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CHARTING the COURSE VI 2010

A San Diego Community Health Needs Assessment

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A San Diego Community Health Needs Assessment

COMMUNITY HEALTH
IMPROVEMENT PARTNERS
9370 Chesapeake Drive, Suite 220
San Diego, CA 92123
www.sdchip.org

ACKNOWLEDGEMENTS

Community Health Improvement Partners

2010 Chair:
Barbara Ryan
Vice President Government Affairs and Advocacy
Rady Children's Hospital and Health Center

Staff:
Aron R. Fleck, MBA
Director of Programs
Community Health Improvement Partners

Charting the Course VI Report Development

Consultant:
Michael J. Moder, MHSA
Moder Research & Communications, Inc.

Data Support:
Community Epidemiology Division, County of San Diego, Health and Human Services Agency

Cover Art:
Kate Bartkiewicz
Community Health Improvement Partners

Tyler Wagner
Community Health Improvement Partners

Executive Summary Design:
Garrison Fletcher, President
Apex Type & Graphics

Regional Meetings:
Facilitated by: Community Health Improvement Partners Staff

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COMMUNITY HEALTH
IMPROVEMENT PARTNERS
making a difference together
9370 Chesapeake Drive, Suite 220
San Diego, CA 92123
General Phone Line: 858.609.7960
Fax: 858.609.7998

Charting the Course VI was produced by the Community Health Improvement Partners, March, 2011.

Charting the Course VI Committee

Co-Chairs:

Anette Blatt
Manager, Community Benefit Services
Scripps Health

James Beaubeaux
CFO/COO
San Diego County Medical Society

Members:

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County of San Diego

Jillian Barber
Sharp HealthCare

Janya Bowman
County of San Diego, HHSA

Deirdre Browner
County of San Diego, HHSA

Julie Cooke
County of San Diego, HHSA

Ruth Covell, MD
UCSD School of Medicine

Sapna Dharkar-Surber
Scripps Whittier Diabetes Institute

Joanne Drinkwater
American Red Cross, WIC Program

Aron Fleck
Community Health Improvement Partners

Mona Freels
211 San Diego

Kristin Garrett
Community Health Improvement Partners

Jeff Johnson
County of San Diego, HHSA

Michele Mathieu
Rady Children's Hospital

Eric McDonald, MD
Community Health Improvement Partners

Michael Peddecord
SDSU, Graduate School of Public Health

Leslie Pels-Beck
Sharp Health Plan

Leslie Ray
County of San Diego, HHSA

Dana Richardson
Community Health Improvement Partners

Gary Rotto
Council of Community Clinics

Robin Rowland
Rowland Consultants

Monica Ruiz
Scripps Whittier Diabetes Institute

Beth Ruland
Community Health Improvement Partners

Shreya Sasaki
Kaiser Permanente

Vanessa Sincock Watkins
Sharp HealthCare

Pat Untied
Scripps Behavioral Health

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Hospital Association of San Diego & Imperial Counties

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Pfizer

Allison Wolpoff
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2010 CHIP Staff

Kristin Garrett, MPH, FACHE
President and Chief Executive Officer

Mariaelena Aguilar
Community Mobilization Specialist
Healthy Eating, Active Communities

JuliAnna Arnett
Food Policy Manager
Communities Putting Prevention to Work
San Diego County Childhood Obesity Initiative

Kate Bartkiewicz
Manager, Business & Community Relations
ICANATWORK

Melanie Cohn
Manager
San Diego County Childhood Obesity Initiative

Aron R. Fleck, MBA
Director of Programs

Michael Johnson
Chief Operation Officer
Director, Safety Net Connect

Eric McDonald, MD
Project Specialist, Safety Net Connect

Cheryl Moder
Director
San Diego County Childhood Obesity Initiative

Yeni Palomino
Program Manager
Healthy Eating, Active Communities

Tanya Rovira-Osterwalder
Community Facilitator
Healthy Eating, Active Communities

Dana Richardson
Senior Director, Advocacy & Community Health

Beth Ruland
CHIP Program Coordinator
Health Literacy San Diego Coordinator

Erica Salcuni
Coordinator
San Diego County Childhood Obesity Initiative

Katie Shultz
Director, Communications & Resource Development

Stacey Tibbott
Office Assistant

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The Charting the Course VI committee, under the direction of the steering committee, began planning this assessment in late 2009. Much thought was put into creating a process and document that would be both useful and enlightening to healthcare organizations, community-based health and social services organizations, and the community in general. Gratitude is expressed to all of the committee members and, in particular, to the committee's co-chairs, Ms. Anette Blatt from Scripps Health and Mr. James Beaubeaux from the San Diego County Medical Society.

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- Eric McDonald, MD, Project Specialist, Safety Net Connect and the new Deputy Public Health Officer, County of San Diego, Health and Human Services Agency, who offered his unique insight and expertise to the project;
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- First United Methodist Church of Escondido, hosts of the North Inland Regional Meeting;

Charting the Course VI was funded by the SB 697 hospitals in San Diego: Kaiser Permanente, Rady Children's Hospital and Health Center, Scripps and Sharp; Sharp Health Plan; Alliance Healthcare Foundation; The San Diego Foundation; and Mental Health Systems.

TABLE OF CONTENTS

List of Abbreviations

ACA	Patient Protection and Affordable Care Act (P.L. 111-148)
AMHS	Adult Mental Health Services
BMI	Body mass index
BRFSS	Behavioral Risk Factor Surveillance System
CCPHA	California Center for Public Health Advocacy
CDC	Centers for Disease Control and Prevention
CHD	Coronary heart disease
CHIP	Community Health Improvement Partners
CHIS	California Health Interview Survey
COBRA	Consolidated Omnibus Budget Reconciliation Act
CMS	Centers for Medicare and Medicaid Services
CMHS	Children's Mental Health Services
ED	Emergency department
GDP	Gross domestic product
IOM	Institute of Medicine
NHDR	National Healthcare Disparities Report
NIMH	National Institute of Mental Health
NSC	National Safety Council
OECD	Organization for Economic Cooperation and Development
OSHPD	California Office of Statewide Health Planning and Development
PTSD	Post-traumatic stress disorder
SANDAG	San Diego Association of Governments
SAMHSA	Substance Abuse and Mental Health Services Administration
SDOH	Social determinants of health
SMI	Serious mental illness
UCR	Uniform Crime Reporting
TAY	Transition-age youth
WHO	World Health Organization
YRBSS	Youth Risk Behavior Surveillance System

EXECUTIVE SUMMARY OF FINDINGS

Community Health Improvement Partners *Charting the Course VI: A San Diego Community Health Charting the Course VI* (Charting the Course VI)provides the most currently available data and information about health issues identified by community stakeholders as being important to residents of San Diego County. The report aims to provide a resource for individuals, agencies, and institutions to identify community health needs and concerns and to be the basis upon which community health programs and interventions can be targeted, developed and evaluated. The ultimate goal of the report is to empower the community to improve the health of its members.

Charting the Course VI also fulfills San Diego's private, nonprofit hospital requirements of Senate Bill 697 (SB 697). In October 1994, SB 697 was signed into law, which created a new mandate for nonprofit, private hospitals to conduct a periodic assessment of the health needs of those living in their service area in order to better respond to the community's health needs. The San Diego SB 697 Coalition first met on June 1, 1995. Representatives from 25 local healthcare organizations voluntarily came together to collaborate and produce one Charting the Course VI in order to maximize their resources and develop a more comprehensive report for San Diego County. The SB 697 Coalition, renamed Community Health Improvement Partners (CHIP) shortly after the completion of the first assessment, formalized its role to provide oversight and direction to the Charting the Course VI process.

That collaborative spirit holds true today as *Charting the Course VI* is the sixth edition of the triennial Charting the Course VI. The Charting the Course VI is available via the CHIP website (www.SDCHIP.org) and will be made available to many organizations and individuals, including schools, libraries, businesses, policymakers and others who may have an interest in current health issues.

