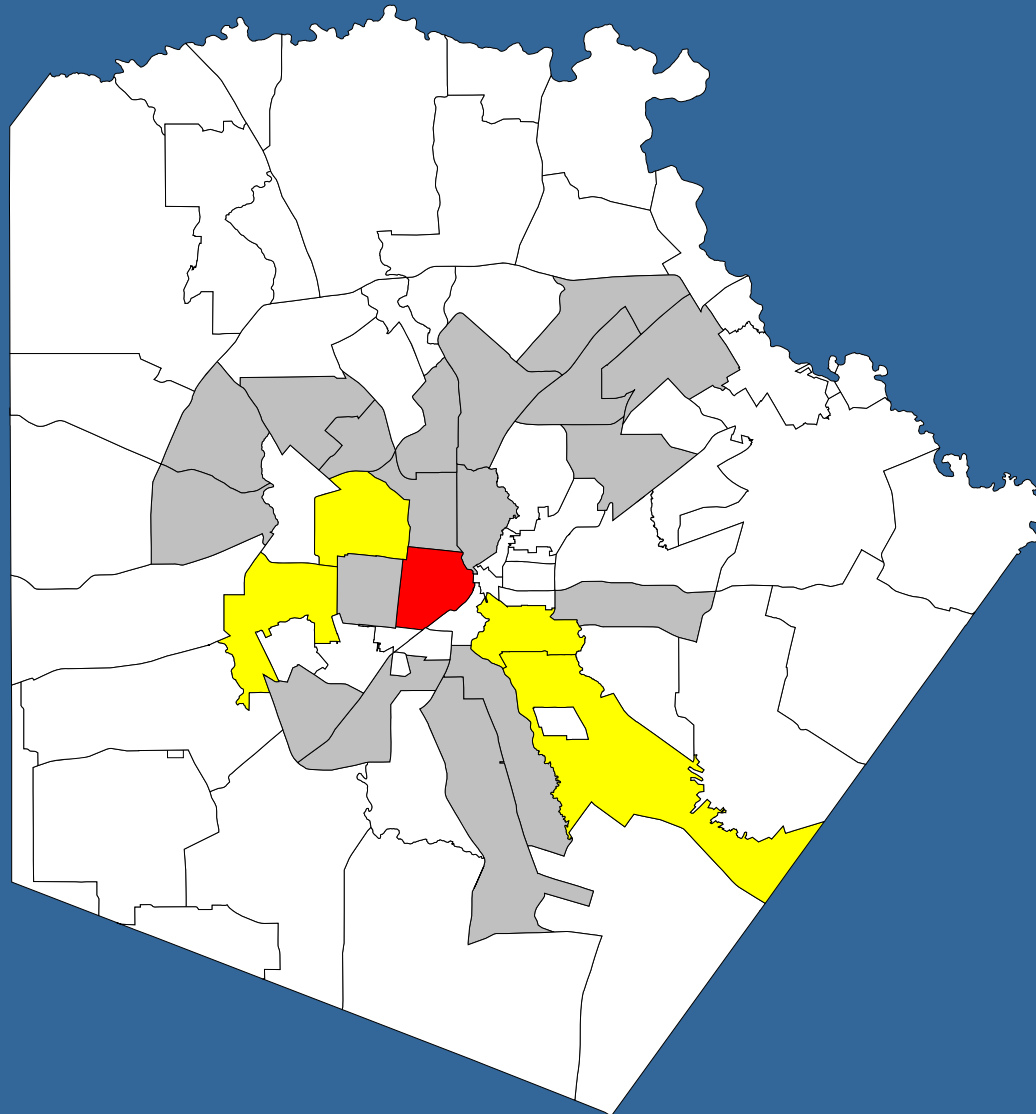
GIS Mapping of Individual Social and Health Indicators

