

UTHSCSA

National Public Health Week Lecture

Department of Family & Community Medicine 4/8/2011



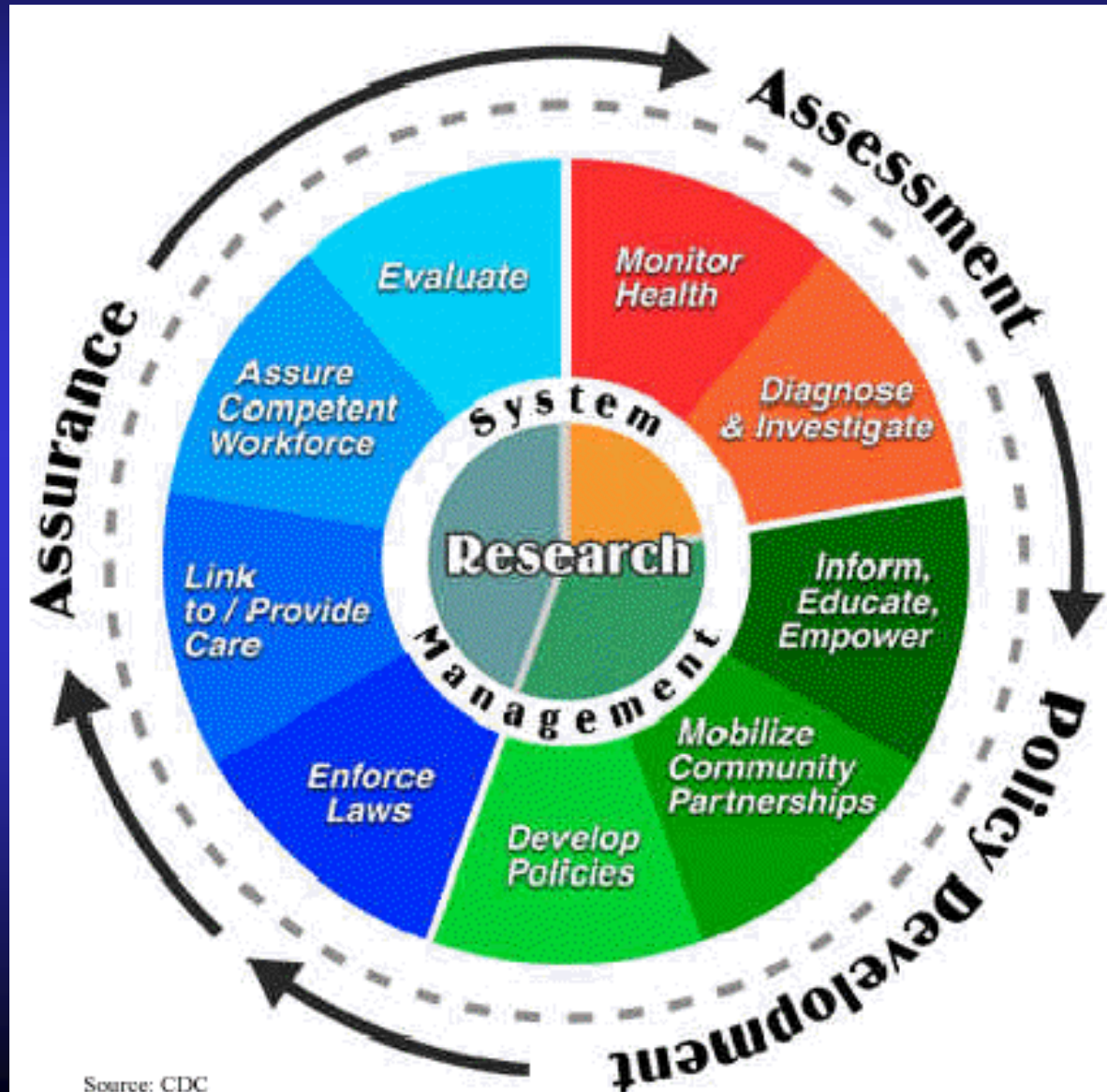
Fernando A. Guerra, M.D., M.P.H.
Public Health Consultant
San Antonio Metropolitan Health District



Objectives

- Introduction to Public Health, Careers and Opportunities
- Highlights and Accomplishments
- Community and Population-Based Data
- “Winnable Battles and Challenges”

The Ten Essential Services



Metro Health Staff -2010



Bridge Between Public Health & Community

- Main reason for past successes was due to integration and cooperation among the community and clinical disciplines, the public relied on public health to stop the spread of disease, improve sanitation and act as a safety net.
- The new challenge for Public Health is to apply surveillance and epidemiology methods to chronic disease, educational attainment, and social determinants which impact health.



Integrating Pediatrics and Public Health

- The demographics of children in the United States and the determinants of child health outcomes are evolving rapidly.
- This evolution will require those responsible for child/public health to acquire new knowledge and skills to ensure the relevance of the field of pediatrics and public health to the health of children for example National Children's Study.
- Advances in child/public health depends on integration between Metro Health, UHS, UTHSCSA, SPH faculty and staff, MD/MPH students and other community members

A Physician's Segue' into Public Health



- A battalion surgeon in Vietnam, also provided medical assistance to Vietnamese civilians
- Faculty of the UTHSC then-fledgling Pediatrics Department in the early 1970s and Robert B. Green Hospital
- In the early 1970's the Public Health system was fragmented and lacking in adequate community immunization levels resulting in diphtheria outbreak of 160 cases and six deaths.

Metro Health highlights “During My Watch”

- Papal Visit
- HIV/AIDS Epidemic
- Measles outbreak, immunization program registry, vaccine studies
- Fiesta Celebrations
- Alamodome saga
- Foodborne Illness outbreak during the Final Four
- Unrelenting Animal Care issues, including rabies
- TB in schools
- Hospital and community acquired Legionella
- Base closures and environmental impact
- Emergency Preparedness post 9/11
- Hurricane Katrina and other disaster responses
- Fluoridation of community water supply
- H1N1 pandemic
- Anti-smoking and tobacco ordinance
- Ongoing back-to-school immunization updates
- Integration of Public Health clinic services and staff with UHS
- Major efforts for community based programs for addressing obesity

“The Pope, Hot Pavement, and Public Health”



5/4/2011
Source: Diocese of Austin and its newspaper the Catholic Spirit.

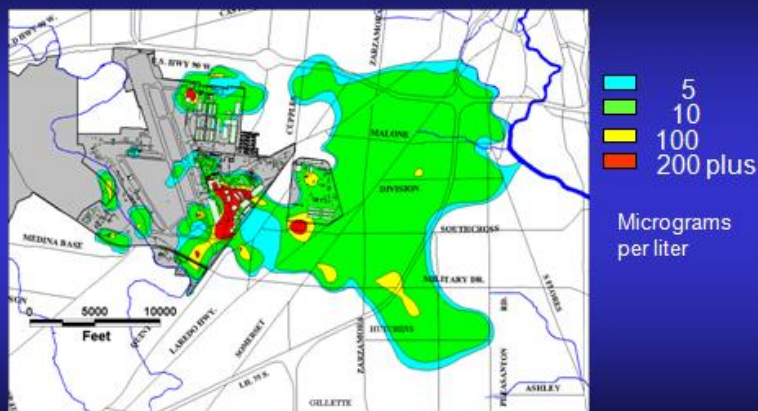
Kelly AFB Environmental Issues

- In November 1997, the public was notified that Kelly AFB had identified a plume of chemicals that originated from on-base activity, and had contaminated the shallow groundwater aquifer. The plume had moved beyond the base's fence line. There were four chemicals of concern found: Trichloroethylene, Perchloroethylene, Dichloroethylene, & Vinyl Chloride.

Metro Health's Role:

- Monitor Federal agencies in assessing the impact of Kelly operations on the community
- To facilitate communications between the community and the agencies involved
- To provide access to public health services and respond to community public health needs