Readers are encouraged to explore *Charting the Course VI* to learn more about the critical health issues impacting San Diego County residents. This document presents a wealth of information relating the health issues to race/ethnicity, gender, age category and geographic region.

Community Priority-Setting Process

The starting point for the 2010 health issue priority process was a review of the 38 Healthy People 2020 focus areas. Because of the large number and the diversity of health issues, the Charting the Course VI committee selected 17 of these health issues for additional study and possible inclusion in this year's Charting the Course VI. These issues were divided into three categories:

- Overarching Issues — considered overarching because they potentially impact all of the other issues in this report. These included:
    - Access to health services
    - Health communications and health information technology
    - Public health infrastructure

- Social determinants of health

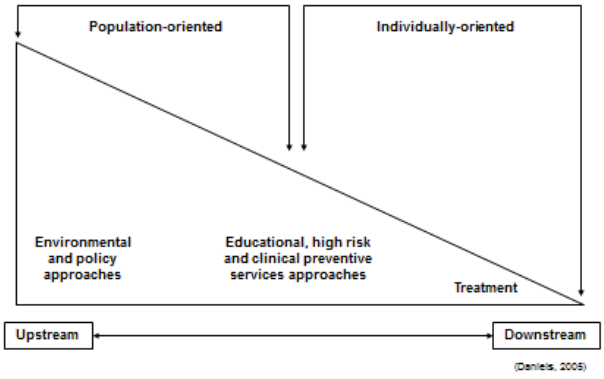
- Health-Related Behaviors — behaviors that are important components in long-term health, such as:
  - Immunization
  - Smoking cessation
  - Improving nutrition
  - Increasing physical activity
  - Achieving a healthy weight status
  - Oral health
  - Violence and injury prevention

- Health Outcomes — look at the change in the health status of the population and various demographic groups over time related to:
  - Cancer
  - Diabetes
  - Heart disease and stroke
  - Infectious diseases
  - Maternal, infant and child health
  - Mental health
  - Respiratory diseases

To help narrow the number of health issues, 379 community leaders from throughout San Diego County were invited to prioritize each issue based on the following criteria:

1. What is the size of the health issue in San Diego County?
2. What is the seriousness of the health issue in San Diego County?
3. What community resources are available to address the health issue?
4. How much data or information do we have to evaluate the health issue's outcomes?

Spectrum of Prevention Framework



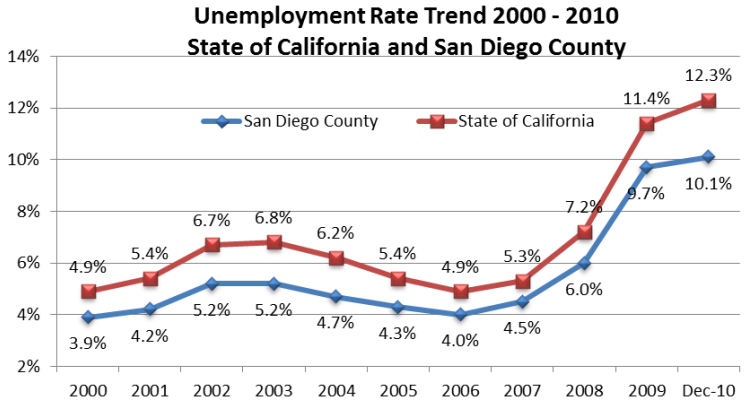
Participants in this community priority-setting process were asked to review the information for each health issue covered in a briefing document and then rate each issue using the information provided along with their own knowledge of the health issue. Overall, 72 community leaders participated in the priority-setting process.

Once the community priority-setting process was completed, committee members used the Spectrum of Prevention Framework to determine which issues are most impacted by prevention activities as opposed to treatment and identify which health issues to bring forward for discussion in the community forums.

The Charting the Course VI committee designated the following health issues to be the focus of the in-depth report:

- Access to health services
- Social determinants of health
- Weight status and physical activity
- Injury and violence
- Mental health

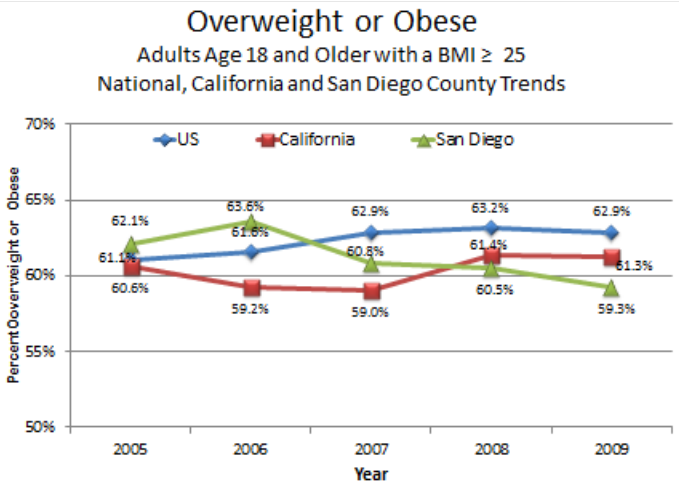
Charting the Course VI contains an in-depth review of these five health issues along with a description of the community priority-setting process used to select these issues. Background information related to the 17 additional issues reviewed as part of the community priority-setting process is also included. In addition, information is presented on the community forums that were held in each of the six regions of San Diego County to gain insights into the health issues of weight status, mental health, and injury and violence, and to begin the process of identifying some of the root causes related to these issues.



Source: EDD, 2011

Access to Health Services

The current economic downturn in the U.S. is believed to be changing patterns of healthcare utilization resulting in, among other things, people putting off needed healthcare and skipping dental care. High unemployment rates are also contributing to the lack of health insurance coverage.



BRFSS, 2005 - 2009

- Cities most impacted by high unemployment in San Diego County include National City (19.1%), Imperial Beach (16.0%), El Cajon (13.6%), Fallbrook (12.8%), Lemon Grove (12.5%) and Spring Valley (11.6%).
- Currently, an estimated 23% of San Diego residents under age 64 are uninsured.
- Community clinics in San Diego County are experiencing a rise in primary care clinic utilization rates and hospital emergency departments have experienced a sharp rise in Medi-Cal utilization.
- Latinos and the unemployed are most likely to be without health insurance.

Social Determinants of Health

Social determinants of health, including education, economic status, living conditions and cultural elements, are factors that threaten health, promote health and protect health.

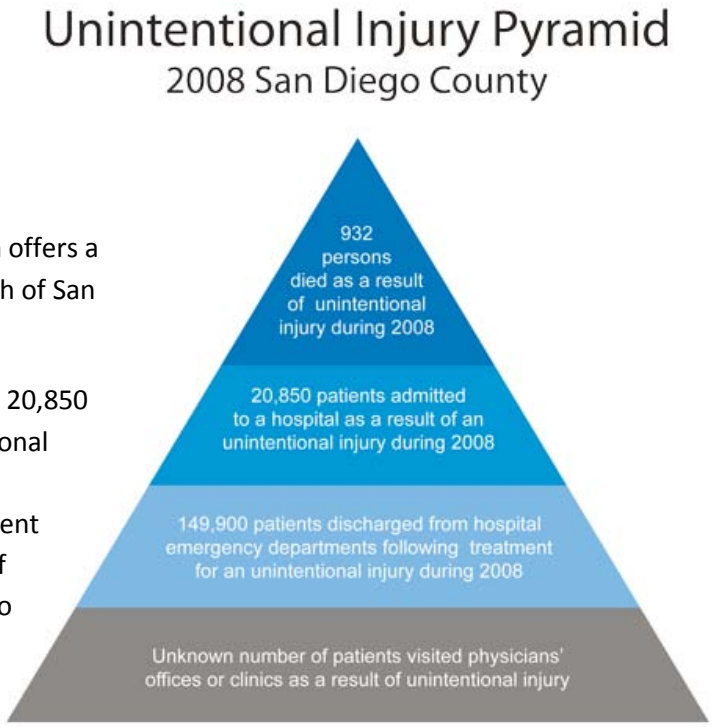
Weight Status, Nutrition and Physical Activity

The long-term health consequences of being overweight or obese are significant.