Median Household Income

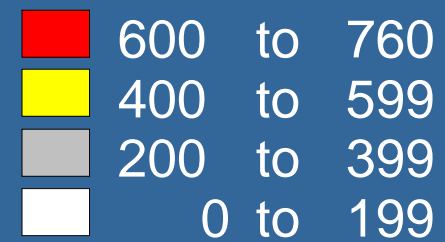


Source: 2000 Census

2008 Family Violence Reports



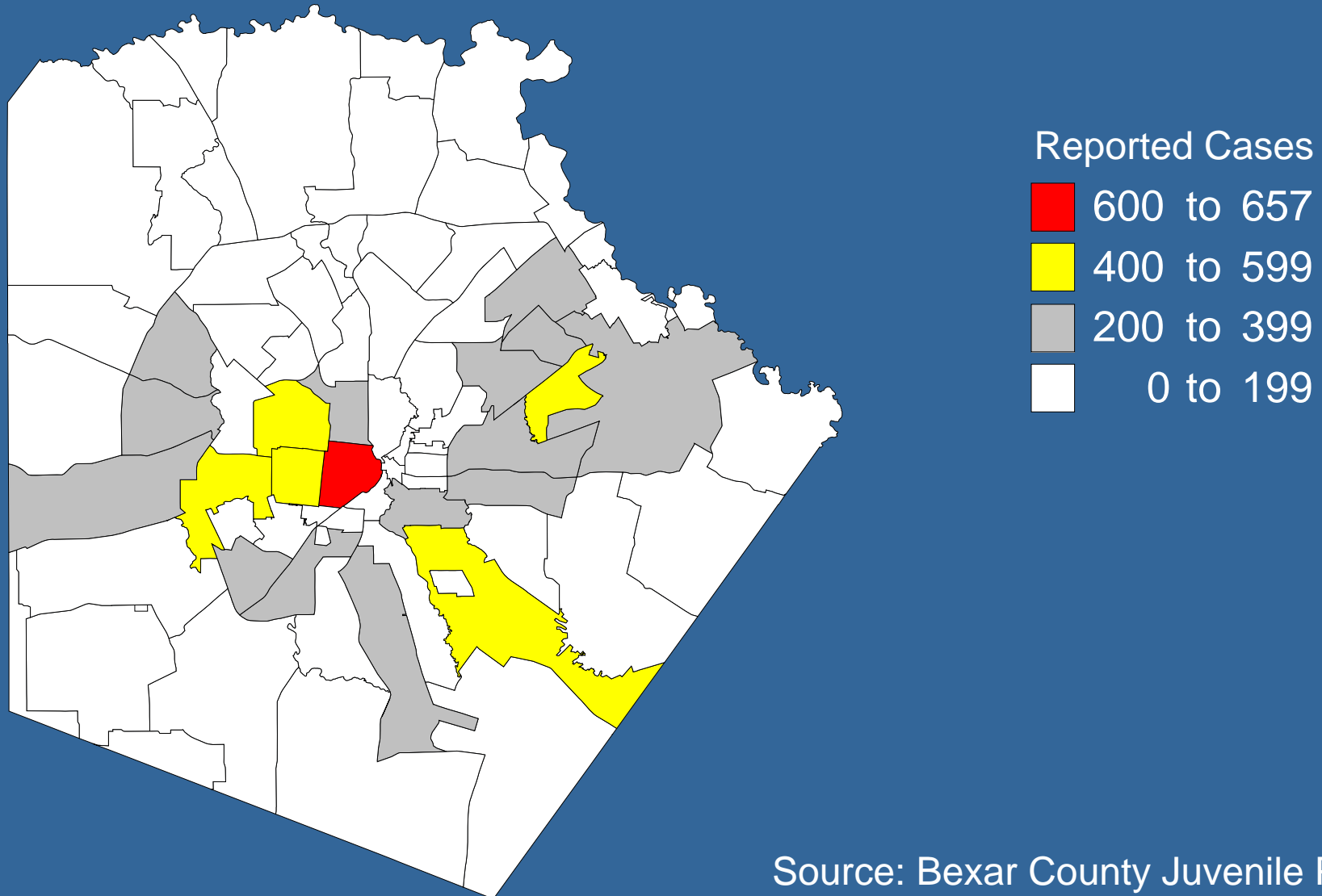
Reported Cases



10,547 total cases

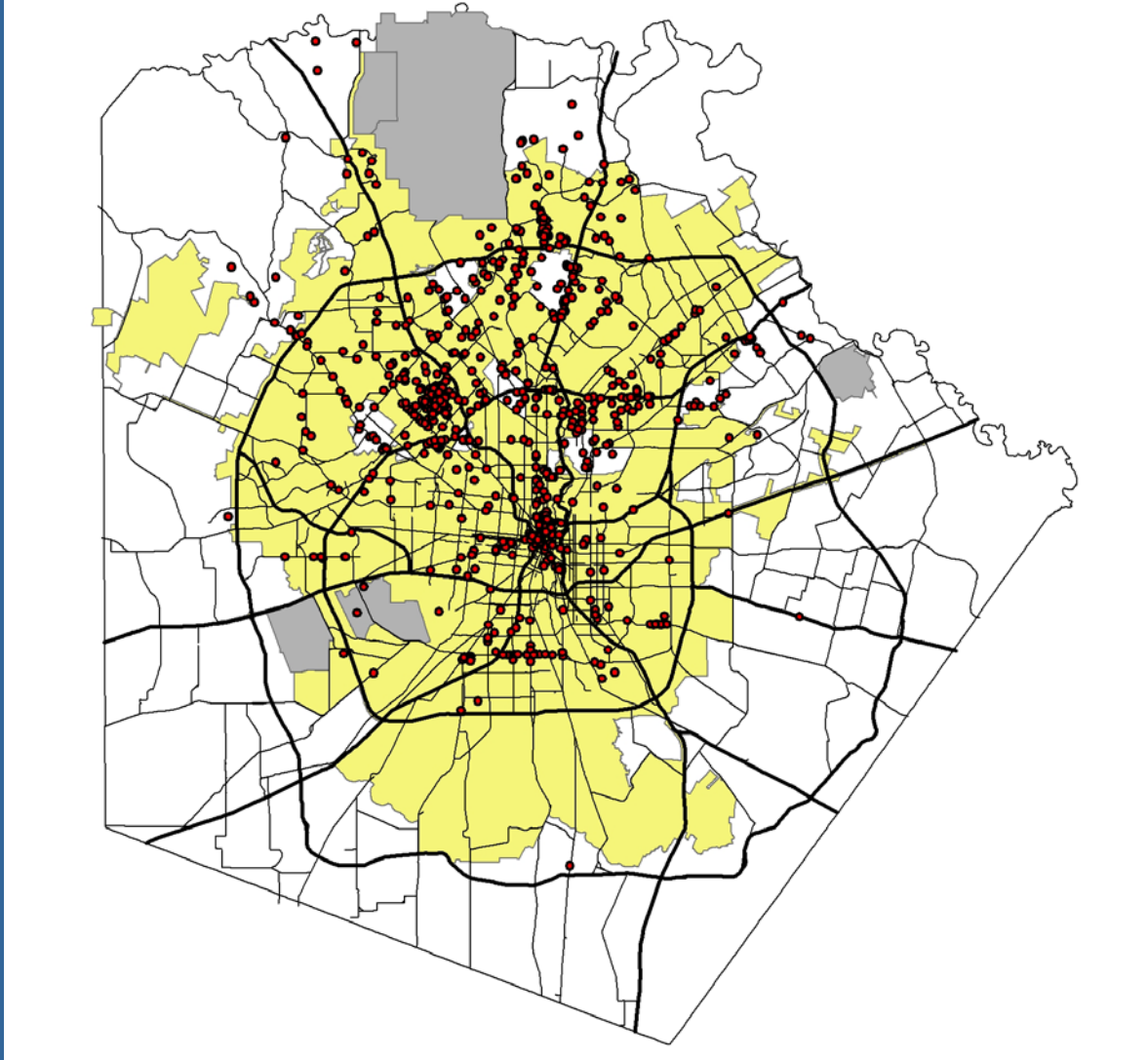
Source: SAPD

2008 Juvenile Probation Referrals



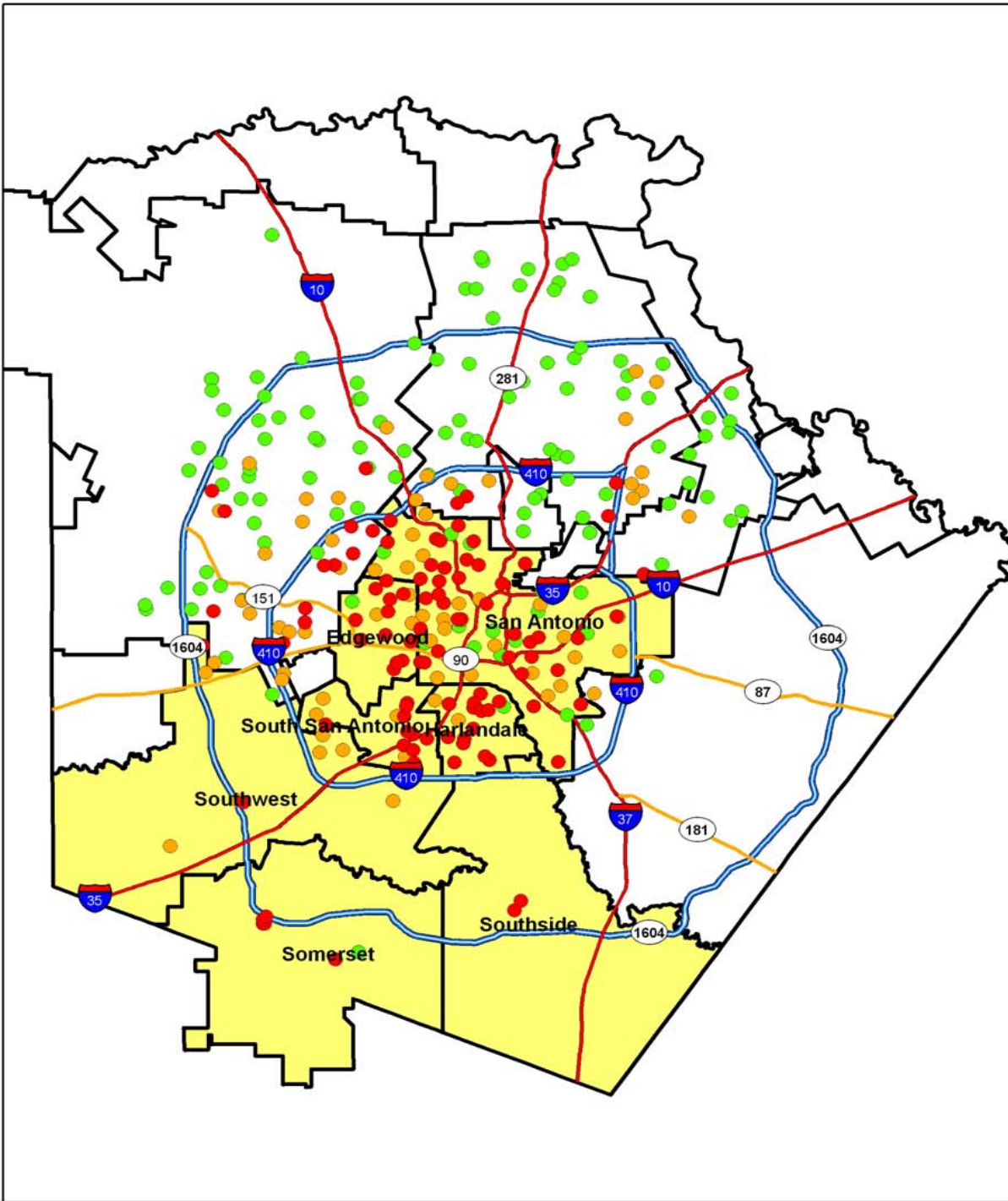
Source: Bexar County Juvenile Probation

Distribution of Physician Offices



Source: Bexar County
Medical Society

Prevalence of Obesity and Overweight in Bexar County Children by Campus and School District