PCE Max Expose levels Chemical Contamination Plume 2002



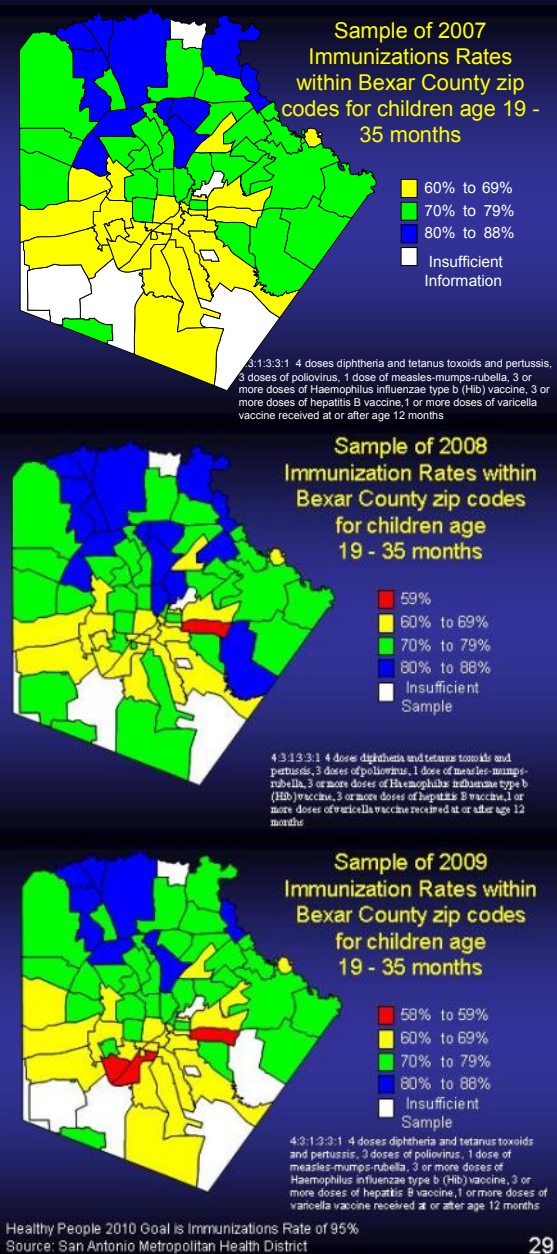
Hurricane Katrina Response

- Sept .1, 2005 (4 days) after the Hurricane hits New Orleans, San Antonio was notified >25,000 evacuees could be arriving
- Evacuees arrived day/night without warning, approximately 12,000-16,000
- Medical screening/ Medical care
 - Quick-look triage
 - Identify threats to people's well being
 - Individuals without medications for several days
 - Crowded group settings
- Enormous numbers of "Special Needs" individuals
- Issues: Food, sanitation, safety and child care, long lines, heat, psychological aspects, tracking and identification



San Antonio Immunization Registry System (SAIRS)

- Computerized immunization information system – 1980
- Immunization information – infants to adults
- 1.3 million client records from 400 area providers (private practices, hospitals, and schools)
- Benefits of SAIRS :
 - Easily identifies children who are not up-to-date
 - Provides information for mapping immunization rates
 - Consolidates vaccination records from multiple providers
 - Generates reminder/recall notices to parents about missing immunizations
- Enhanced Immunization Registry (eSAIRS)



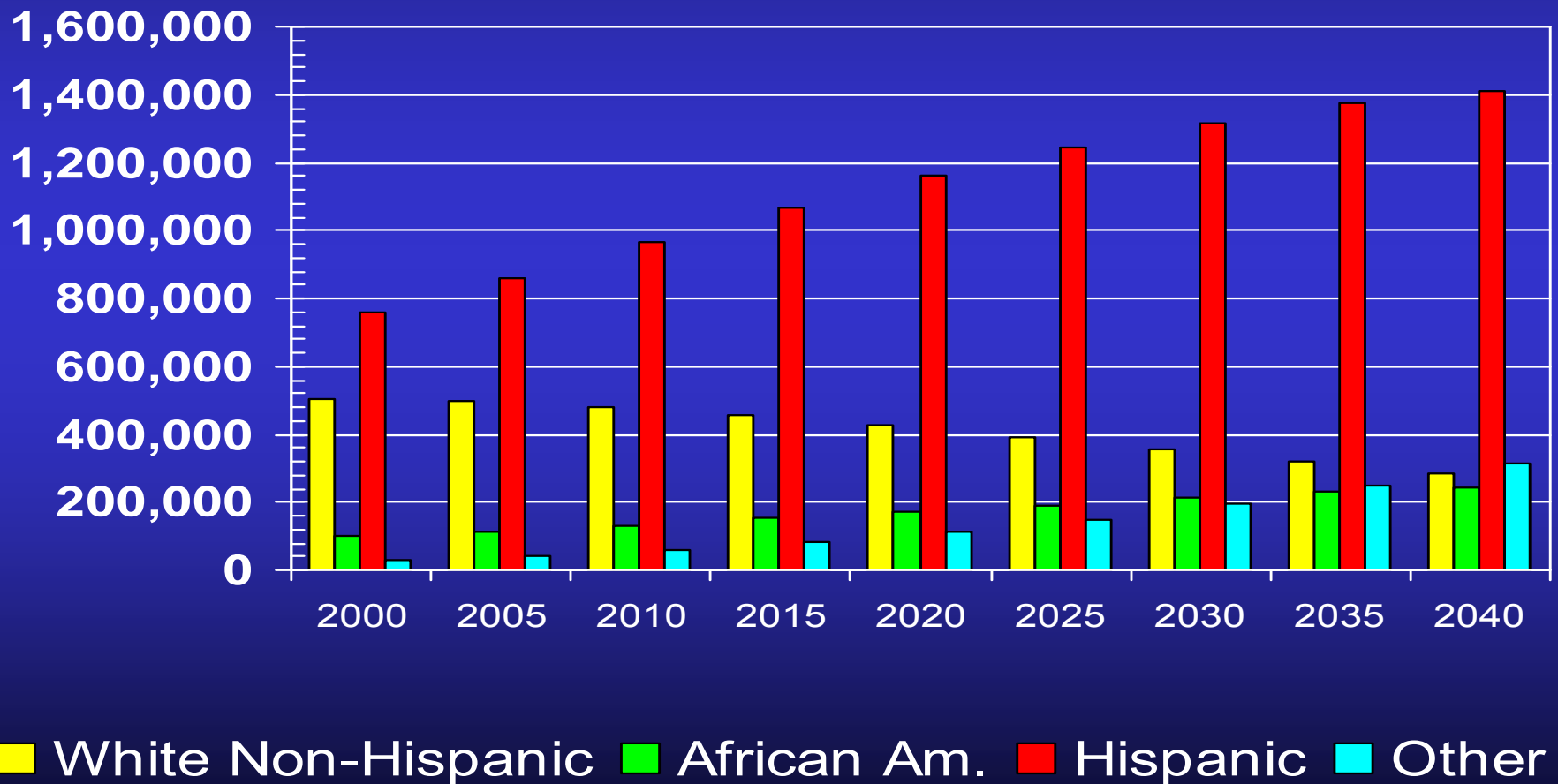
Healthy People 2010 Goal is Immunizations Rate of 95%
 Source: San Antonio Metropolitan Health District 29

Quick Overview of Current Health Status of Community



- Demographics
- Maternal indicators
- Communicable diseases
- Morbidity and Mortality

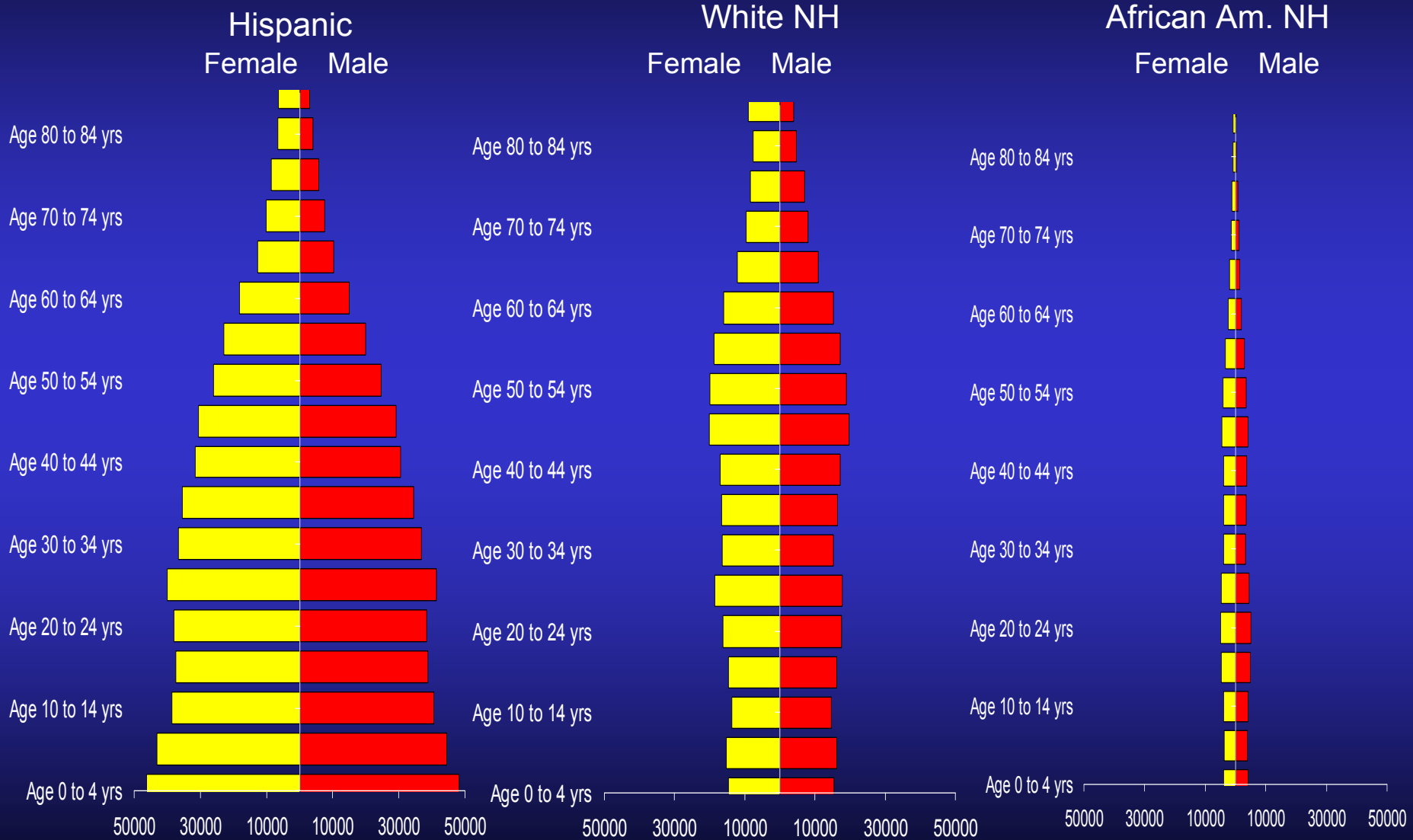
Projected Population of Bexar Co. by Race/Ethnicity & Migration