- During 2009, the nearly 60% adults in San Diego County were either overweight or obese.
- Adults most likely to be obese include African Americans and Latinos.
- Nearly 28% of children living in San Diego County were overweight or obese during 2007, the most recent period for which data is available.
- Children most likely to be overweight or obese include African Americans and Latinos.

Injury and Violence

Prevention of unintentional injury and death offers a tremendous opportunity to impact the health of San Diego County residents.



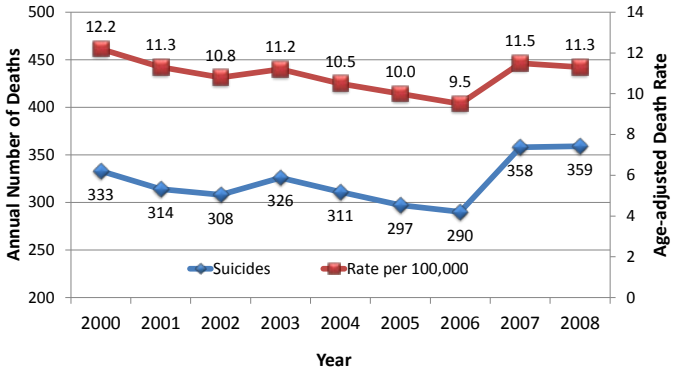
- During 2008, there were 932 deaths and 20,850 hospitalizations resulting from unintentional injury and 149,900 hospital emergency department discharges following treatment for unintentional injuries. The number of physician office and clinic visits related to unintentional injury, while unknown, is likely much higher than the number of emergency department visits.
- Unintentional injuries are one of the leading causes of death for San Diego County residents in all age categories regardless of gender, race or region.
- Between 2000 and 2008, the rate of death related to unintentional injury increased by nearly 10%.
- Those most impacted by death as a result of unintentional injury are males, persons age 85 or over, American Indians and persons living in the East region.

Mental Health

Serious mental illness is a leading cause of disability in the U.S.

- The estimated prevalence of serious mental illness in San Diego County is 5% of the population, impacting more than 141,400 persons.
- During 2008, suicide, one of the major complications of depression, was the 8th leading cause of death in San Diego County.

Suicide Deaths
San Diego County, 2000-2008



(CoSDCHS & CoSDEip, 2010)

Community Input

Community forums were held in each of the six regions of San Diego County. The six forums were attended by more than 200 community stakeholders representing a wide variety of programs, agencies and organizations.

The following table highlights some of the root causes identified by community stakeholders related to each health issue.

Summary of Identified Root Causes by Health Issue		
Weight Status, Nutrition and Physical Activity	**Injury and Violence**	**Mental Health**
• Limited access to affordable, fresh, healthful foods • Limited access to safe, affordable space for physical activity • Societal norms do not support physical activity • Fast foods are easily accessible, less expensive and marketed heavily • Society's encouragement of sedentary activities • Fear of crime and safety issues related to being physically active in neighborhoods and parks • Language barriers	• Limited access to, knowledge and awareness of prevention • Gang activity • Easy access to and use of illicit drugs and alcohol • Unsafe home environments • High-risk activities among youth • Language and cultural issues related to laws and trust in government programs • Military culture conflicts with civilian code of conduct • Cultural bias against services for seniors and Latinos • Cultural norms do not support reporting problems • Distrust of neighbors, community leaders, and fear of retaliation • Low literacy levels	• Stigma associated with mental illness • Cultural beliefs related to mental illness • Provider systems intimidate consumers • Socioeconomic, cultural and language barriers to care • Limited number of culturally competent psychiatrists and nurses • Primary care physicians unwilling to accept referrals or do screening, assessment and brief interventions • Limited knowledge on how to navigate the mental health treatment system

More information and resources are available on line at http://www.sdchip.com.

Introduction and Background

Community Health Improvement Partners *Charting the Course VI: A San Diego Community Health Charting the Course VI* (Charting the Course VI)provides the most currently available data and information about health issues identified by community stakeholders as being important to residents of San Diego County. The report aims to provide a resource for individuals, agencies, and institutions to identify community health needs and concerns and to be the basis upon which community health programs and interventions can be targeted, developed and evaluated. The ultimate goal of the report is to empower the community to improve the health of its members.

Charting the Course VI fulfills San Diego's private, nonprofit hospital requirements of Senate Bill 697 (SB 697). In October 1994, SB 697 was signed into law, which created a new mandate for nonprofit, private hospitals to conduct a periodic assessment of the health needs of those living in their service area in order to better respond to the community's health needs. The San Diego SB 697 Coalition first met on June 1, 1995. Representatives from 25 local healthcare organizations voluntarily came together to collaborate and produce one Charting the Course VI in order to maximize their resources and develop a more comprehensive report for San Diego County. The SB 697 Coalition, renamed Community Health Improvement Partners (CHIP) shortly after the completion of the first assessment, formalized its role to provide oversight and direction to the Charting the Course VI process.

In addition to fulfilling legislative requirements, *Charting the Course VI* provides a resource for individuals, agencies and institutions to identify community health needs and concerns. The report also monitors changes and trends in health status among San Diego County residents. This information provides the basis upon which community health programs and interventions can be targeted, developed and evaluated, with the ultimate goal of improving the health of the community and its members. *Charting the Course VI* is available via the CHIP website (www.SDCHIP.org) and is distributed to many organizations and individuals, including schools, libraries, businesses, policymakers and others who may have an interest in current health issues.

This year, CHIP revised the community input process and conducted forums with community leaders rather than focus groups with individual residents. These community forums were held in each of San Diego County's six geographic regions with a cross-section of stakeholders to discuss three health issues of critical importance to San Diego residents. These issues include:

- Nutrition and weight status, and physical activity and fitness
- Injury and violence
- Mental health and mental disorders

Process and Approach

The Charting the Course VI process began in August 2009 with an invitation to those community organizations and individuals who had participated in previous assessments to form a 2010 Charting the Course VI – Charting the Course VI Advisory Council. The advisory council spent six months defining the process to be used in executing the Charting the Course VI based on the following timeline.

Charting the Course VI Timeline

During those initial months the committee also established their vision, mission and set of goals for the Charting the Course VI process.

Vision: To be the catalyst for health improvement throughout San Diego County

Mission: To produce the primary community health Charting the Course VI document for San Diego County while meeting the non-profit hospital requirements of SB 697

Goals:

- Monitor trends in the health status in San Diego County and compare local results to state and national trends and goals
- Provide a community resource for individuals, agencies, institutions and businesses to use in identifying health concerns of their constituencies, neighborhoods or geographic regions
- Prioritize for action the health issues of San Diego County
- Facilitate resource allocation

Charting the Course VI uses information from four main sources. These include:

1. Health-related statistics gathered and analyzed by the County of San Diego Health and Human Services Agency (HHSA), supplemented by data from the California Health Interview Survey (CHIS), the California Office of Statewide Health Planning & Development, the Centers for Disease Control and Prevention's (CDC) Youth Risk Behavior Surveillance System, Behavior Risk Surveillance System, and census data from the San Diego Association of Governments (SANDAG)
2. Health-related scientific literature

3. Results of a community priority-setting scoring process, taking into consideration the information obtained from the preceding two steps
4. Results of the six community regional forums held with a cross-section of the community stakeholders.

Community Priority Setting Process

The goal of the community priority-setting process for *Charting the Course VI* was to provide an organized, objective method of reviewing and prioritizing the health issues facing San Diego County. The priority-setting and scoring process involved the input of key stakeholders from throughout San Diego County and included the following steps:

Step 1. Selecting health issues to investigate

Initially, the Charting the Course VI Committee reviewed the Healthy People 2020 objectives and health data indicators available through the San Diego County HHSA. This process resulted in the identification of 17 key health issues felt to be most important to residents of San Diego County.