% Unhealthy Weight by Campus

- under 29%
- 29% to 36%
- 37% to 67%

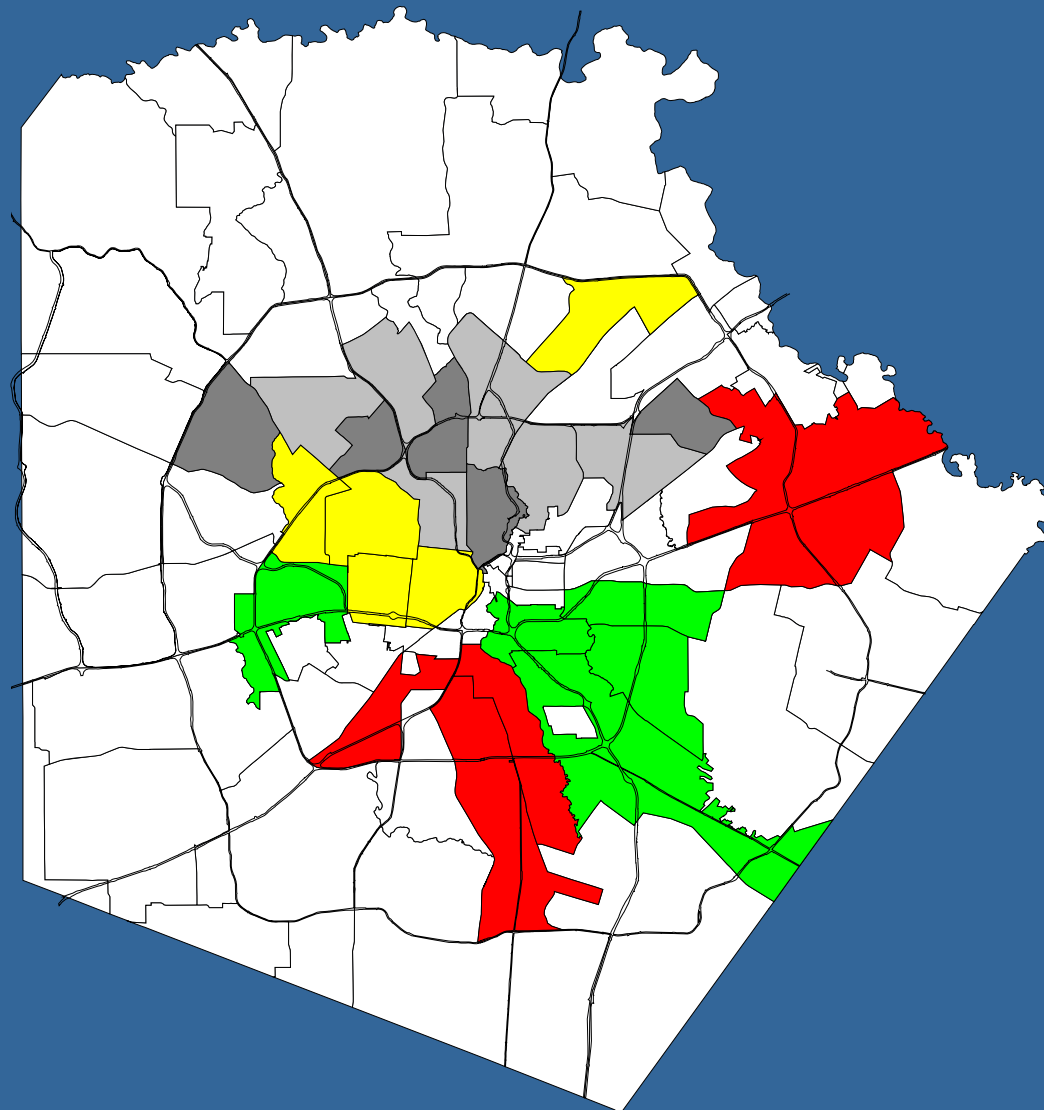
School Districts > 35% Unhealthy Weight

According to FITNESSGRAM a Healthy Weight equals BMIs ranging from 14.7-27.8 for boys and 16.2-27.3 for girls adjusted for age. FITNESSGRAM includes Grades 3-12 with approximately 175,000 Bexar County students tested. 70% of these students were considered Healthy Weight.

Source: 2009 FITNESS GRAM
Texas Education Agency



2006 Diabetes Mortality Rates



Age Adjusted Rates

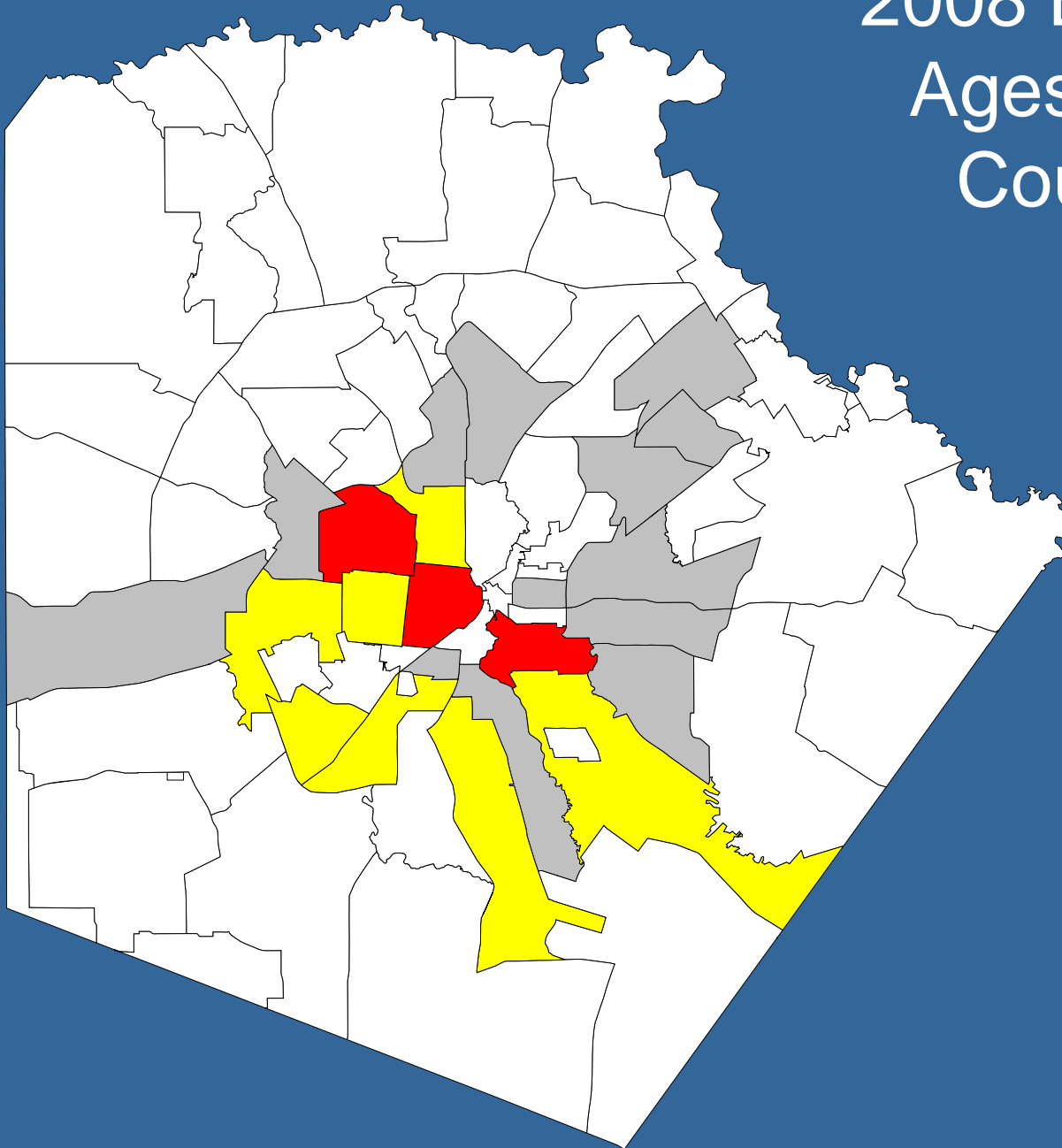
Red	209 to 251
Yellow	186 to 209
Green	144 to 186
Dark Gray	116 to 144
Light Gray	77 to 116

- Deaths in which **Diabetes listed as primary or contributing cause of death**
- Age Adjusted Death Rate calculations use 2000 standard
- Zip codes with fewer than 20 deaths did not have rates calculated

Source: TX DSHS Death Certificates

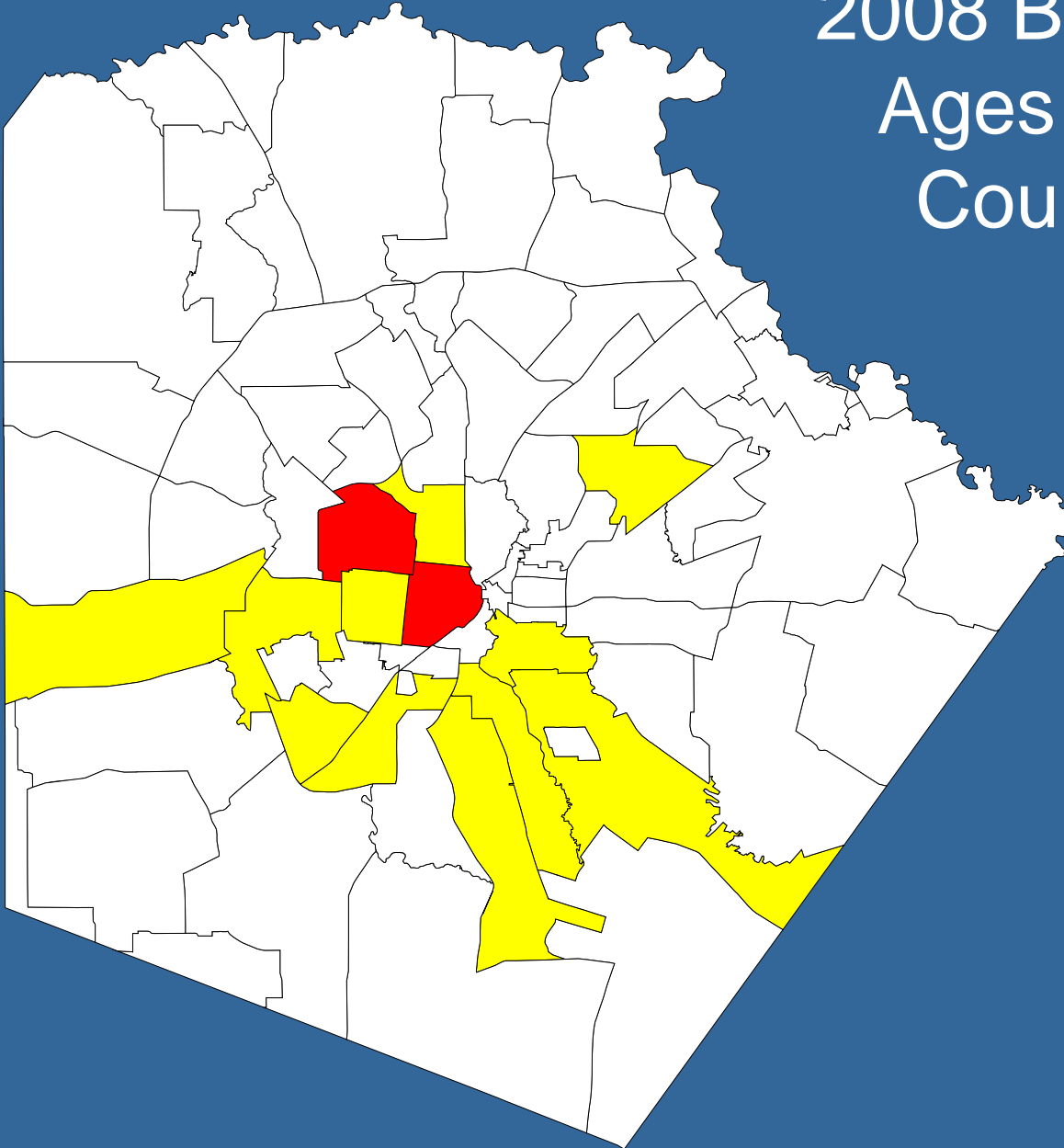
2008 Births to Mothers Ages < 18 by Bexar County Zip Code