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14

Age Distribution Bexar County



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15

Scorecard – Maternal Health Bexar County

Maternal Indicators	YR 2009	HP2010
Total Births	26,687	100%
Mother's Age <18	1,351	5% Less than 5%
Low Birth Weight Infants <2500 grams	2,492	9% Less than 5%
Prenatal Care = 1st Trimester	22,007	82% 90%
Births to Single Mothers	12,346	46%
Estimated Premature <37 Weeks	3,076	12% Reduce to 7.6%
Private Insurance	9,065	34%
Medicaid Number*	13,524	51%
Birth Within 24 Months of Previous Birth	4,283	16% Reduce to 6%
BMI 30 & above before pregnancy	6,813	26% Reduce to 15%
Less than HS / GED Edu	6,994	26%
Method of Delivery CESAREAN	9,610	36%
Infant Mortality	149	5.58

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16

2009 Births as of 7/27/2010, *Does not include Emergency Medicaid

2009 Births to Mothers <22 Yrs. by Birth Order and Age, Bexar County

Age of Mother	Birth Order						Total
	1	2	3	4	5	6	
12	0						
13	8	1					9
14	51	1					52
15	148	10					158
16	370	45					415
17	612	95	10				717
18	731	219	40	6			996
19	907	359	89	11	2	1	1,369
20	765	427	131	42	2		1,367
21	686	467	196	66	13		1,428
Total	4,278	1,624	466	125	17	1	6,511

Source: San Antonio Metropolitan Health District

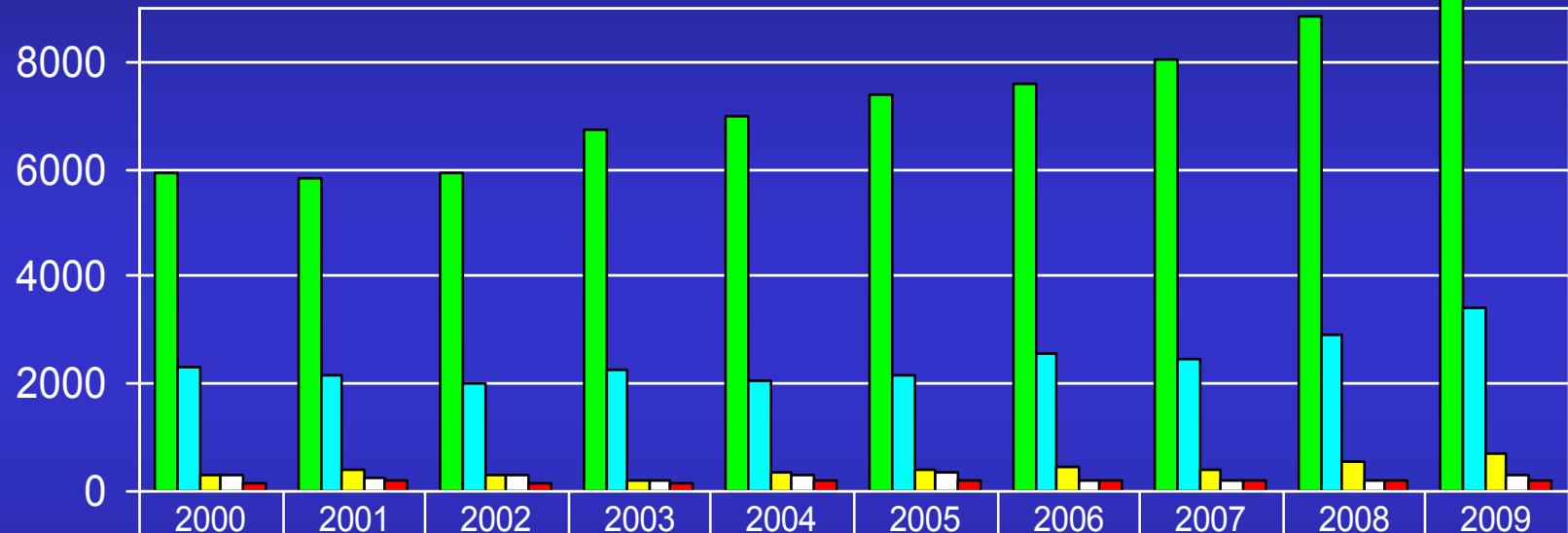
* 2009 Births as of 7/27/2010

Selected Reportable Communicable Diseases - Confirmed Cases

	Bexar Co. 2007		Bexar Co. 2008		Bexar Co. 2009	
	Cases	Rate	Cases	Rate	Cases	Rate
Shigellosis	65	4.1	314	19.3	240	14.5
Salmonellosis	174	10.9	267	16.5	204	12.4
Campylobacter	159	10.0	129	7.9	122	7.4
Tuberculosis	72	4.5	81	5.0	93	5.6
Hepatitis B	106	6.6	101	6.2	79	4.8
Meningitis (Viral)		0.0	65	4.0	26	1.6
Legionellosis	35	2.2	16	1.0	18	1.1
Strep (Grp A) Invasive	73	4.6	18	1.1	12	0.7
Hepatitis A	12	0.8	24	1.5	6	0.4
Meningitis (Bacterial)**	3	0.2	2	0.1	5	0.3
Invasive Meningococcal disease	4	0.3	10	0.6	5	0.3
Escherichia coli 0157:H7	3	0.2	9	0.6	4	0.2
Vibrio Infections	4	0.3	2	0.1	2	0.1
Malaria	6	0.4	2	0.1	1	0.1
Brucellosis	4	0.3	1	0.1		
West Nile Infections	16	1.0				
Listeriosis	2	0.1				
Lyme Disease	1	0.1				

Rate per 100,000 population

Sexually Transmitted Diseases (STDs) by Year of Report, Bexar County



■ Chlamydia	5910	5835	5912	6742	6971	7400	7594	8054	8849	10440
■ Gonorrhea	2314	2185	1992	2244	2054	2184	2562	2465	2898	3401
■ Syphilis	292	383	310	217	329	422	438	384	550	705
■ HIV	319	245	321	226	287	330	208	223	205	312
■ AIDS	167	200	175	164	207	205	207	226	198	200

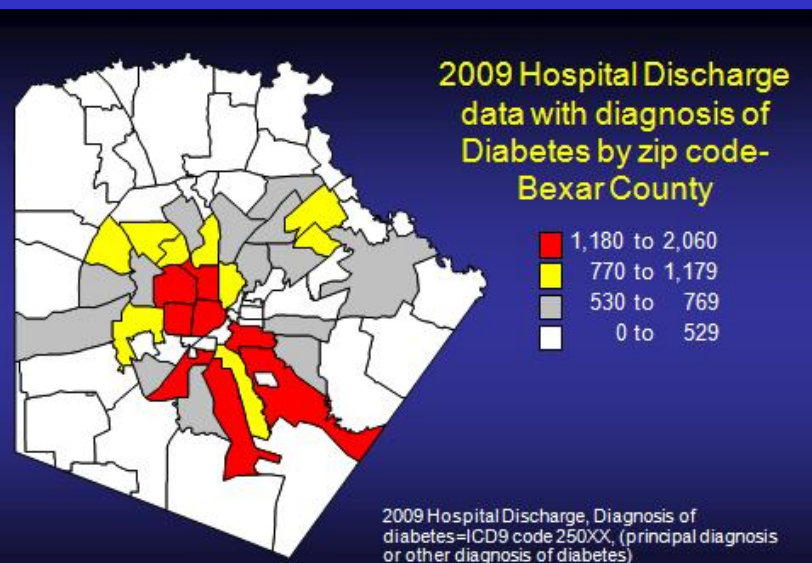
2009 San Antonio A1c Registry

Diabetes in San Antonio by Age Group

Age Groups	2009 Population	A1c Patients	% of Total Population	A1c 7 or more % Patients	A1c 9 or more % Patients
<20	511,228	8,639	2%	398 5%	224 3%
20 to 39	488,449	40,913	8%	8,480 21%	4,955 12%
40 to 59	409,212	100,591	25%	32,534 32%	15,139 15%
60 to 79	194,077	72,903	38%	22,310 31%	6,229 9%
80 plus	48,482	13,098	27%	2,932 22%	501 4%
Missing		126		31	9
Total	1,651,448	236,270	14%	66,685 28%	27,057 11%

2009 Hospital Discharge data with diagnosis of Diabetes and Diabetes with Amputations

	2009 Bexar Co. Population	Dx of Diabetics	Rate per 1000	Dx of Diabetics Amputations	Rate per 100k
Total	1,651,448	39,376	24	1,528	93
Hispanic	962,600	24,188	25	1,122	117
White non-Hisp	516,932	10,042	19	277	54
African Am.	111,859	3,204	29	83	74