Step 2. Identifying priority-setting criteria

In order to set priorities among competing health concerns, two separate processes were employed. First, and most significant, the Charting the Course VI committee determined that they needed to use a slightly modified scoring process, one originally developed by John J. Hanlon, M.D. A similar method was used in the 1998, 2004 and 2007 Charting the Course VIs. In previous years, this method involved scoring each health issue identified in Step 1 using size, seriousness and community concern. Our revised version included size and seriousness of the problem, and modified community concern into two separate categories: community resources and data availability. The 2010 priority-setting criteria were as follows:

- **Size of the problem**—including the number of people who are personally affected by a health issue, which may be presented as prevalence per 100,000 population, an annual incidence rate or the percentage of people affected. Considerations include increasing or decreasing trends, health disparities and specific populations or regions that are disproportionately affected by the condition and how rates in San Diego compare to state or national rates.
- **Seriousness of the problem**—including mortality, economic costs, the impact on or interrelationship with other health issues and impact on quality of life. Considerations include health disparities, specific populations or regions that are disproportionately affected by the condition and how rates in San Diego compare to state or national rates.
- **Community resources available to address the problem**—the degree to which key stakeholders feel the problem is currently being addressed in San Diego County in terms of funding being applied as well as local, state and national organizations represented in the area.

- **Outcomes data** – In addition to these three criteria, a fourth was added to indicate how much information is available to evaluate outcomes within the health issue.

Second, each evaluator was asked to rank each health issue within its category (see overarching issues, health-related behaviors and health outcomes below).

Step 3. Creating health issues briefs

Health issues briefs were developed to provide information about each of the previously identified 17 health issues. This document summarized local, state and national data and statistics for each health issue. To the extent possible, each topic covered in the health issues briefs included details pertaining to the scoring criteria (size, seriousness and other relevant information) for easy reference during the scoring process. When available, information included prevalence, incidence, impact, trends and populations most affected by the health issue or concern.

Step 4. Scoring of health issues by category

Next, the health issues briefs were distributed to 379 community leaders from throughout San Diego County, along with a priority-setting worksheet, which allowed participants to rate each issue based on the four criteria. (For additional information about the evaluation process, please refer to Appendix 2 – Health Issue Priority Setting Exercise in the 2010 Health Issues Briefs.)

Each of the 17 health issues were scored separately within the following three categories:

- Overarching Issues (4 Issues) — considered overarching because they potentially impact all of the other issues in this report. These include topics related to access to health services, health communications and health information technology, public health infrastructure, and the social determinants of health.
- Health-Related Behaviors (6 Issues) — behaviors that are important components in long-term health, such as immunization, tobacco use, nutrition, physical activity, weight status, oral health and violence and injury.
- Health Outcomes (7 Issues) — looks at the change in the health status of the population and various demographic groups over time, related to cancer; diabetes; heart disease and stroke; infectious diseases; maternal, infant and child health; mental health; and respiratory diseases.

The scoring process was conducted electronically via an Internet-based survey. Each participant was provided with written scoring sheets and sent several reminders via e-mail, which included a link to an online scoring survey and health issue briefs for each of the 17 topics. Several reminders were sent to individuals who had expressed a desire to participate but did not return their scoring information. In total, 72 individuals participated in the scoring process (a 50% increase over the number who participating 2007 priority-setting survey).

Step 5. Reaching consensus on scoring results

The project consultant compiled and analyzed scoring results and presented the findings by category and overall to the Charting the Course VI Committee for review and discussion.

Step 6. Selection of priority health issues

One of the key outcomes from the community priority-setting process was identification of which health issues to bring forward for discussion in the community forums and expand upon in the Charting the Course VI report. The committee members used the Spectrum of Prevention Framework to help them visualize which issues are most impacted by prevention activities as opposed to treatment. Based on a review of the community priority-setting results and utilizing the Spectrum of Prevention Framework to associate select behaviors with potential health outcomes issues, the Charting the Course VI committee designated the five health issues to be the focus of the in-depth report, and selected three issues as topics to be brought forward for discussion in the community forums.

Step 7. Input from key stakeholders during community forums

During August and September 2010, six community forums were held with key stakeholders, one in each of the six San Diego County regions. In total, 201 persons participated in the forums, with attendance ranging from 22 to 54 persons per forum. All of the forums were conducted in English.

The forums were designed to provide regional level information about each of the three health issues, begin the process of better understanding each issue from a regional perspective and identify some of the potential root causes related to the issues. (For additional information about the community forums, please refer to Appendix 1 – Regional Community Forum Reports.)

Health Issue Profiles

The final phase was an in-depth analysis for each of the five health issues selected to be highlighted in this year's health Charting the Course VI:

- Health access and delivery
- Social determinants of health
- A combination of nutrition, weight status, physical activity and fitness
- Injury and violence
- Mental health and mental disorders

Developed by the consultant, each analysis adds to the previously produced fact sheets used for each health issues brief. Each highlighted health issue profile is self-contained and, depending on the topic and available data, includes:

- Overview of the health issue
- Why the health issue is important
- Seriousness of the health issue in terms of economic costs, use of resources and/or loss of functional status
- Who is most impacted by the health issue in terms of incidence and prevalence of both morbidity and mortality
- The local impact of the health issue
- References

COMMUNITY PRIORITY-SETTING PROCESS AND RESULTS

One of the major features of each Charting the Course VI is the review of health issues felt to be impacting the San Diego region. These health issues are examined from local (San Diego County), state and national perspectives. The starting point for the 2010 process was a review of the 38 Healthy People 2020 focus areas (shown in the sidebar on this page). Because of the large number and the diversity of health issues, the Charting the Course VI committee selected 17 of these health issues for additional study and possible inclusion in this year's Charting the Course VI. (Health issues selected are indicated by an asterisk in the sidebar.) They selected these issues based on an extensive review of the issues and a ranking of their perceived importance by the Charting the Course VI committee. The 17 health issues were then divided into three categories:

- Overarching Issues (4 Issues) — considered overarching because they potentially impact all of the other issues in this report. These included:
    - Access to health services
    - Health communications and health information technology
    - Public health infrastructure
    - Social determinants of health
- Health-Related Behaviors (6 Issues) — behaviors that are important components in long-term health, such as:
    - Keeping immunizations current
    - Smoking cessation
    - Increasing physical activity
    - Achieving healthy weight status and improving nutrition
    - Maintaining Oral health
    - Preventing violence and injury
- Health Outcomes (7 Issues) — looks at the change in the health status of the population and various demographic groups over time related to:
    - Cancer
    - Diabetes
    - Heart disease and stroke
    - Infectious diseases
    - Maternal, infant and child health

Healthy People 2020 Focus Areas

*Access to health services **
Adolescent health
Arthritis, osteoporosis, and chronic back conditions
Blood disorders and blood safety
*Cancer **
Chronic kidney disease
*Diabetes**
Disability and secondary conditions
Early and middle childhood
Education and community-based programs
Environmental health
Family planning
Food safety
Genomics
Global health
*Health communication and health IT **
Healthcare-associated infections
Hearing and other sensory or communication disorders
*Heart disease and stroke **
HIV/AIDS
*Immunization and infectious diseases**
*Injury and violence prevention **
*Maternal, infant, and child health **
Medical product safety
*Mental health and mental disorders **
*Nutrition and weight status **
Occupational safety and health
Older adults
*Oral health **
*Physical activity and fitness **
*Public health infrastructure **
Quality of life and well-being
*Respiratory diseases **
Sexually transmitted diseases
*Social determinants of health **
*Substance abuse **
*Tobacco use **
Vision

- Mental health
- Respiratory diseases

The next step in the process was to narrow the number of health issues to five or six for an in-depth evaluation. To achieve this task, a brief written report was prepared for each of the 17 health issues, presenting background information about the issue from local (San Diego County), state and national perspectives. The health issues briefs were distributed to 379 community leaders from throughout San Diego County along with a priority-setting worksheet, which allowed participants to rate each issue based on the following four criteria (For additional information about the evaluation process, please refer to Appendix 2 – Health Issue Priority Setting Exercise in the *2010 Health Issues Briefs* in the appendix of this document):

- What is the size of the health issue in San Diego County?
- What is the seriousness of the health issue in San Diego County?
- What community resources are currently available to address the health issue?
- How much data or information do we have to evaluate the health issue's outcomes?