Number of births



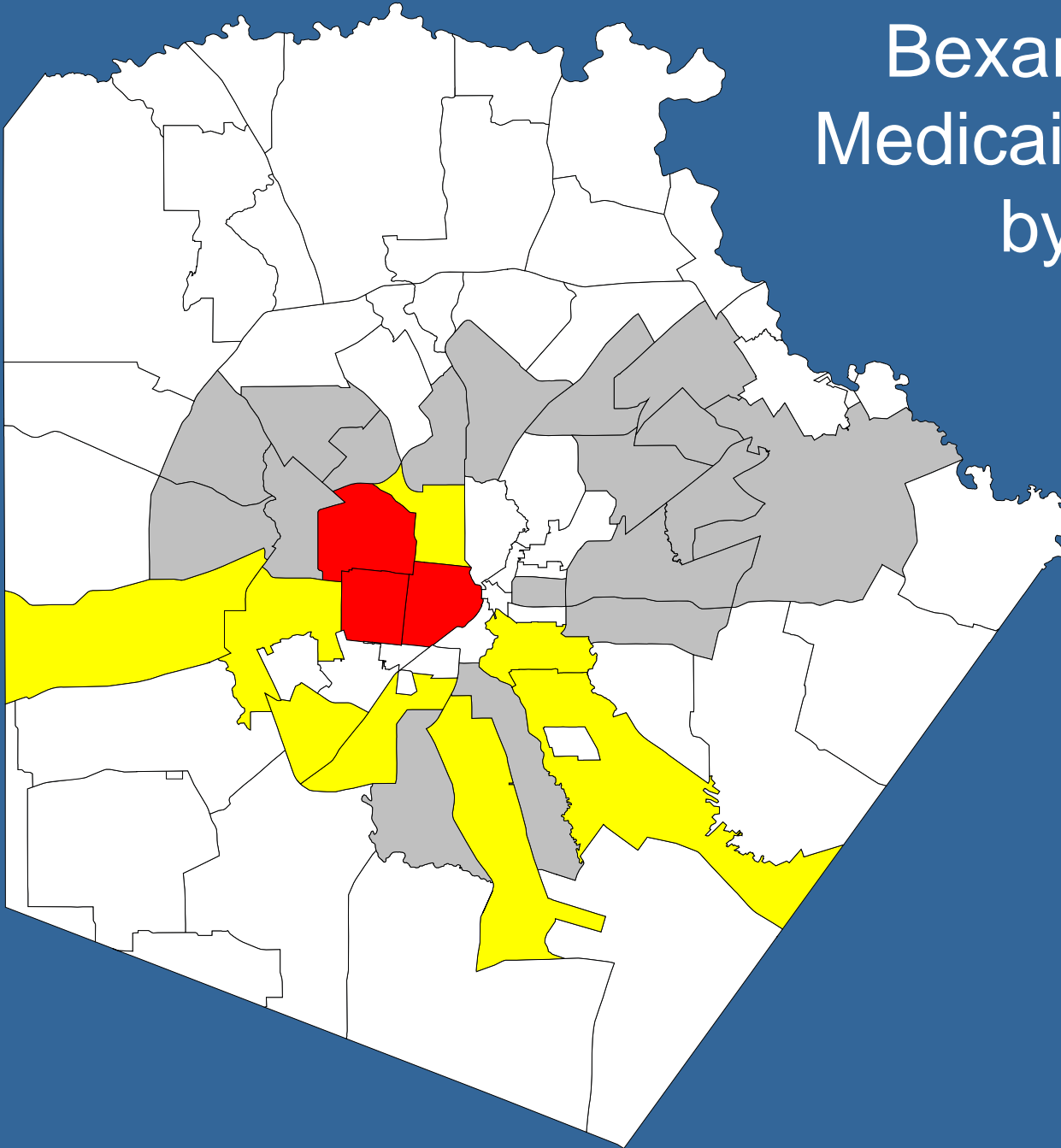
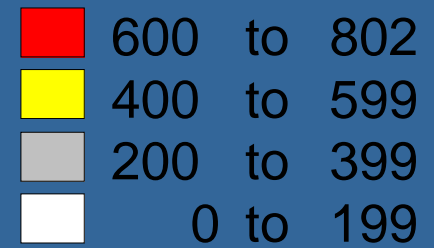
2008 Births to Mothers Ages <20 by Bexar County Zip Code

Number of births

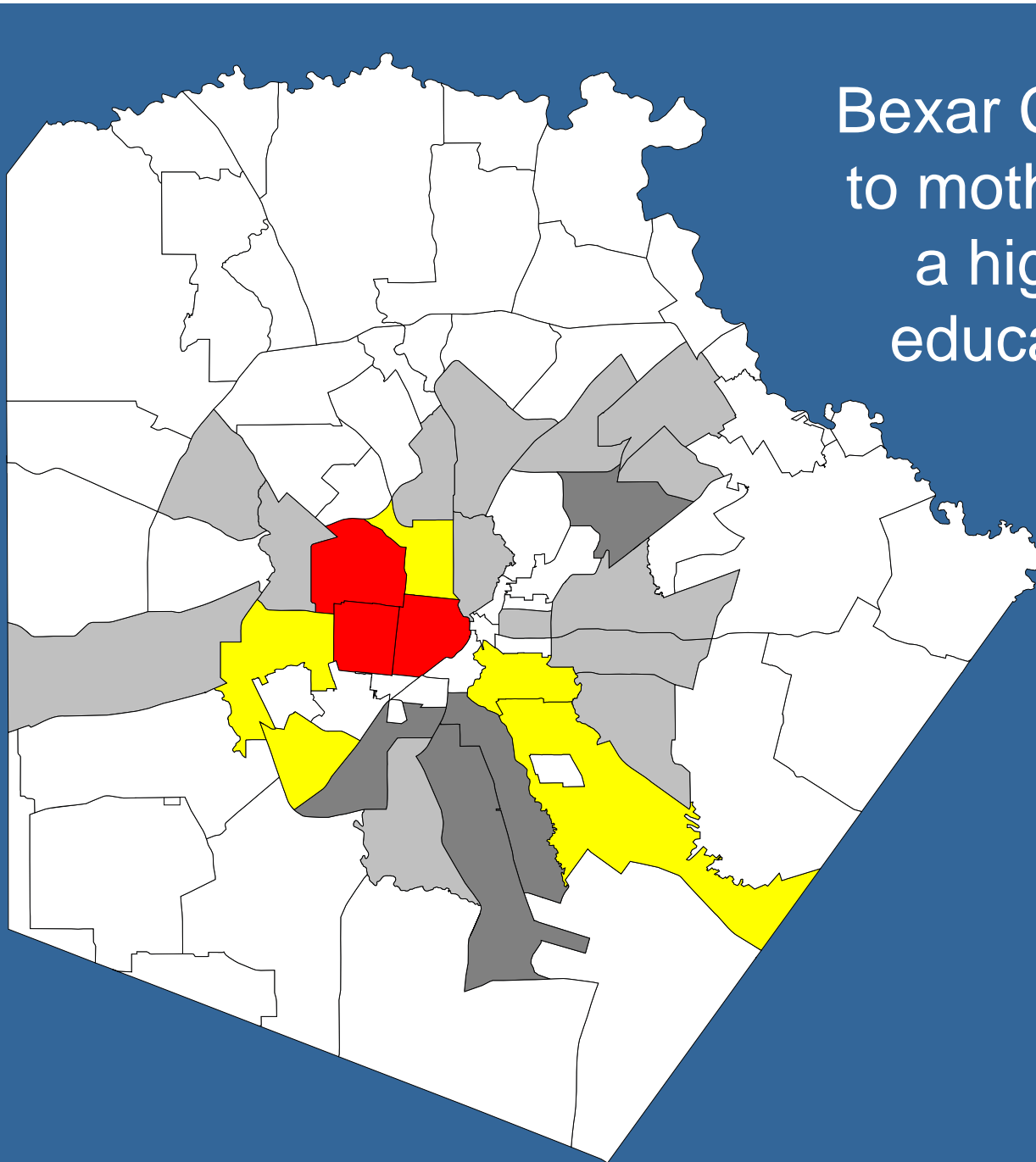


Bexar County 2008 Medicaid Funded Births by Zip Code






Number of births



Bexar County 2008 Births to mothers with less than a high school / GED education by zip code