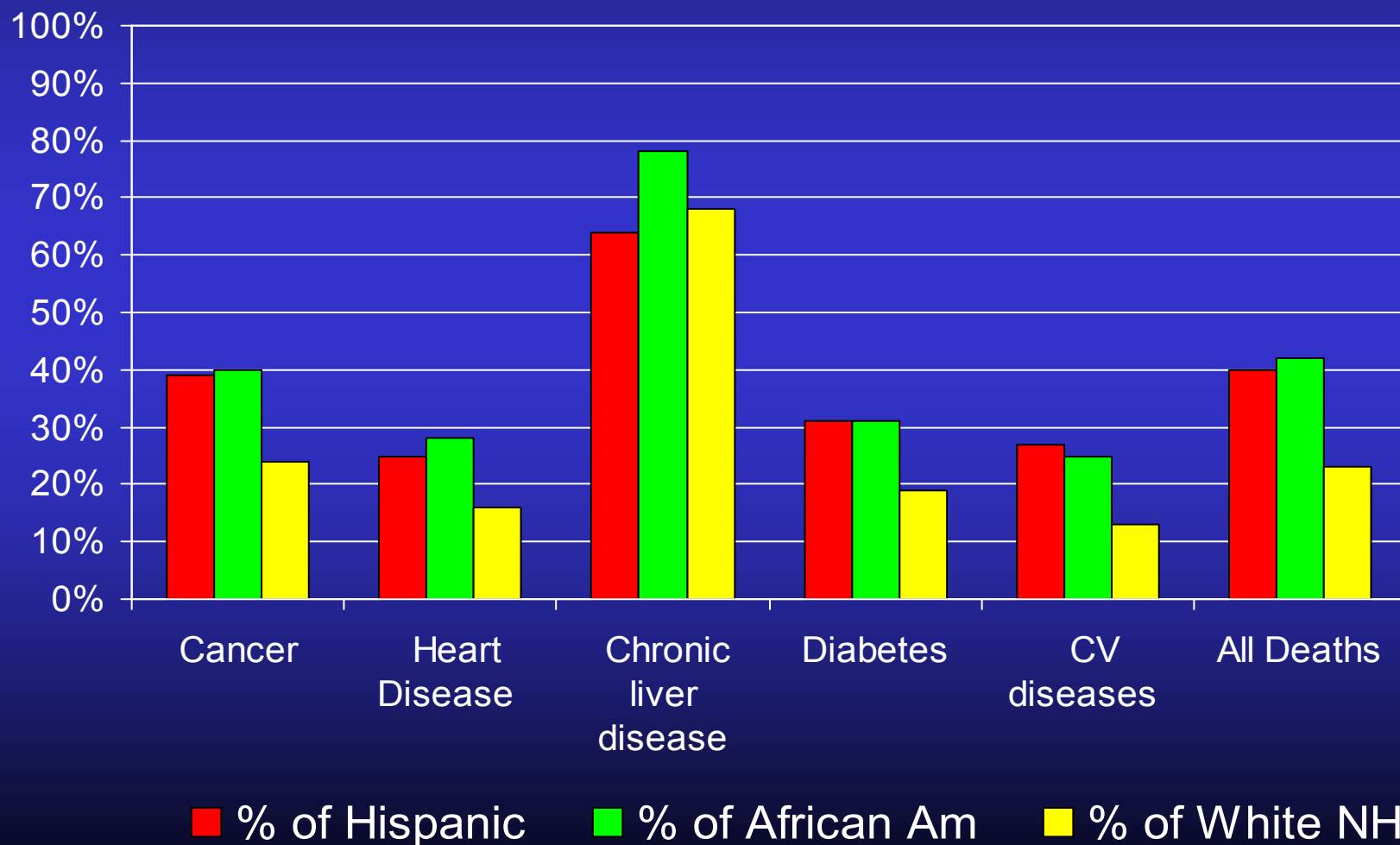


San Antonio Hispanics have twice the rate of Diabetic Amputations as White non Hispanics

2009 Hospital Discharge, Diagnosis of diabetes=ICD9 code 250XX, Non-traumatic Lower Extremity Amputations ICD9 code =84XX (principal diagnosis or other diagnosis of diabetes) (principal surgical or other procedure)

Bexar County 2009 Health Disparities

Premature Deaths (Ages <65 yrs)



“Winnable Battles”

Healthcare-
Associated
Infections



Nutrition,
Physical
Activity, Obesity
& Food Safety

HIV



Teen
Pregnancy

Motor
Vehicle
Injuries



Tobacco

What are Winnable Battles?

- Winnable Battles are public health priorities with large-scale impact on health and with known, effective strategies to address them.
- Winnable Battles have been chosen based on the magnitude of the health problems and our ability to make significant progress in improving outcomes.

CDC's "Winnable Battles"

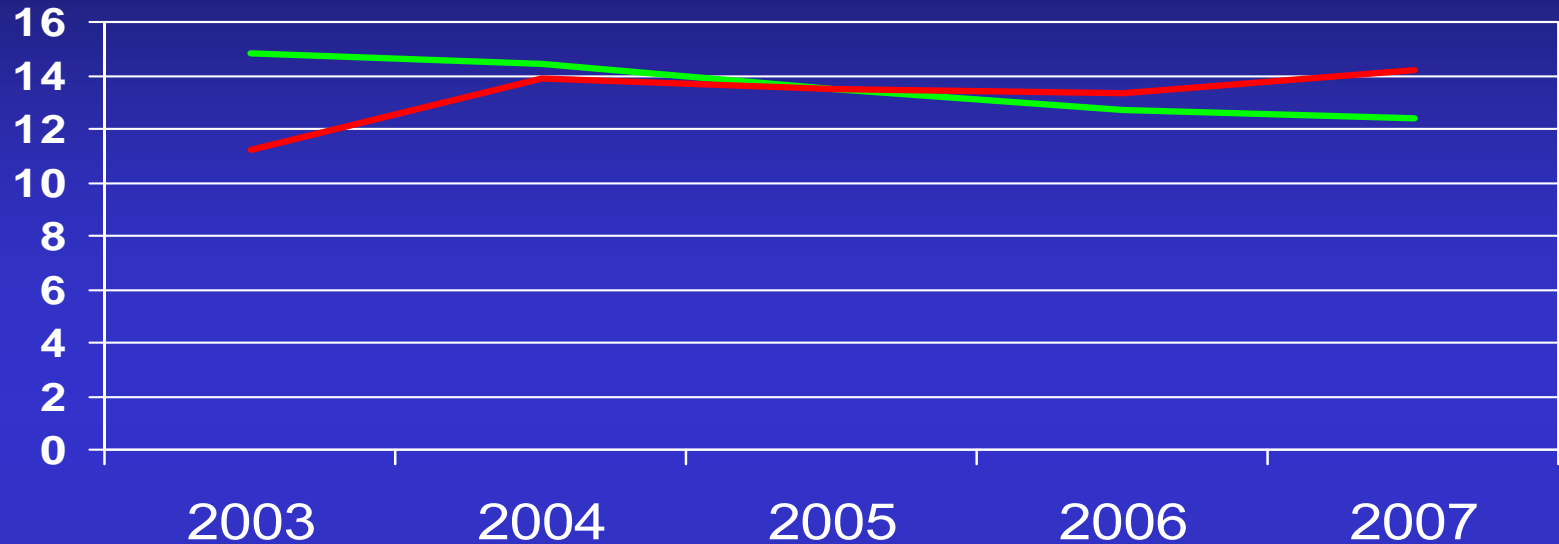
- Each area is a leading cause of illness, injury, disability or death and/or represents enormous societal costs
- Evidence-based, scalable interventions already exist and can be broadly implemented
- Our effort can make a difference, we can get results within 1 to 4 years

CDC Strategies to Address Public Health Priorities...

- Excellence in surveillance, epidemiology, and laboratory services
- Strengthen support for state, tribal, local, and territorial public health
- Increase global health impact
- Use scientific and program expertise to advance policy change that promotes health
- Better prevent illness, injury, disability, and death

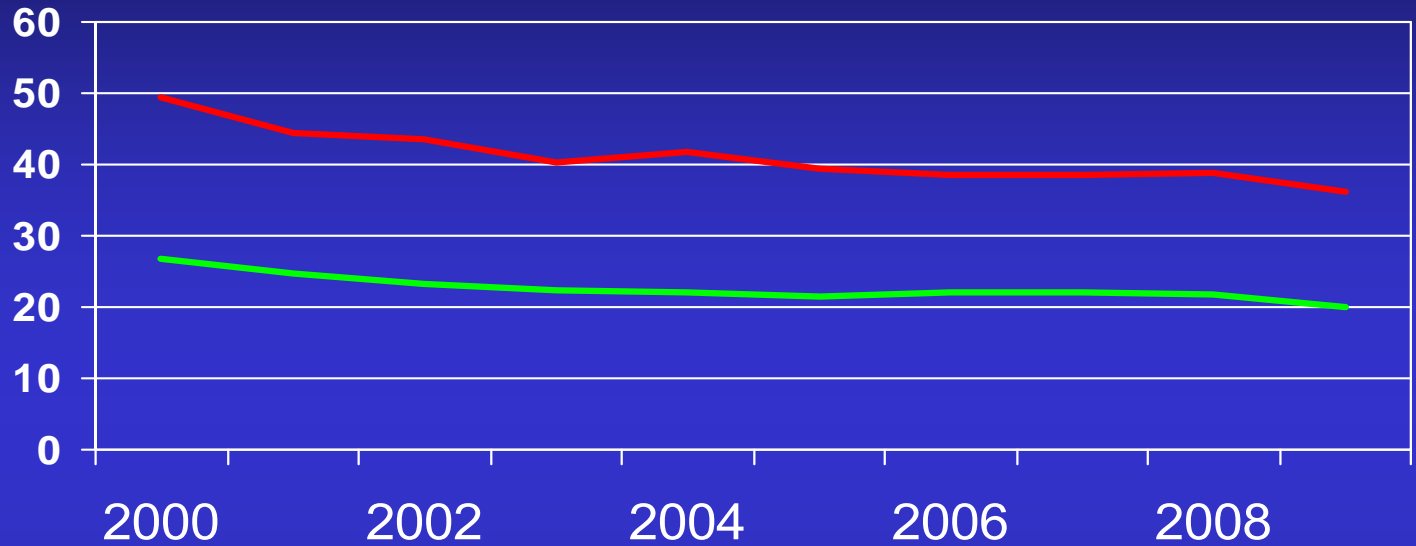
San Antonio/Bexar County's "Winnable Battles"???