Participants in this priority-setting process were asked to review the information for each health issue covered in the briefing document, provide their ratings from their perspective and weigh each issue using the information provided along with their knowledge of the health issue.

Overall, 72 community leaders participated in the priority setting process. As part of this exercise, participants were requested to indicate the geographic region of the county they represent. (Participants were allowed to indicate more than one region.) As shown on the following table, participants in the priority-setting process represented all regions of the county.

Priority Setting Responses by Geographic Region

Region	Count	Percent of total count	Percent of total respondents
North Coastal	48	16.1	67.6
North Inland	46	15.4	64.8
North Central	49	16.4	69.0
Central	57	19.1	80.3
East	48	16.1	67.8
South	51	17.1	71.8

Many types of organizations participated in the priority-setting exercise, as shown on the following table.

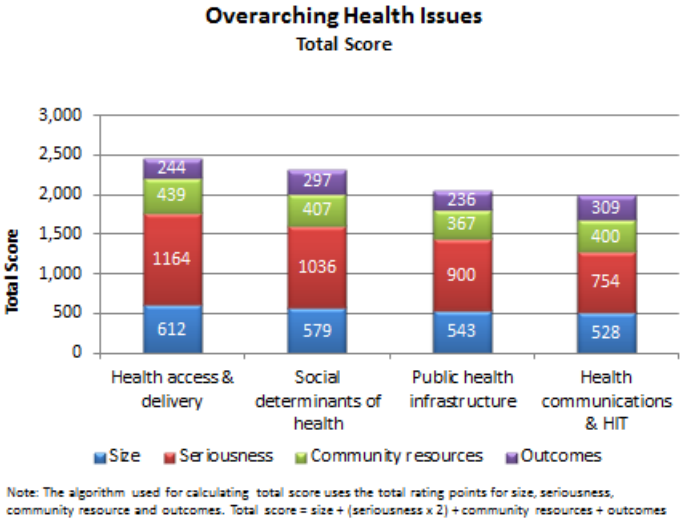
Priority-Setting Responses by Type of Organization

Type of organization	Count	Percent
Hospital or health system	21	29.2
Community-based organization	18	25.0
County government/public health	9	12.5
Community clinic	5	6.8
Membership organization	4	5.6
Foundation	3	4.2
Social services agency	3	4.2
Consultant	2	2.8
Health plan	2	2.8
Physician	2	2.8
University/medical school	2	2.8
Other non-profit organization	1	1.3
Total	72	100

The following briefly presents results of the community priority-setting process; results by scoring criteria and ranking are shown in Figure 1 (page 18).

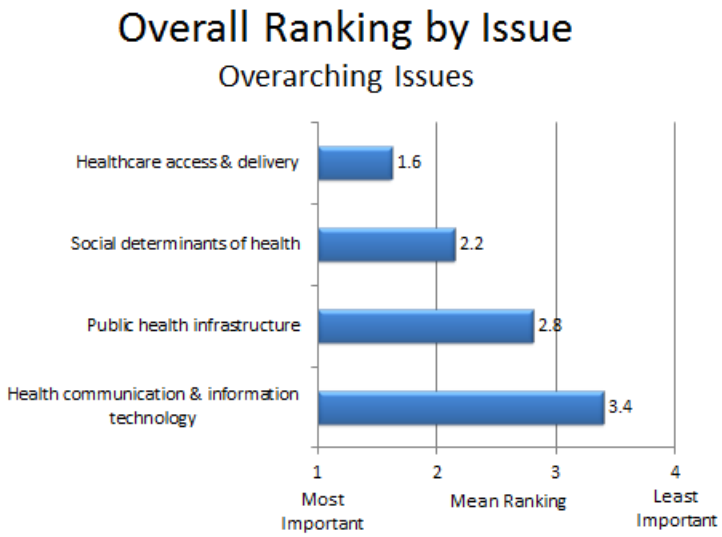
Overarching Health Issues

The scoring and ranking of importance of the four overarching health issues produced consistent results indicating participants felt that health access and delivery and social determinants of health were the top two issues in this category.



In terms of size and seriousness scoring these two issues scored highest. In terms of outcomes, where a lower score is more desirable, participants indicated that current efforts related to access and delivery and public health infrastructure are more effective than for the other two issues.

When ranked by importance, both health access and delivery, and social determinants of health were ranked as more important than the other two overarching issues.



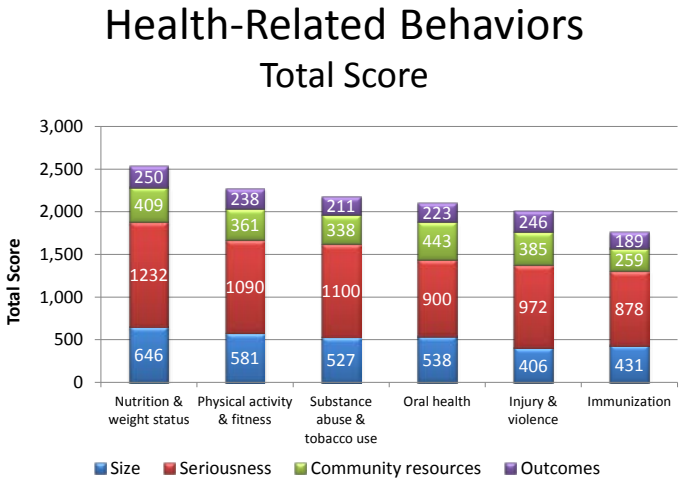
Health-Related Behaviors

The scoring and ranking of importance of the six health-related behaviors produced consistent results for the top three behaviors, indicating that participants felt nutrition and weight status, physical activity and fitness, and substance abuse and tobacco use were the top three issues in this category.

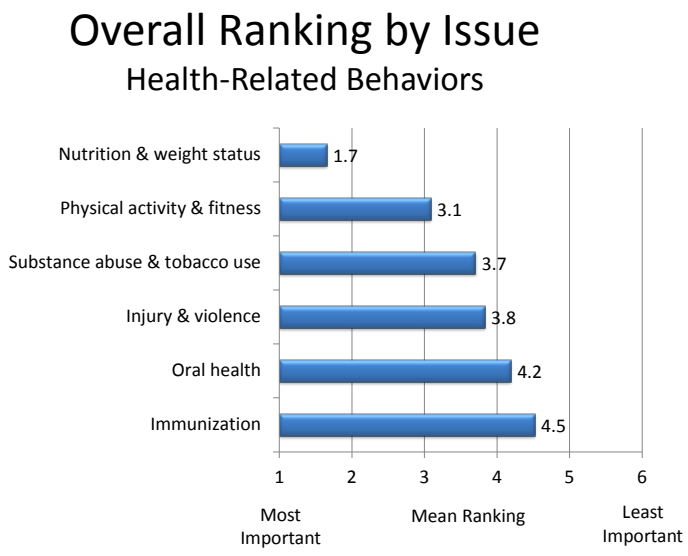
In terms of size and seriousness scoring, nutrition and weight status, physical activity and fitness scored highest.

Immunization was clearly the behavior felt to have more effective interventions than the other behaviors.

When ranked by importance, nutrition and weight status clearly ranked as the most important health-related behavior.