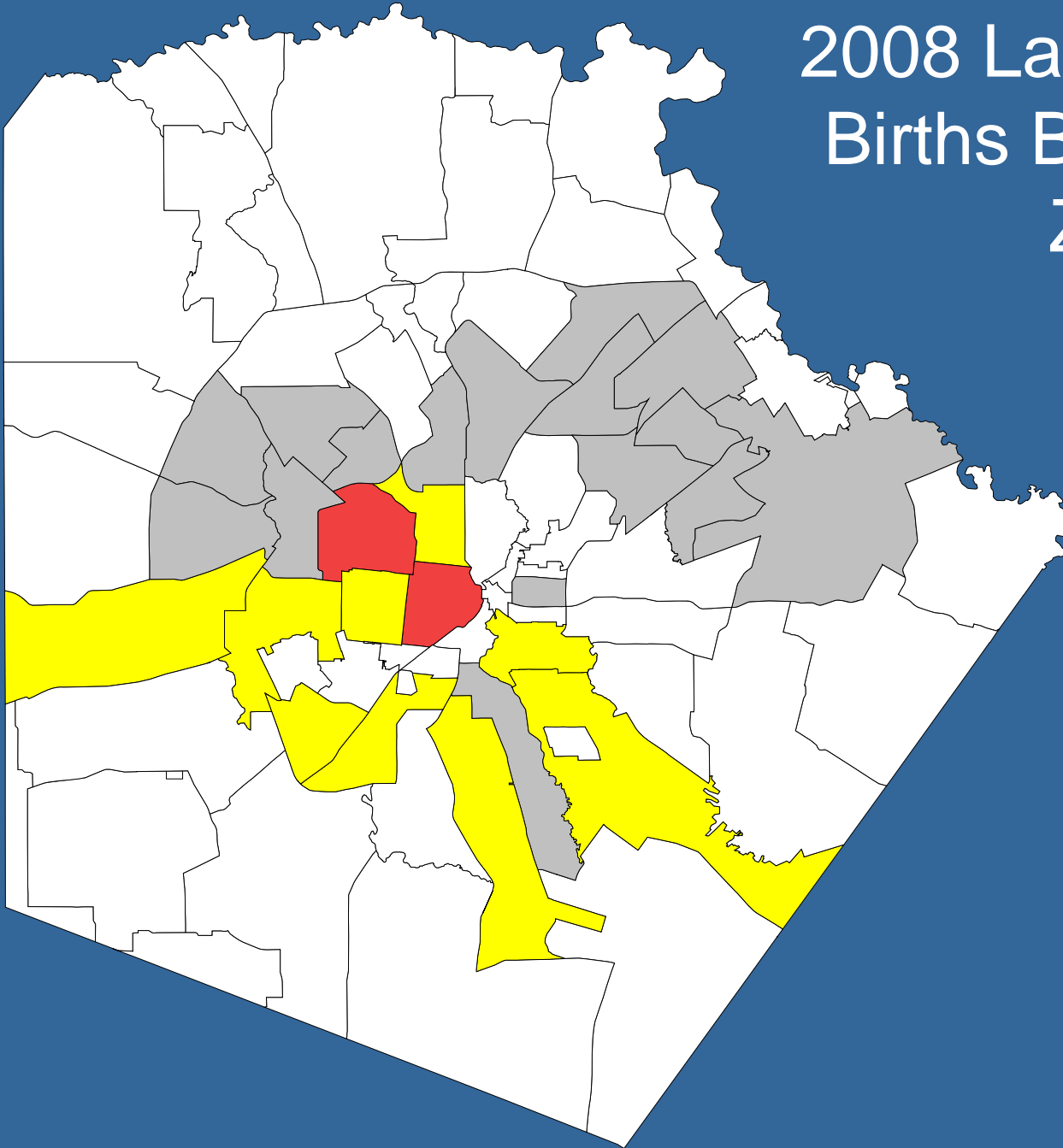


of Births

	400 to 642
	300 to 399
	200 to 299
	100 to 199
	0 to 99

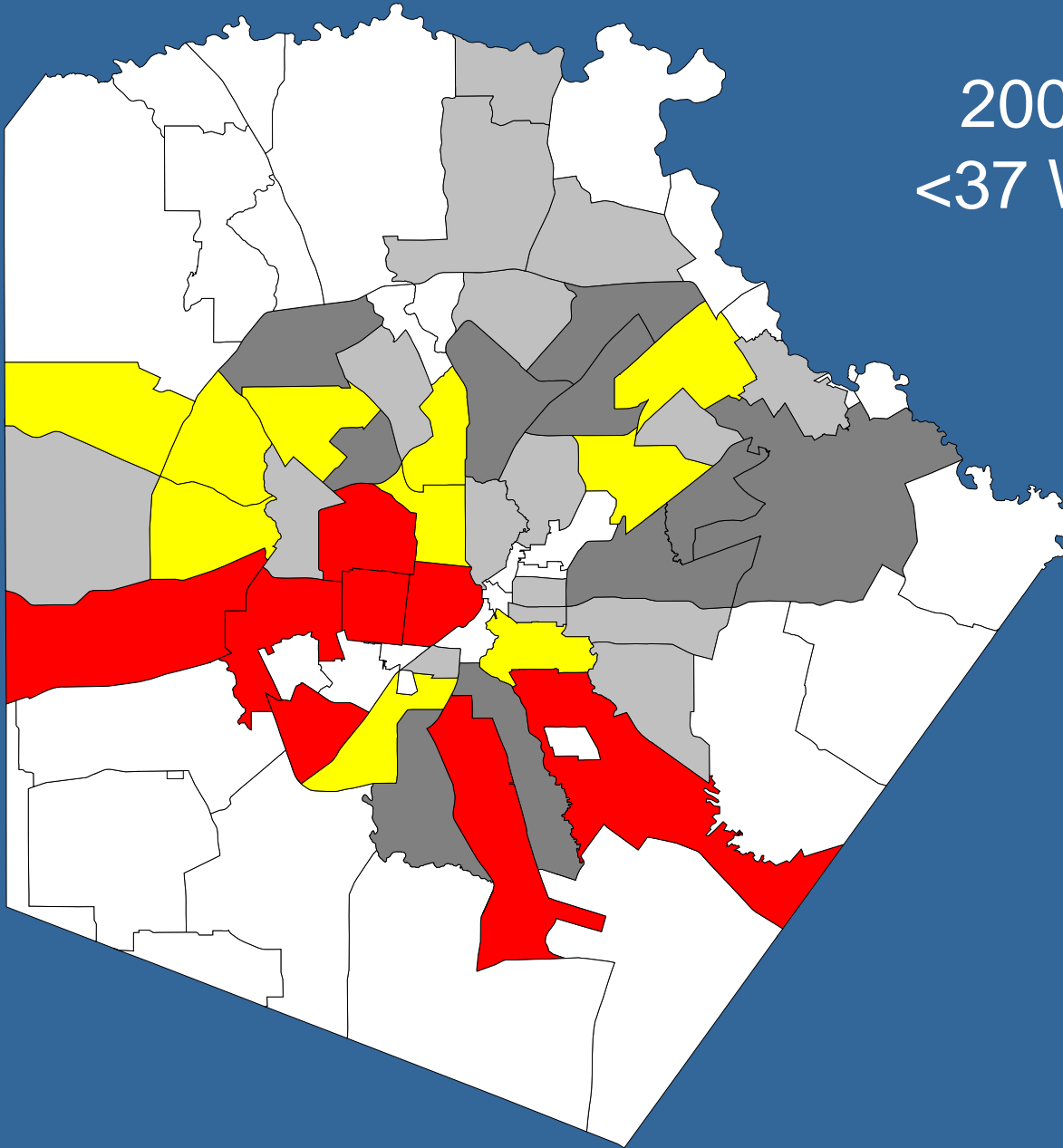
2008 Late Prenatal Care Births Bexar County by Zip Code