Bexar County and U.S. AIDS Cases by Year

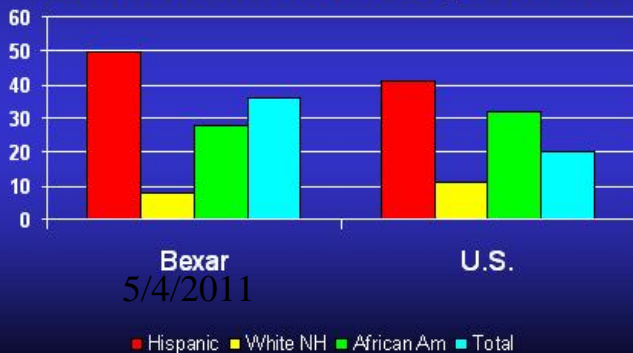


— Nationwide — Bexar **Nationally AIDS Rates are decreasing**

Bexar County and U.S. School-Age Birth Rates for females, ages 15 -17



2009 Bexar County and U.S. School-Age Birth Rates for females ages 15 -17

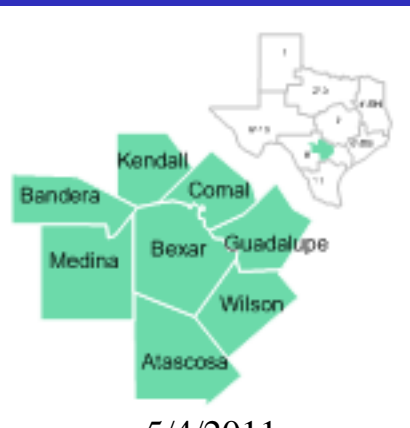
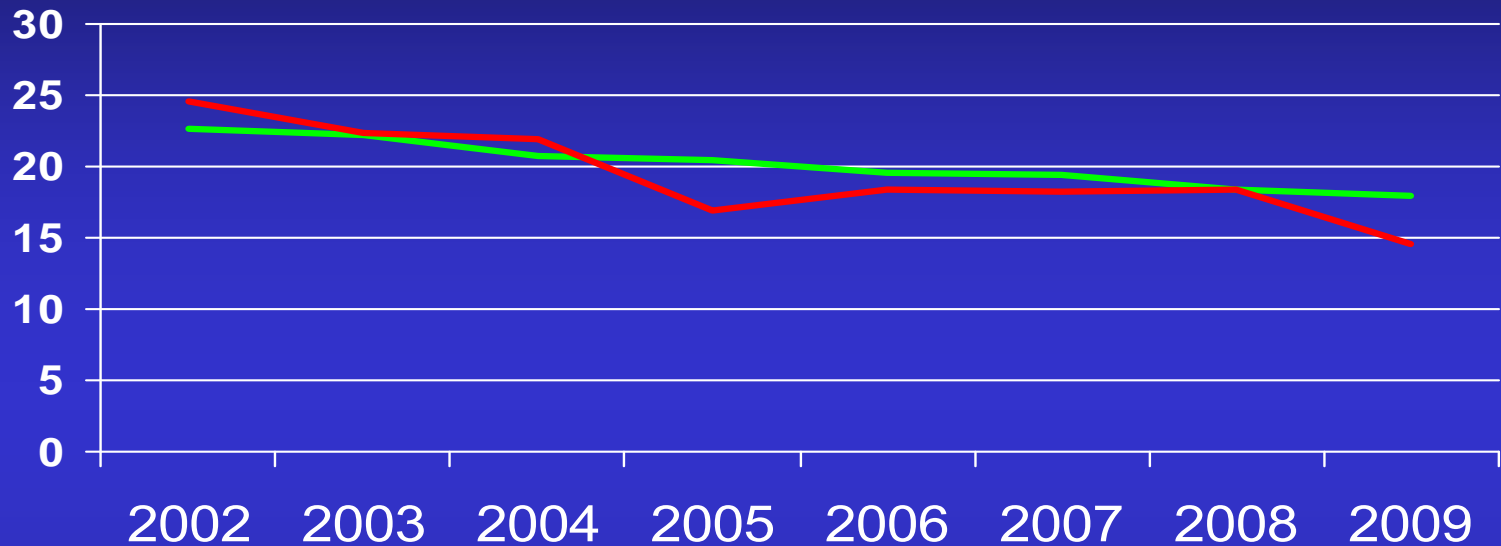