Note: The algorithm used for calculating total score uses the total rating points for size, seriousness, community resource and outcomes. Total score = size + (seriousness x 2) + community resources + outcomes

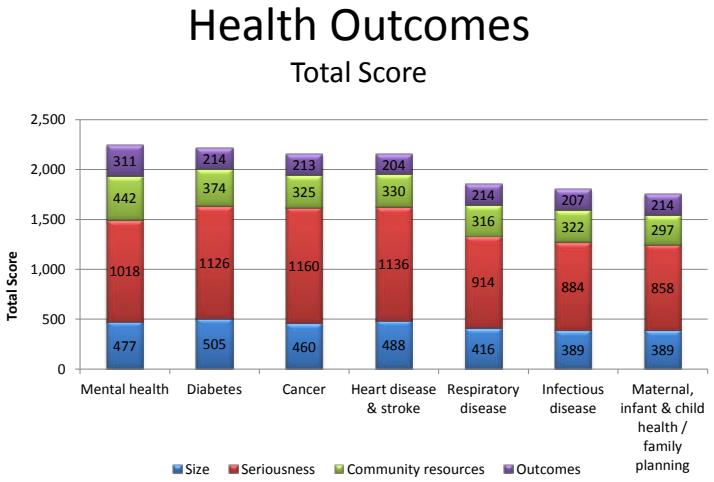


Health Outcomes

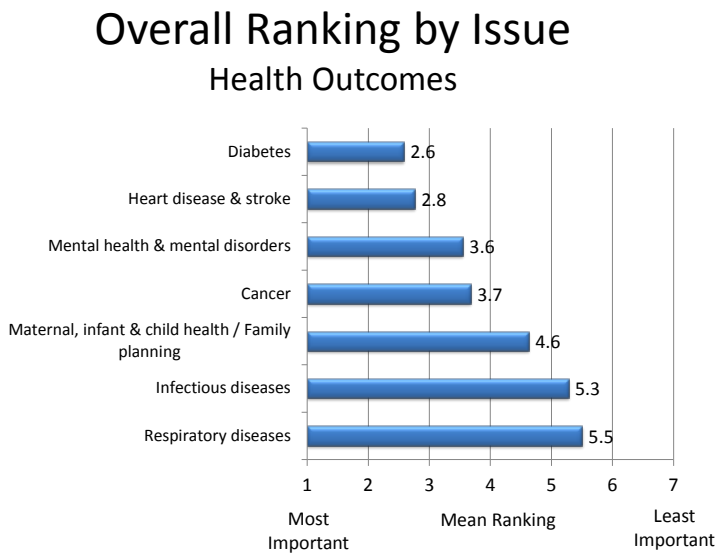
The scoring and ranking of importance of the seven health outcomes produced rather inconsistent results. Mental health received the highest total score but was ranked third in importance. Much of the mental health score was driven by the perceived lack of community resources and the perceived lack of effective interventions (outcomes score).

In terms of size and seriousness scoring, diabetes, cancer, and heart disease and stroke scored highest.

When ranked by importance, diabetes and heart disease and stroke clearly ranked as the most important health outcomes, followed by mental health and cancer.



Note: The algorithm used for calculating total score uses the total rating points for size, seriousness, community resource and outcomes. Total score = size + (seriousness x 2) + community resources + outcomes



(Figure 1)

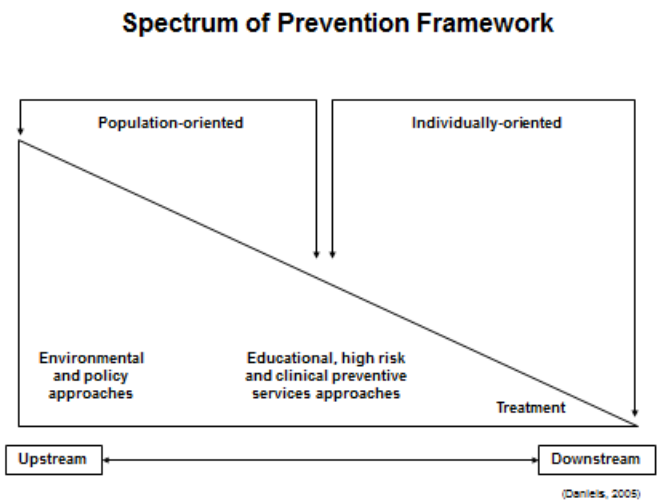
Community Priority-Setting Process Results
By Scoring Criteria and Overall Ranking

Rank	Size	Seriousness	Community Resources	Evaluation / Outcomes	Overall Ranking
Overarching Health Issues					
1	Health Access	Health Access	Health Access	Health Info Tech	Health Access
2	Social Determinants	Social Determinants	Social Determinants	Social Determinants	Social Determinants
3	Public Health Infrastructure	Public Health Infrastructure	Health Info Tech	Health Access	Public Health Infrastructure
4	Health Info Tech	Health Info Tech	Public Health Infrastructure	Public Health Infrastructure	Health Info Tech
Health - Related Behaviors					
1	Weight Status	Weight Status	Oral Health	Weight Status	Weight Status
2	Physical Activity	Substance Abuse	Weight Status	Injury & Violence	Physical Activity
3	Oral Health	Physical Activity	Injury & Violence	Physical Activity	Substance Abuse
4	Substance Abuse	Injury & Violence	Physical Activity	Oral Health	Injury & Violence
5	Immunization	Oral Health	Substance Abuse	Substance Abuse	Oral Health
6	Injury & Violence	Immunization	Immunization	Immunization	Immunization
Health Outcomes					
1	Diabetes	Cancer	Mental Health	Mental Health	Diabetes
2	Heart Disease/ Stroke	Heart Disease/ Stroke	Diabetes	Diabetes*	Heart Disease/ Stroke
3	Mental Health	Diabetes	Heart Disease/ Stroke	Respiratory Disease*	Mental Health
4	Cancer	Mental Health	Cancer	Family Planning*	Cancer
5	Respiratory Disease	Respiratory Disease	Infectious Disease	Cancer*	Family Planning
6	Infectious Disease*	Infectious Disease	Respiratory Disease	Infectious Disease	Infectious Disease
7	Family Planning*	Family Planning	Family Planning	Heart Disease/ Stroke	Respiratory Disease

**Items within a particular category denote similar scores or ties in scores. No statistical analysis was applied to this tool, it was designed as a rating tool to assist in the decision making process.*

Selection of Health Issues

One of the key outcomes from the community priority-setting process was identification of which health issues to bring forward for discussion in the community forums and expand upon in the Charting the Course VI report. Key considerations for the selection of the health issues were the availability of data at the regional level and the position of the issues on the spectrum of prevention. To help with the latter consideration, the committee members used the Spectrum of Prevention Framework to help them visualize which issues are most impacted by prevention activities as opposed to treatment.



Based on a review of the priority-setting results and utilizing the Spectrum of Prevention Framework to associate select behaviors with potential health outcomes issues, the Charting the Course VI committee designated the following health issues to be the focus of the in-depth report:

- Health access and delivery
- Social determinants of health
- A combination of nutrition, weight status, physical activity and fitness
- Injury and violence
- Mental health and mental disorders

These issues were felt to have excellent data availability at the sub-regional level (with the exception of mental health data) and they provide a broad enough focus for use by a wide range of potential community organizations.

The committee designated nutrition and weight status, injury and violence, and mental health as topics to be brought forward for discussion in the community forums.

Healthcare Access and Delivery

The American healthcare system, responsible for meeting the needs of over 307 million Americans, consumes nearly one-sixth of the U.S. economy (Census, 2010 and DH&HS, 2010). This chapter will examine the current U.S. healthcare system in terms of some of its most pressing issues and challenges, including increasing cost, the weak economy, rising number of people without health insurance, variable quality of care and outcome disparities. The final section of this chapter will briefly discuss how the healthcare reform, as legislated by the Patient Protection and Affordable Care Act, will address each of these issues.