Number of births

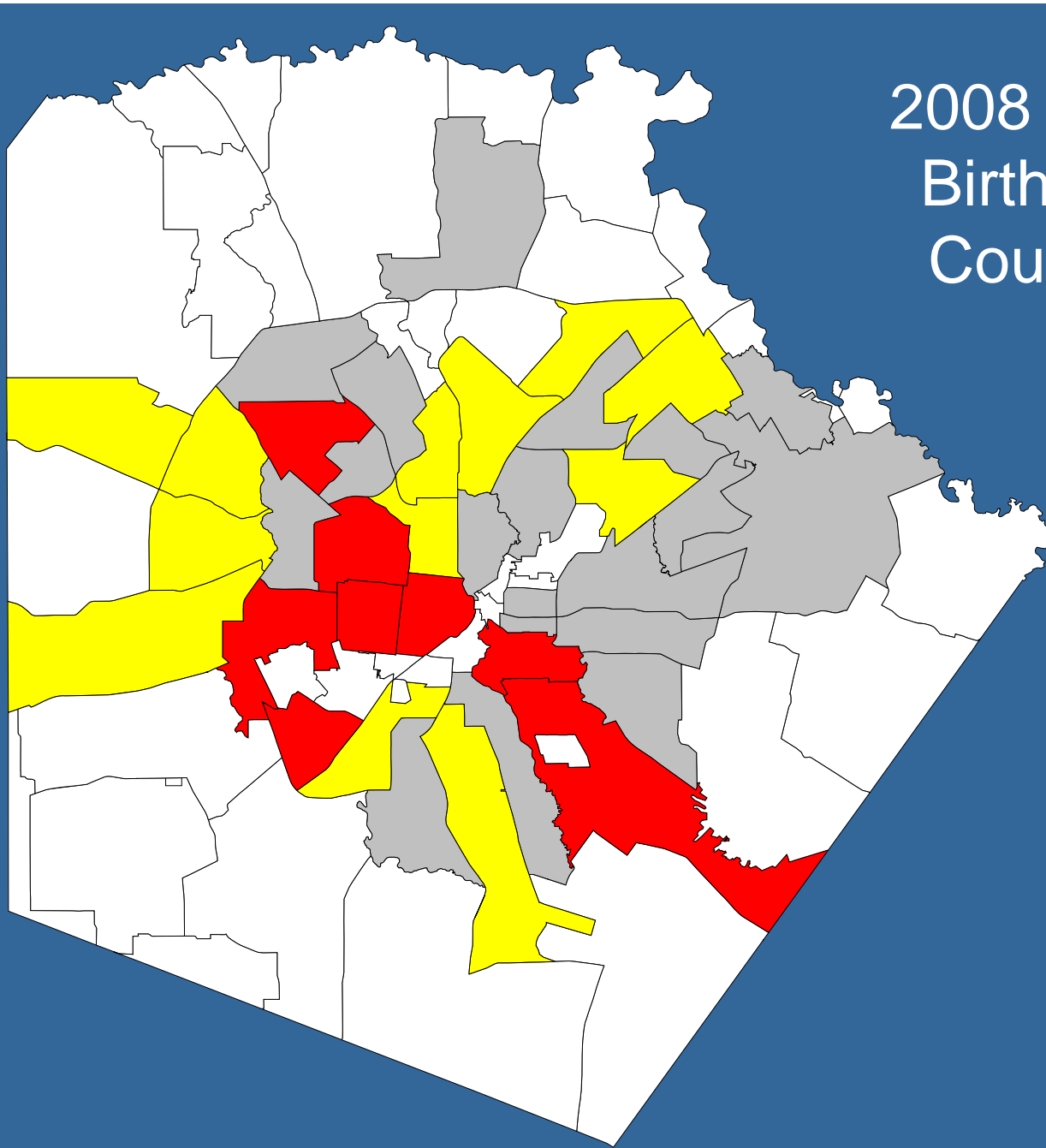


2008 Premature Births <37 Weeks Bexar County by zip code

Number of Births



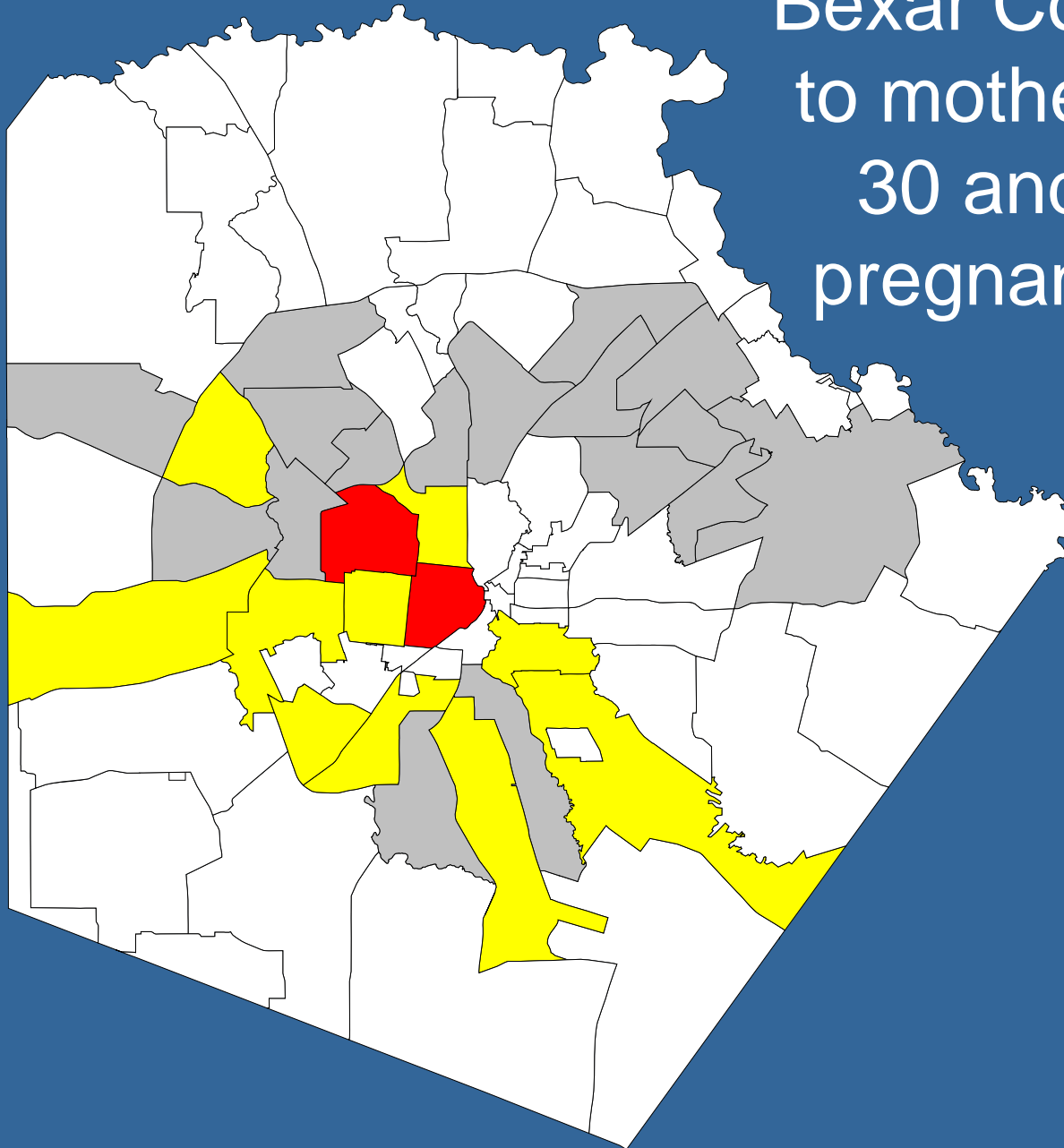
2008 Low Birth Weight Births <2500g Bexar County by Zip Code



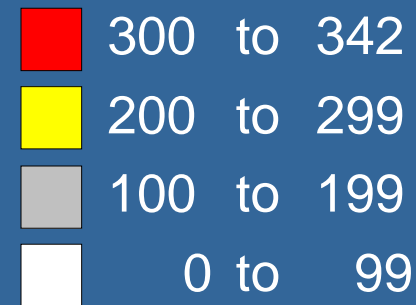
Number of Births



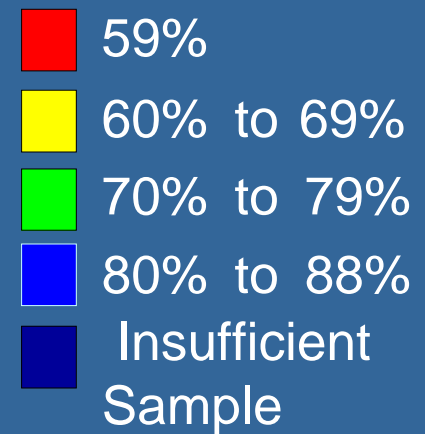
Bexar County 2008 Births to mothers with a BMI of 30 and above before pregnancy by Zip Code



of mothers per zip code



Sample of 2008 Immunization Rates within Bexar County zip codes for children age 19 - 35 months