— Nationwide — Bexar

Nationally and locally Teen Births Rates are decreasing

Rates are per 1000 population

San Antonio MSA and U.S. Current Smoker Age 18 and Older by Year



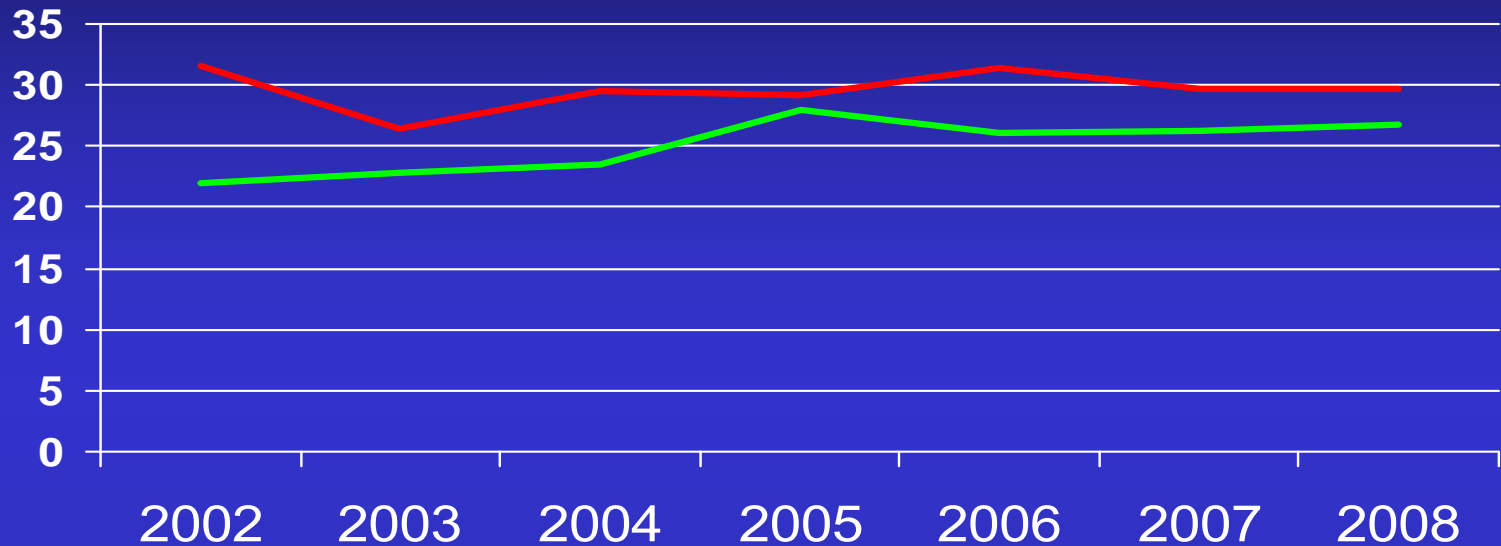
— Nationwide — SA MSA

Nationally and locally rates are decreasing

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30

San Antonio MSA and U.S. Obesity (BMI 30 or greater) age 18 and older by Year



— Nationwide — SA MSA

Nationally rates are increasing

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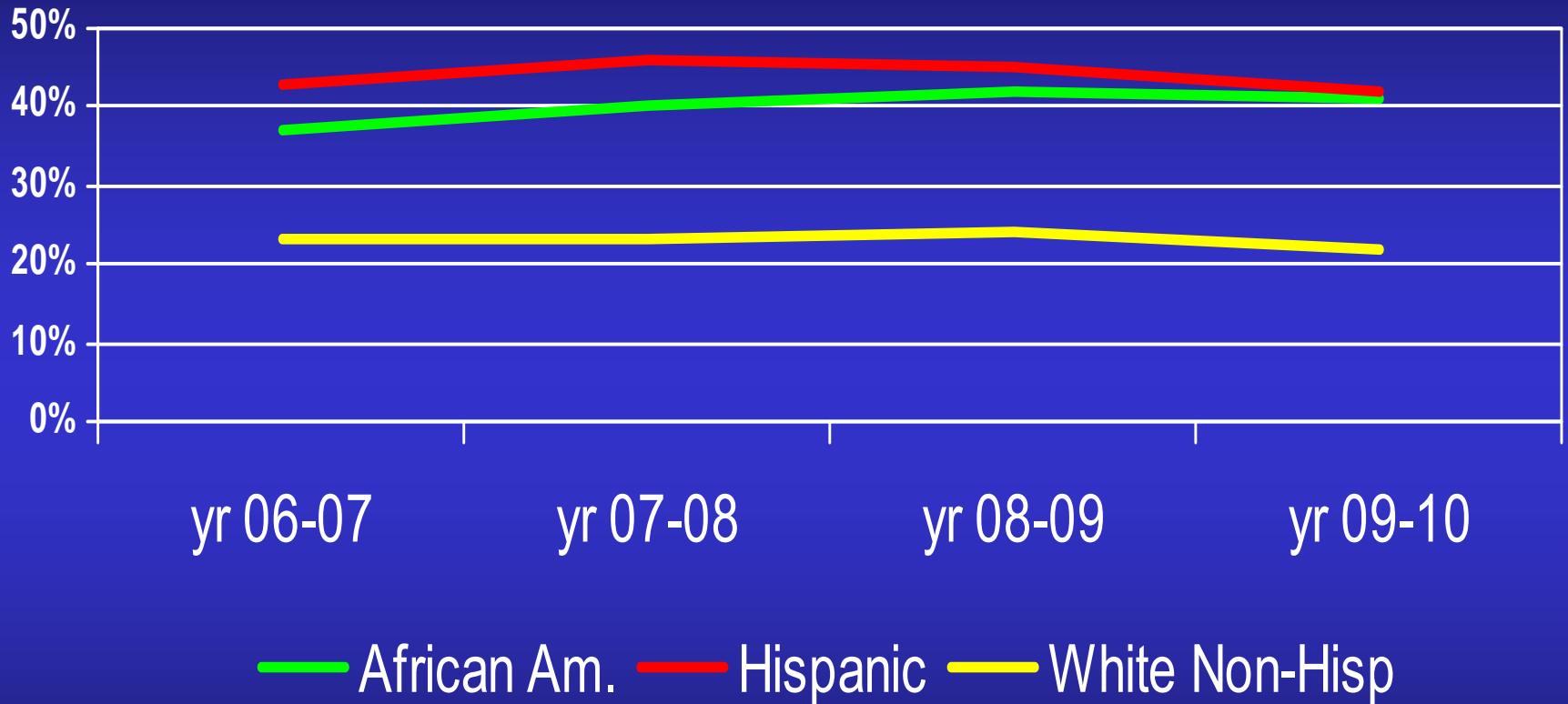
31

San Antonio's Challenges-SA 2020

- Poor School Performance and Dropouts
- Nutrition, Obesity and Physical Activity
- Ten Zip Codes
- Economic Development and Health Disparities
- Place Matters



Bexar County High School Attrition Rate “Dropout Rate”



Bexar County, Total 9th grade to senior population=88,360
High School Dropout rate is 37% or 32,693

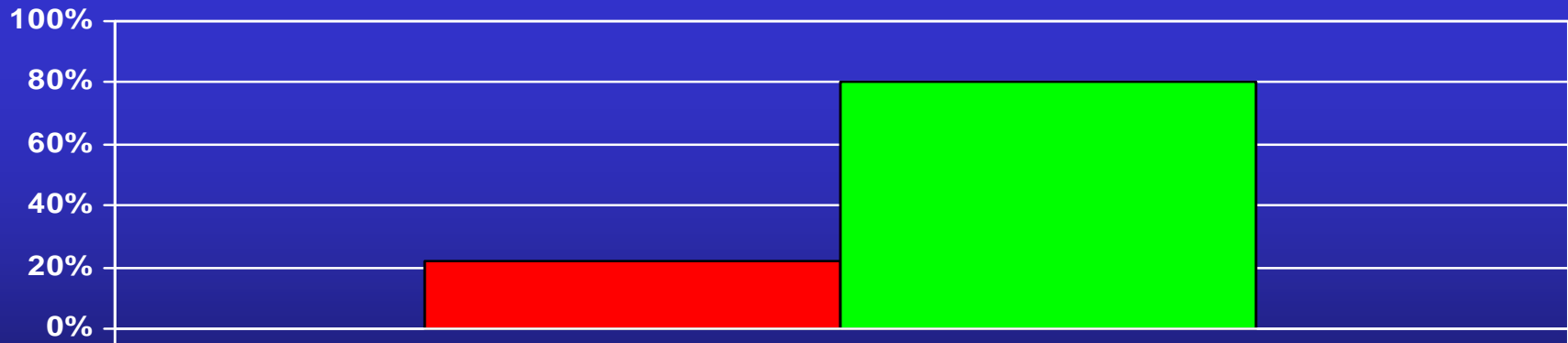
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33

High School Graduates with lack of basic skills

- According to the Texas Higher Education Coordinating Board, only 47% of 2008 high school graduates from Bexar County who enrolled in college were considered ready for college-level coursework in all areas— reading, writing and math.