Recent studies by the Organization for Economic Cooperation and Development (OECD) have evaluated the U.S. healthcare system against various systems in other countries and found that it has not compared well on issues related to cost, access and health outcomes (OECD, 2009).

"Although national health spending is significantly higher than the average rate of other industrialized countries, the U.S. is the only industrialized country that fails to guarantee universal health insurance and coverage is deteriorating, leaving millions without affordable access to preventive and essential health care. Quality of care is highly variable and delivered by a system that is too often poorly coordinated, driving up costs, and putting patients at risk. With rising costs straining family, business, and public budgets, access deteriorating and variable quality, improving health care performance is a matter of national urgency."

Why Not the Best? *Results from a National Scorecard on U.S. Health System Performance* The Commonwealth Fund Commission on a High Performance Health System. September 2006

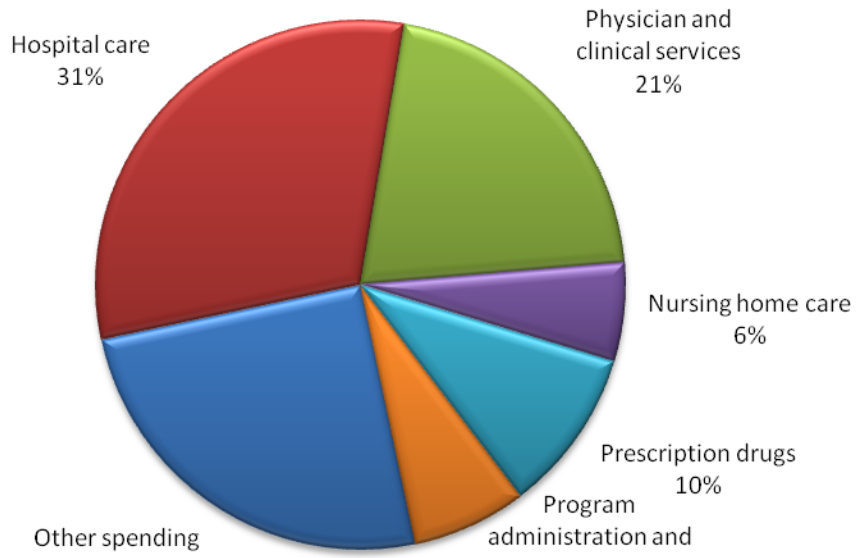
Cost of Care

American citizens spend more of their gross domestic product (GDP) on healthcare than any other developed country (OECD, 2009). Currently, it is estimated that one-sixth (projected to be 17.6 % in 2009) of the U.S. GDP is used to pay for healthcare (DH&HS, 2010). According to a recent OECD report, the average for OECD countries is 8.9%.

The Centers for Medicare and Medicaid Services (CMS) estimated that Americans spent over $2.5 trillion on healthcare in 2009. This equates to $8,160 per U.S. resident (KFF, 2009). CMS projects that by 2018, healthcare spending in the U.S. could reach over $4.3 trillion or $13,100 per resident, and account for 20.3% of GDP.

Overall, healthcare spending in 2008 was fairly evenly split between private and public sources. Private insurance, out-of-pocket and other private sources accounted for 52%, while government programs, including Medicare, Medicaid, SCHIP and other public sources, accounted for 48% (CMS, 2010).

Uses of U.S. Healthcare Funds – 2008

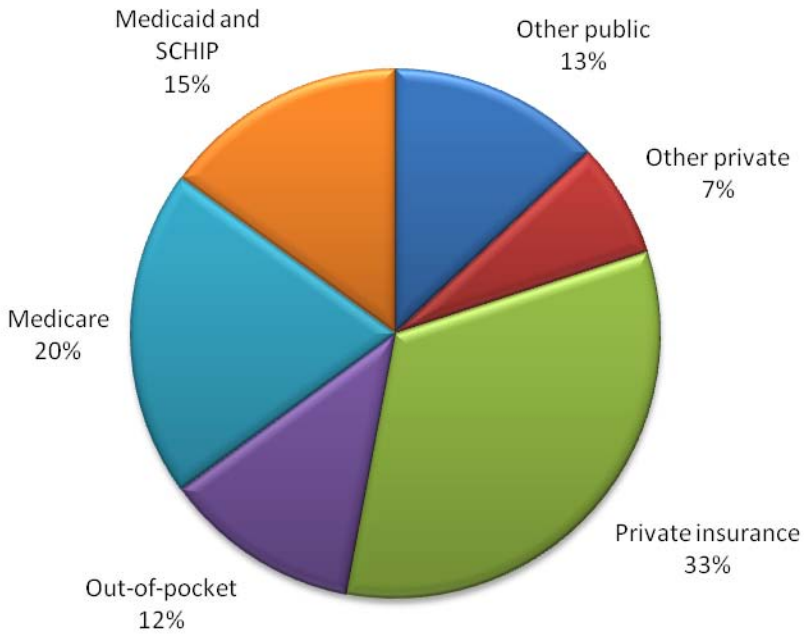


Source: CMS, 2010

CMS projects public spending will increase during the next 10 years as baby boomers become eligible for Medicare.

In 2008, Americans spent 31% of their healthcare dollars on hospital care and 21% on physician and clinical services. Other spending included dentist services, other professional services, home health, durable medical products, over-the-counter medicines, sundries, public health, other personal health care, research and structures, and equipment.

Source of Funding for U.S. Healthcare – 2008



Source: CMS, 2010

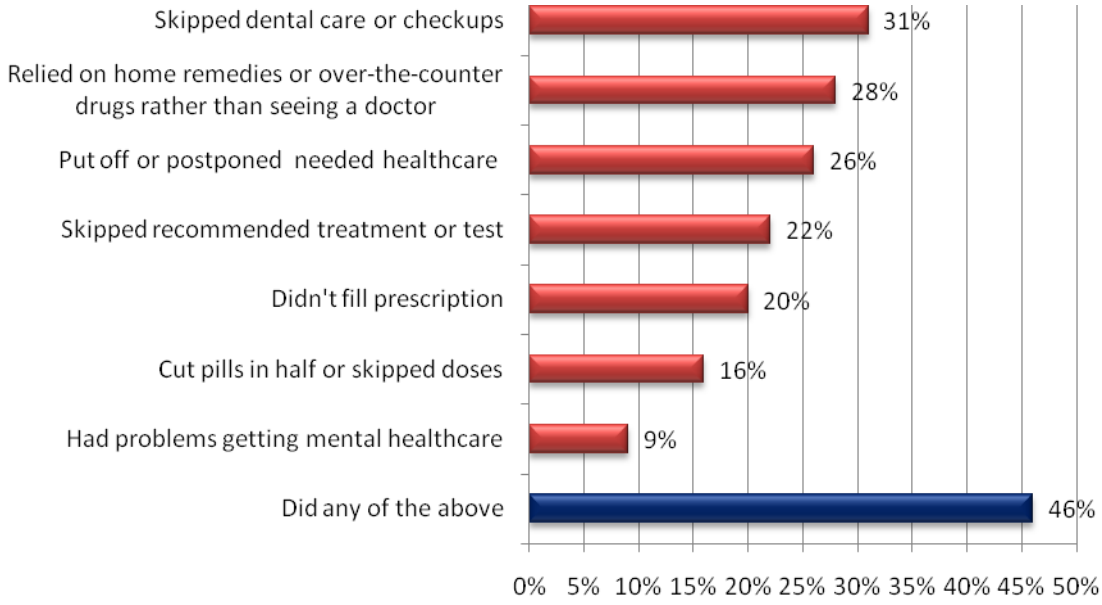
While most of the costs associated with healthcare are paid by either private insurance or government programs, individuals still must pay out-of-pocket costs for healthcare, including health insurance premiums, deductibles and copayments.

A June 2010 study by the Kaiser Family Foundation found 21 percent of Americans have had trouble paying their medical bills during the past year (KFF, 2010). Among those without medical insurance, the rate was significantly higher, with 53% reporting problems. Problems associated with medical bills include being contacted by a collection agency, using savings, not paying other bills, borrowing money and not being able to pay for basic necessities.