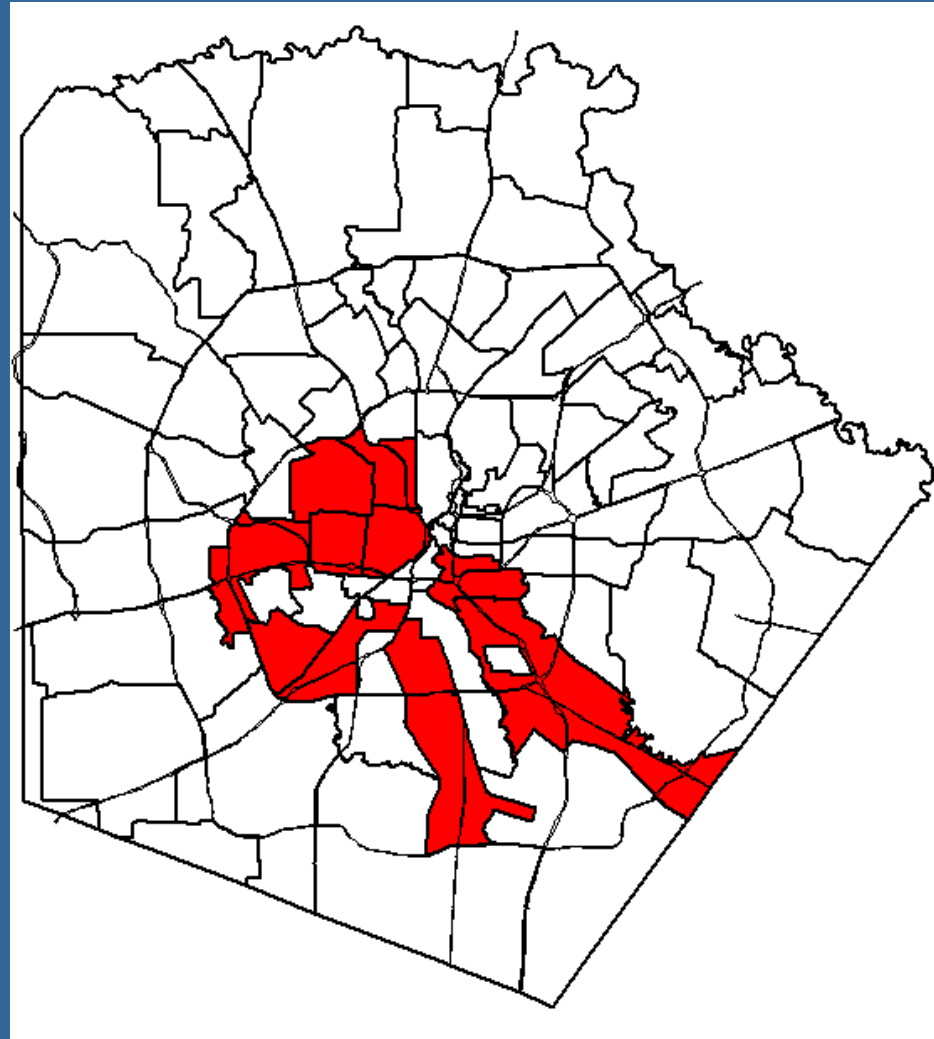


4:3:1:3:3:1 4 doses diphtheria and tetanus toxoids and pertussis, 3 doses of poliovirus, 1 dose of measles-mumps-rubella, 3 or more doses of Haemophilus influenzae type b (Hib) vaccine, 3 or more doses of hepatitis B vaccine, 1 or more doses of varicella vaccine received at or after age 12 months

Emergence of the “Ten Zip Codes”

- Summarize selected indicators to call attention to those neighborhoods across indicators that have a high concentration of health challenges
- Clearly display segments of the community that have a need for targeted resources to address disparities
- Communicate health disparities to community leaders and policymakers

The “Ten Zip Codes”



“Ten Zip Code” Demographics

	Ten Zip Codes	Bexar County (72 zip codes)
Population	421,561 (30%)	1,386,179 (100%)
Median Income	\$27,075	\$44,219
Below Federal Poverty Level	104,458 (25%)	215,680 (16%)
Hispanic	347,102 (82%)	752,532 (54%)
Non-Hispanic White	55,474 (13%)	493,090 (36%)
African American	13,317 (3%)	94,131 (7%)
High School Graduates or Higher Education ¹	240,290 (57%)	1,067,358 (77%)
Female Headed Households	88,528 (21%)	207,929 (15%)

1) Among adults aged 25 and older. All data from 2000 U.S. Census and American Community Survey.

Ten Zip Codes - 2008

	Ten Zip Codes	% of Bexar County
Population	421,561	30%
Total Births	8,265	30.7%
Late Prenatal Care Births	2,627	36.6%
Birth within 24 Months of Previous	1,694	38.0%
Births To Mothers BMI >30	2,700	38.3%
Juvenile Probation	4,038	39.2%
Family Violence Reports	4,322	41.0%
Single Mother Births	5,154	41.2%
Medicaid Births	5,684	41.7%
Confirmed Child Abuse/Neglect Cases	2,460	43.8%
Births To Mothers Age <18	683	47.0%
Births to mothers < HS / GED	3,731	49.8%

Applications of the “Ten Zip Codes”

- Communicating health disparities
- Targeting programs, resources and policies on communities with higher demand for services
- Engaging partners including those outside of the public health community to address social and environmental challenges in targeted communities

Application: Communications

- Use of GIS mapping and data on key indicators in combination is powerful
- Elected officials and policy makers respond to targeted information about their constituents
- Community members seek out and respond to information about their neighborhood
- Use of single “Ten Zip Codes” image conveys a compelling picture of health disparities that is relevant to the local community

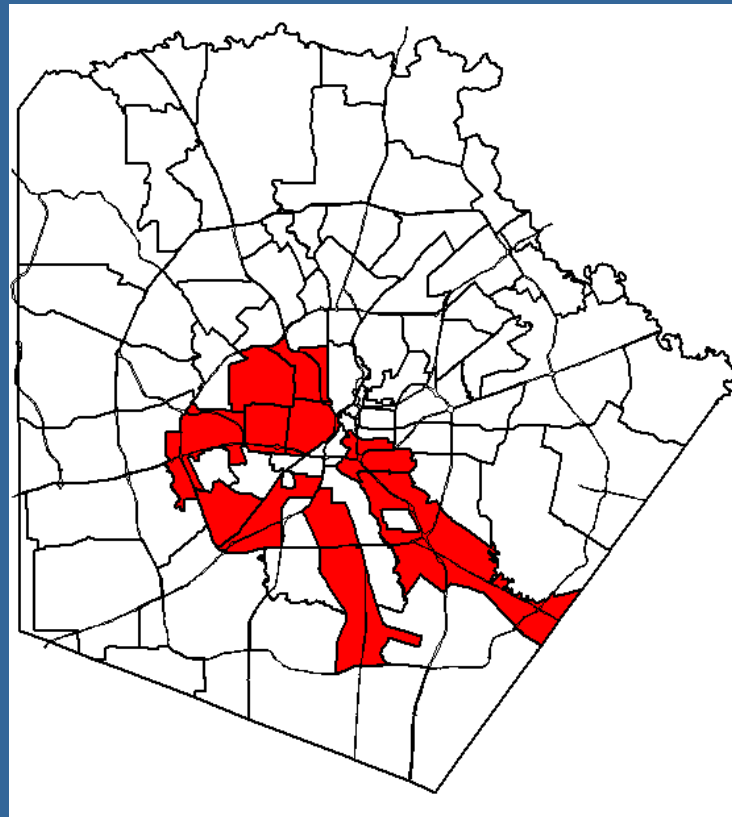
Application: Health Program & Policy Development

- Targeting of geographic areas for a broad range of health and social interventions can produce a synergistic effect to counteract the cumulative affect of multiple burdens facing these communities
- Introduction of new programs into communities with documented need
 - Healthy Kids, Healthy Communities grant
 - Immunization Programs
 - WIC services
 - Others...

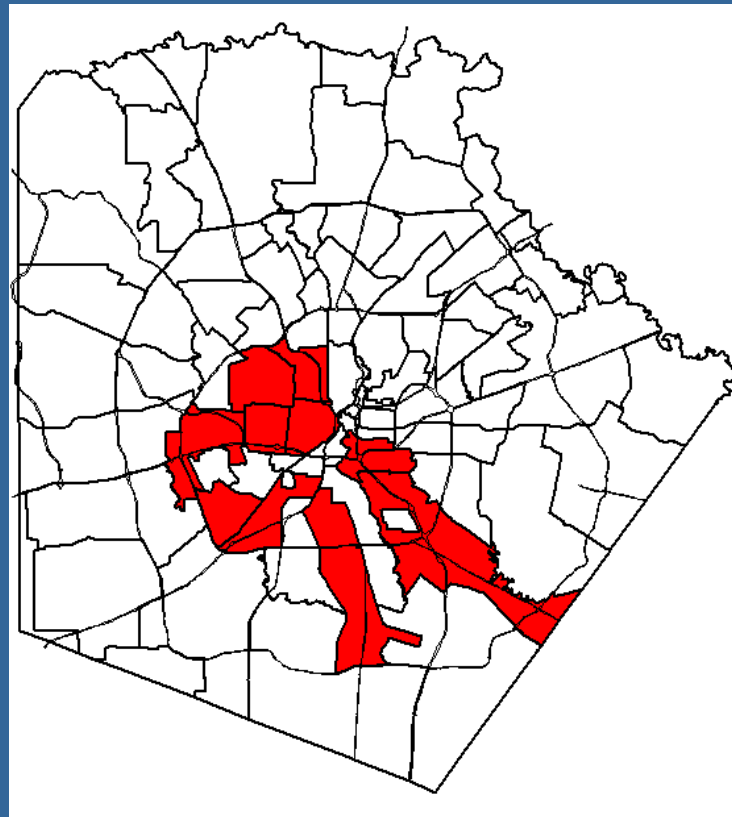
Application: Partner Engagement

- Use of the model has generated interest and commitment of local partners to get involved in addressing challenges
- Compelling to grassroots and non-traditional public health partners
- Has generated broad discussions about social determinants and community needs beyond individual health issues