San Antonio first-time college students



% met standards in all areas

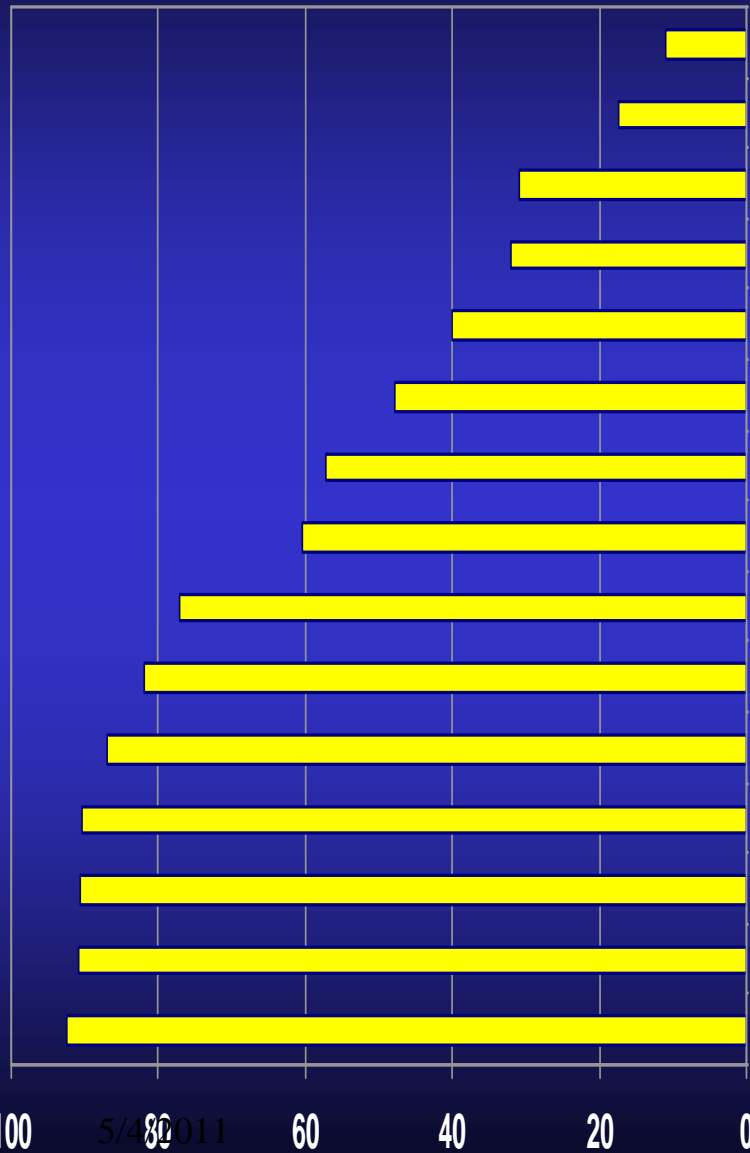
■ ACCD ■ UTSA

Fall 2007 Cohort Tracked for 1 year

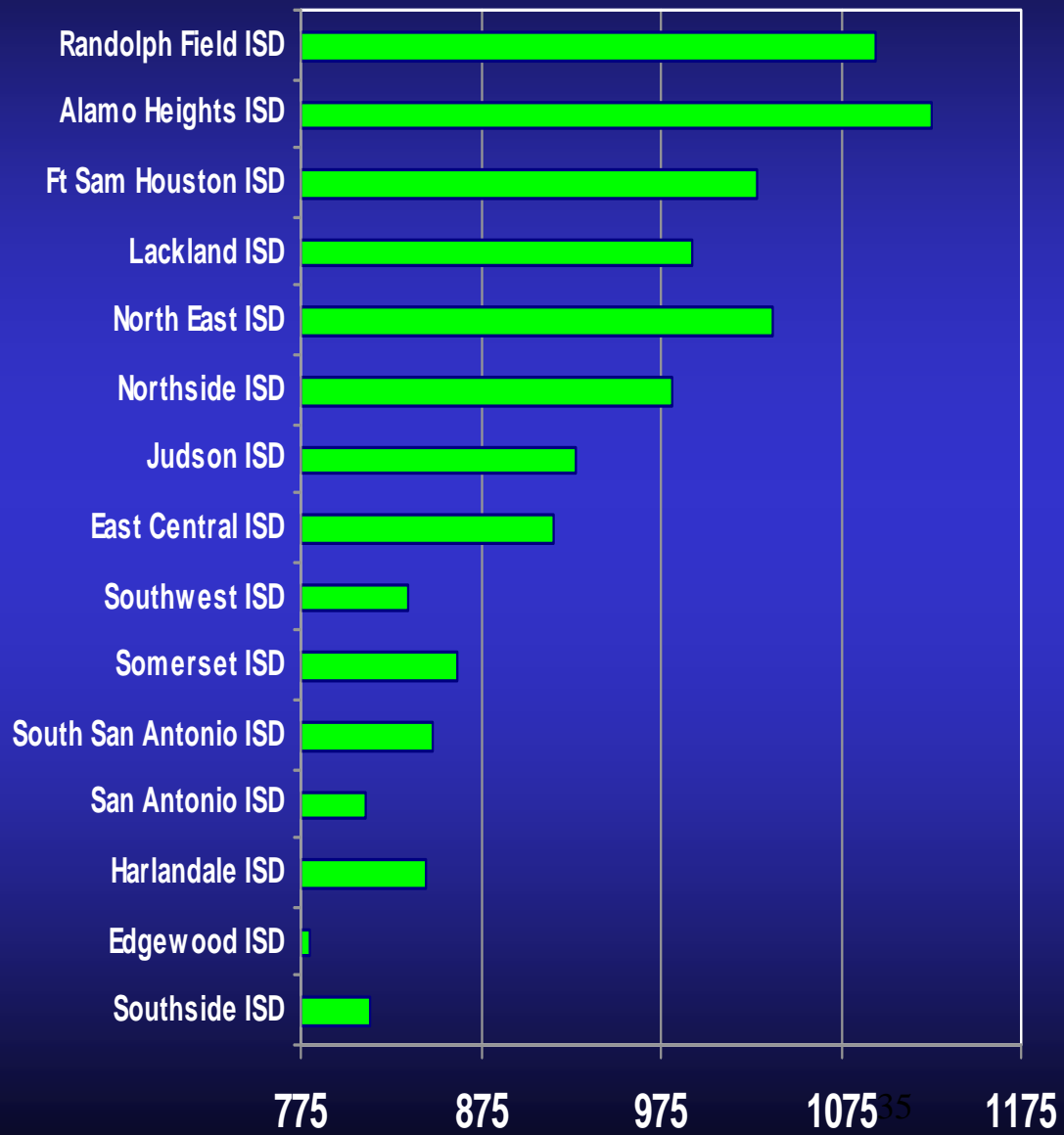
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34

% Economically Disadvantaged Children by School District 2009

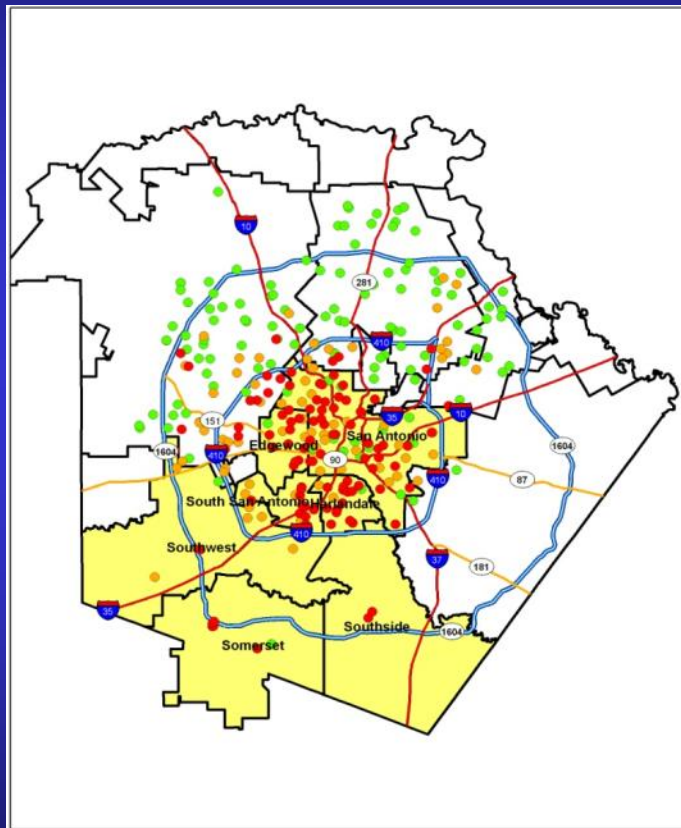


SAT Mean Total Score by School District 2009



Source: Texas Education Agency

Prevalence of Obesity & Overweight Children and Adolescents in Bexar County



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 181,000 Bexar County students tested. 30% of these students were considered Un-Healthy Weight.

Source: 2009 FITNESS GRAM
Texas Education Agency

METRO HEALTH
SAN ANTONIO'S PUBLIC HEALTH TEAM

- 216,935 Students (Grades 3-12)
- 84% Tested or 181,387 Students
- 30% Unhealthy Weight or 54,717 Students

Source: 2009 FITNESS GRAM,
According to FITNESSGRAM a Healthy Weight equals BMI ranging from 14.7-27.8 for boys and 16.2-27.3 for girls adjusted for age.



Popular Mobile Vendors located near Elementary Schools at 3:30PM

Poor Walkability in Residential Areas



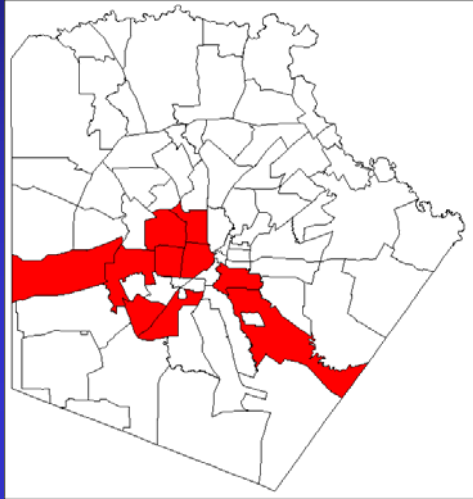
5/Broken Sidewalks



Food Deserts

2009 Ten Zip Codes & Concentration of Need

Metro Health identified ten zip codes as high-risk areas for ongoing public health problems and higher demand for social/city services



10 Zip Codes of 72 (area in Red), account for about 30% of population

About 82% Hispanic, 3% African American, Median Household Income \$26,824, 2000 Census
Zip Codes selected for high numbers of single and teen mothers

	10 Zip Codes	%
Births To Mothers Age <18	666	49%
Births to mothers with less than a HS / GED	3,323	48%
Confirmed Victims of Child Abuse/Neglect	2,058	42%
Medicaid Births	5,537	41%
Single Mother Births	5,007	41%
Family Violence	4,138	40%
Juvenile Probation	3,788	39%
Infant Deaths	56	38%
Births to mothers BMI ≥ 30 Before Pregnancy	2,581	38%
Diabetes Deaths	127	38%
Late Prenatal Care Births	2,519	38%
Births within 24 Months	1,577	37%
Renal disease (kidney) deaths	88	36%
Accidents w/o Motor vehicle deaths	127	35%

Economics and Healthcare



- Health disparities impacts us all by escalating health care spending and adversely affecting the health care system for everyone.
- Public Health's role is to ensure healthcare equity, accountability and alignment of services to decrease morbidity and mortality.
- Addressing the underlying causes of disparities in health care will require improving data collection, population and community health measures.

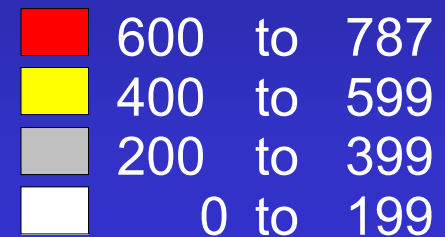
“Place Matters”



- Place matters because it determines what you are exposed to, e.g. community violence or safe places to walk.
- Where someone works, where they go to school, or where they live determines a whole host of factors that can affect health.
- Health disparities may result from land use policies or the absence of policies that may create inequalities in resources and environments where people live.

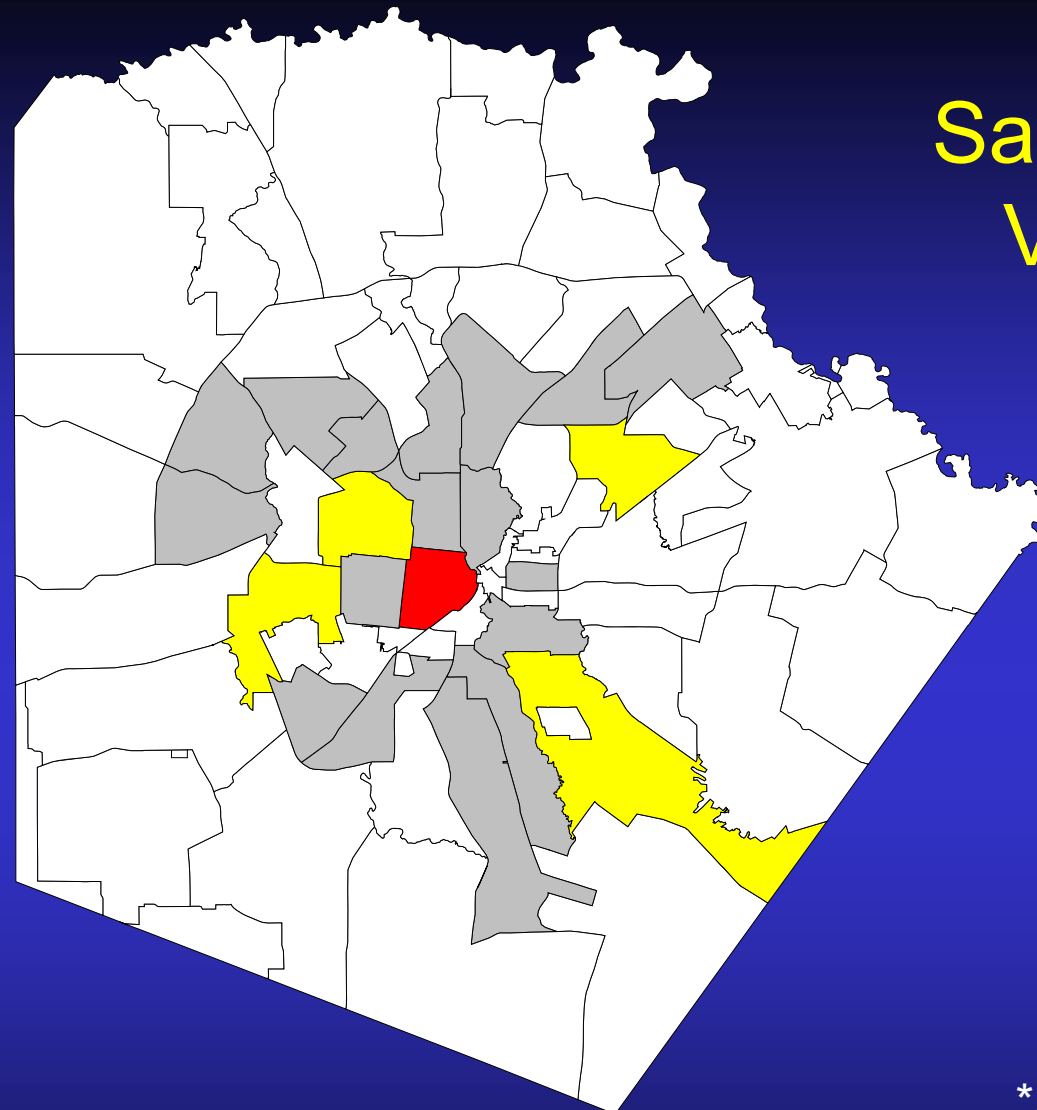
San Antonio 2009 Family Violence by Zip Code

of Cases by Zip Code



Child abuse is 15 times more likely to occur in families where domestic violence is present.*

*American Academy of Family Physicians



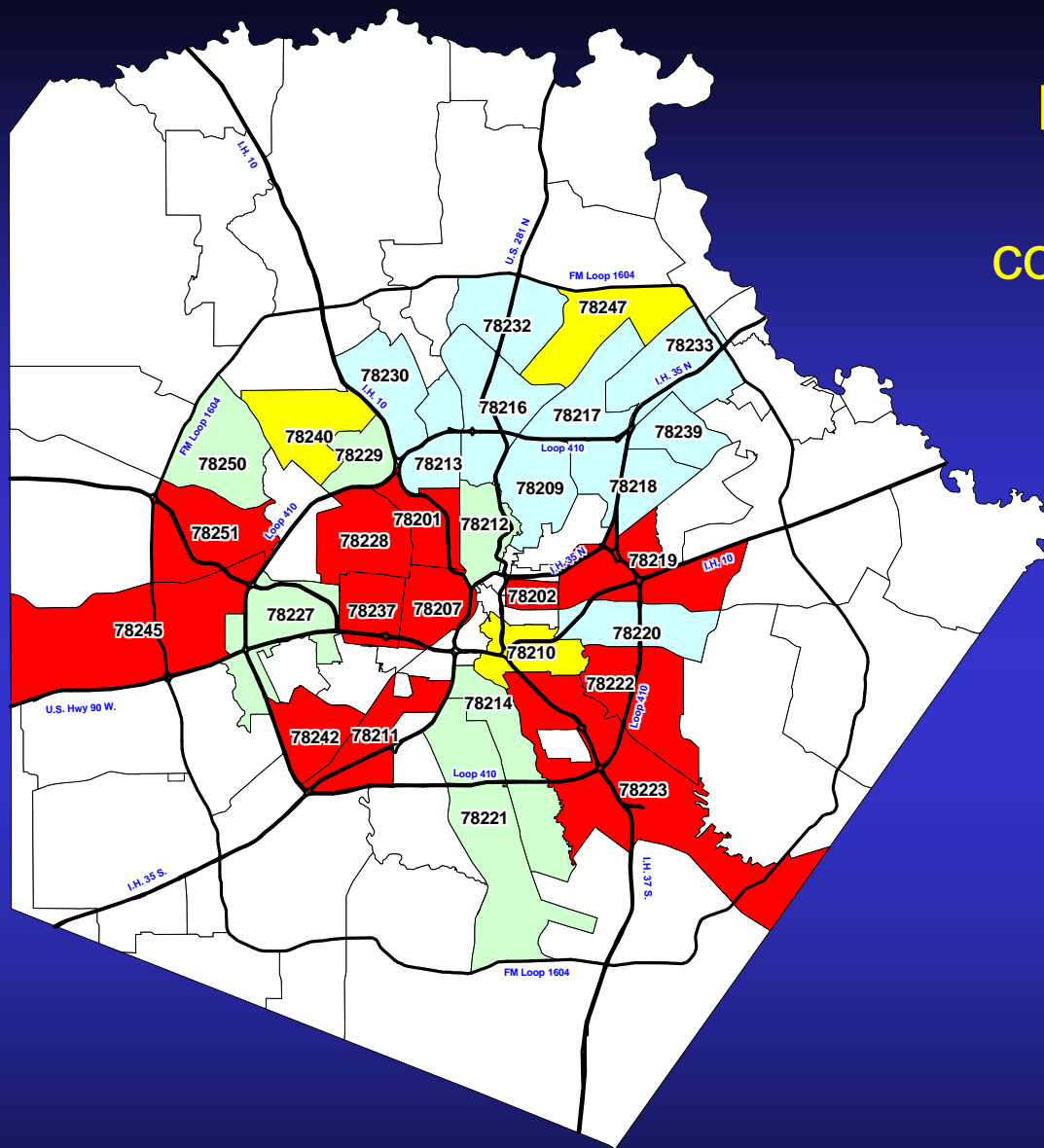
Bexar County 2009 Diabetes Mortality Rates (Diabetes listed as contributing cause of death) by Zip Code

age adjusted rates
per 100,000

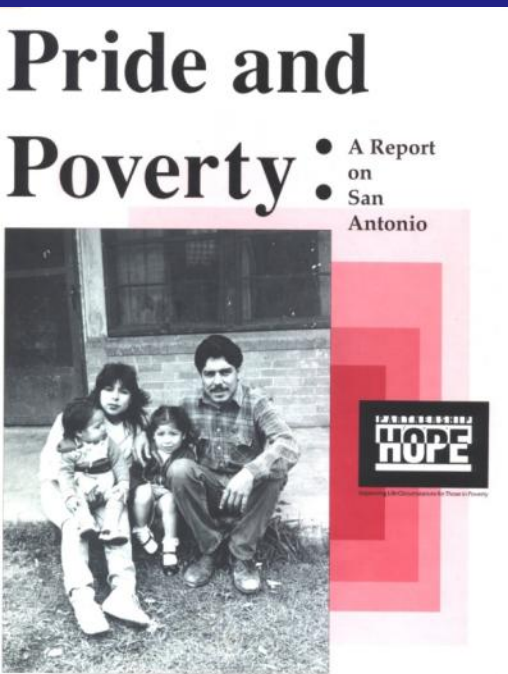


1,604 Deaths

Zip codes with <20
deaths were not
included



In spite of all our best efforts segments of our community continue to experience disparities



- In 1992 The San Antonio Pride and Poverty report cited: high rates of uninsured, a need to improve educational outcomes; affordable housing, and marginal human services.

- Years later, after millions invested in San Antonio we still see high rates of uninsured, a need to revitalize downtown, strengthen the local economy and reverse the deterioration of public education.



http://www.mysanantonio.com/news/local_news/article/Mayor-advocatesinvesting-in-S-A-1307622.php#ixzz1II5M0ZNE

Questions??

The first challenge of Public Health (*“and Medicine”*) is to do no harm... I submit more harm is done by errors of omission (*“and commission”*)*. The vaccines not given. The helmets not worn. The interventions not made for abused children. The science not used.

William H Foege, M.D. , MPH 2003

*Fernando A. Guerra, M.D., M.P.H.
Public Health Consultant

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