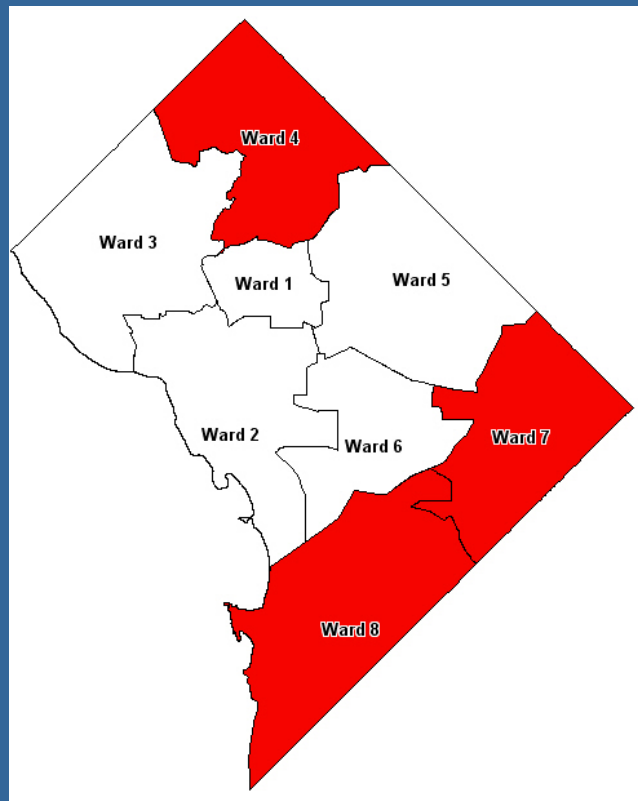
Case Study: Westside Development Corporation



Case Study: Eastern Triangle

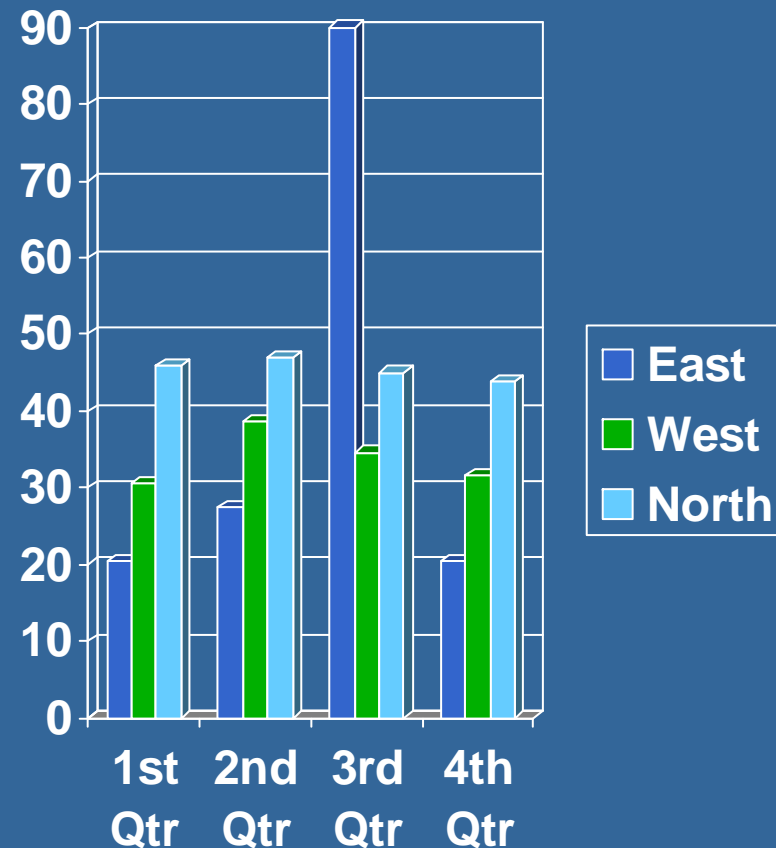


Case Study: D.C. Public Schools



Next Steps for “Ten Zip Codes”

- Expand use of GIS to layer additional data and provide more multi-faceted images to convey information
- Expand social and health data through partnerships
- Continue to monitor and refine the model



Limitations of the Model

- Creates a summary picture of the community but on each issue additional analysis and study is necessary to address specific needs
- Health behavior data (i.e. BRFSS) and other information could help link social and health outcome data but is not currently available by zip code
- Model does indicate those communities with a burden of multiple health issues but may de-emphasize the challenges facing other sectors of the community (i.e. suicide rate on Northside)

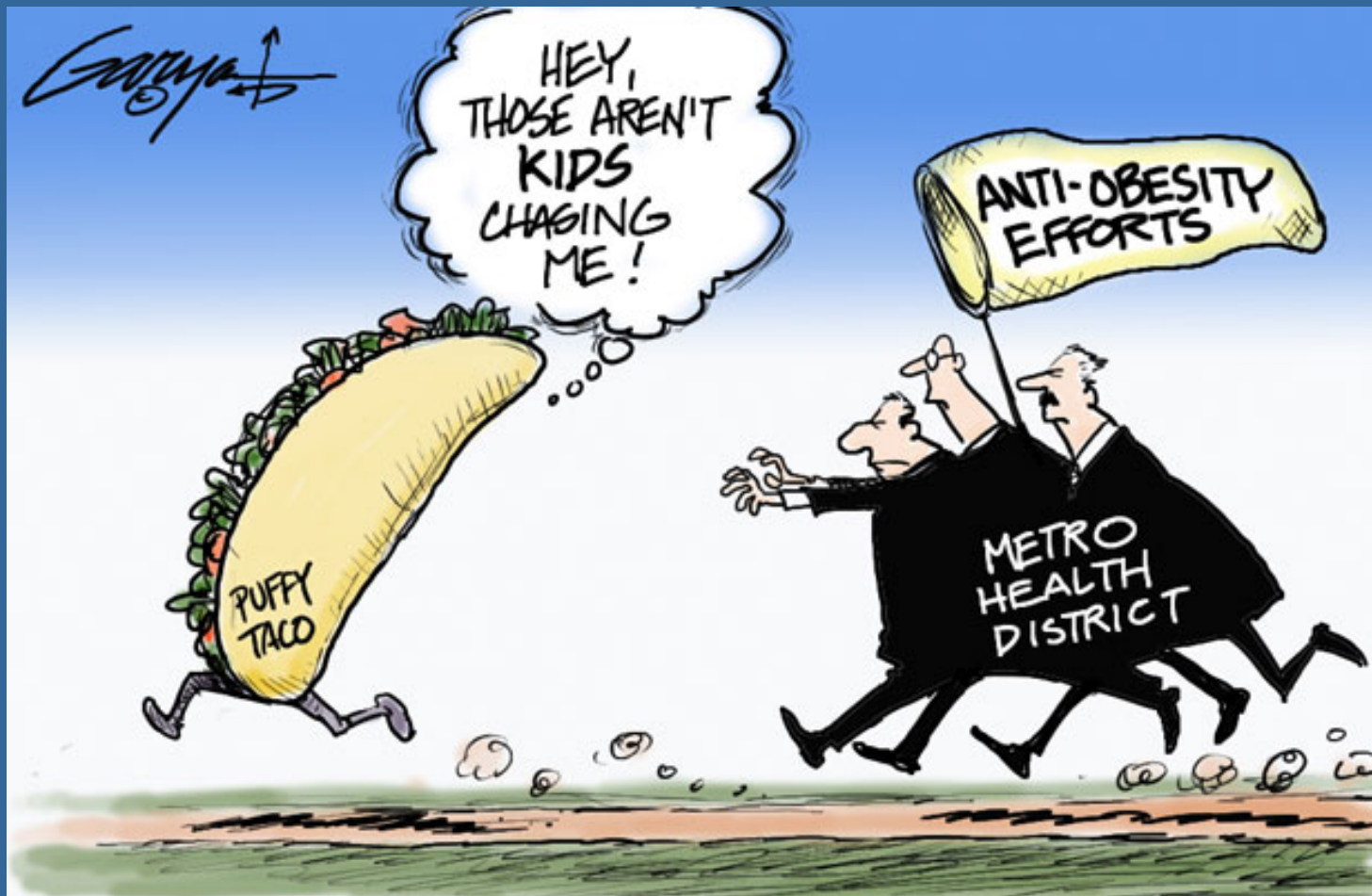
Recommendations for LHDs

- Assess community needs across multiple dimensions including social determinants, behaviors and health outcomes
- Utilize GIS mapping to show a broad picture of the community with specific details for neighborhood leaders and elected officials
- Engage broad partnerships to address spectrum of needs in targeted communities

Closing Thoughts

- Need to balance efforts to focus resources on communities of greatest need without stigmatizing
- Balance recognition of disparities in outcomes and/or resources with appreciation of the rich culture, tradition and community of neighborhoods
- Summarize and present data to show high level picture that can reach non-traditional partners effectively

Questions & Discussion



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