Other indicators of difficulties in paying for medical expenses are the actions people are taking to reduce their out-of-pocket costs associated with health care. The 2010 Kaiser survey reported that nearly half of Americans (45%) have taken some action during the past 12 months to reduce their healthcare costs.

Putting Off Care Because of Cost

Percent who say in the past 12 months, they or another family member in their household has done each because of the cost



Source: KFF, 2010

Among those without health insurance, almost three-fourths reported they had delayed or skipped care in the past year. Putting off needed care, relying on home remedies or over-the-counter drugs and skipping dental care were the most frequently mentioned, 62%, 58% and 57%, respectively.

While the costs associated with healthcare continue to increase, there does not seem to be an increase in the quality of healthcare received. A 2008 study by the Agency for Healthcare Research and Quality (AHRQ) found that between 2001 and 2005, total annual healthcare expenditures increased at a rate of 4.6 times the rate of the increase in the summary measure of quality of care. During this period, the annual total healthcare expenditures rose 6.5%, while the quality increased at a rate of 1.4% (NHQR, 2008).

Economic Recession (Impact on coverage, type of coverage and utilization)

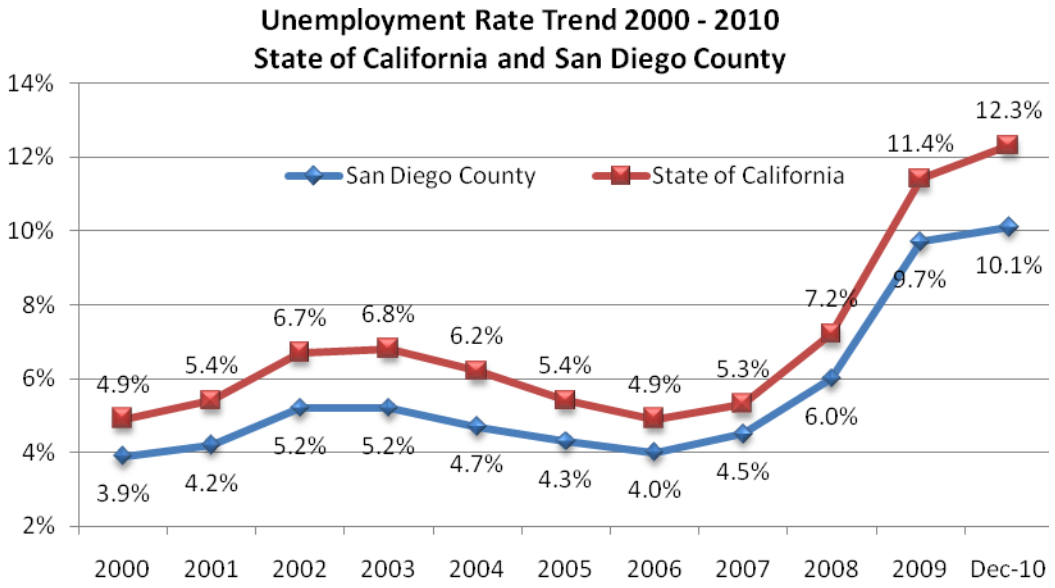
The economic recession that began in December 2007 has been more severe than any economic downturn since the Great Depression.

The National Bureau of Economic Research defines an economic recession as significant decline in the economy which usually lasts for months. The economic downturn is measured in consumer spending, employment, industrial production, real income and wholesale trade. A key indicator of this is two consecutive quarters of negative growth, which is measured by the gross domestic product.

The Business Cycle Dating Committee of the National Bureau of Economic Research indicated the most current recession began in December 2007 and ended in June of 2009. This recession lasted 18 months, which makes it the longest of any recession since World War II. Previously the longest postwar recessions were those of 1973-75 and 1981-82, both of which lasted 16 months (NBER, 2010).

On an individual basis, if impacted by the recession, the most frequent symptom is a decline in income precipitated by a loss of employment or curtailment of hours worked. Depending on the length of unemployment and the individual's financial reserves, the consequences of a recession can range from fiscal belt tightening to financial devastation.

During the past 10 years, the unemployment rate in San Diego County has varied from 3.9% in 2000 to 10.6% in September 2010.



Source: EDD, 2011

There are many health consequences of losing a job; some of these include:

Changes in Health Insurance Coverage **–** Losing a job often means people lose their health insurance. In 2009, more than one in five adults under age 65 (22%) were uninsured, which puts their health and financial security at risk. While some people can use the health insurance benefits available under the Consolidated Omnibus Budget Reconciliation Act (COBRA), which allows them to continue paying their

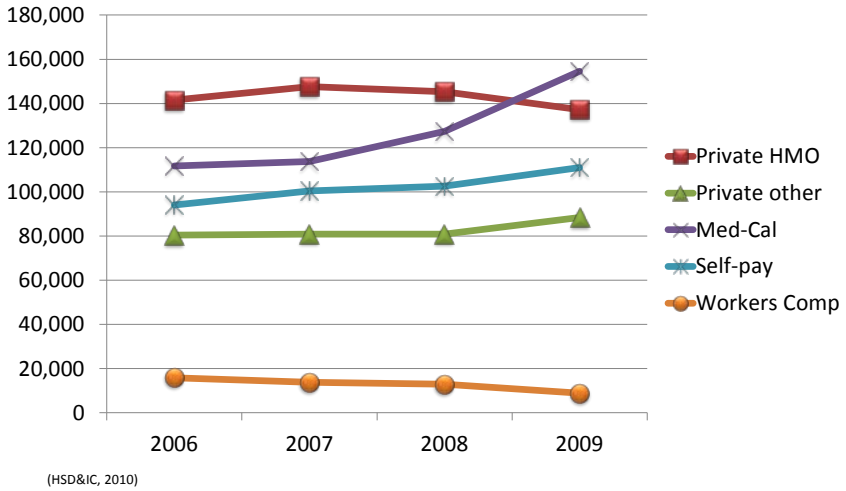
own premiums for up to 18 months after job loss, the cost is often prohibitive for someone who has just lost his or her income.

Current insurance estimates provided by the UCLA Center for Health Policy Research indicate that 22.9% of those under age 64 living in San Diego County are currently uninsured. Statewide, the uninsured rate was 24.3% (LA Times, 2010). This data was derived from 2007 California Health Interview Survey (CHIS), county unemployment and household income data, and county-level Medi-Cal and Healthy Families public health insurance enrollment data from 2007 to 2009. Additional information about insurance coverage from the 2009 CHIS is expected to be released in February 2011.

Changes in Healthcare Utilization – Providers' reluctance to treat uninsured patients frequently results in many uninsured adults not having a usual source of healthcare. A recent study by Kaiser Family Foundation indicated that over half of uninsured adults have no regular source of healthcare. Moreover, because of concerns about high medical bills, they are more than twice as likely to delay or forgo needed care (KFF, 2010).

Higher Emergency Department Utilization – Rising rates of the uninsured may be reflected in higher use of emergency departments, which by law must provide at least stabilizing care to all patients regardless of ability to pay. Review of San Diego County ED discharges by source of payment between 2006 and 2009 found the demand for ED services increased by 11.9%, from 582,129 to 651,595 visits. (Note: discharges with missing payor information have been excluded from this analysis.) In addition, several shifts in payor sources were noted, including a decline in private HMO and Worker Compensation ED discharges and increases in both self-pay and Medi-Cal ED discharges. The decline in private HMO coverage was offset by a slight increase in other private insurance. The increase in self-pay and Medi-Cal discharges suggests more patients are relying on ED care due to lack of insurance coverage.

Emergency Department Discharges by Payor Source
San Diego County, 2006 – 2009



(HSD&IC, 2010)

Higher Primary Care Clinic Utilization – Community clinics in San Diego County have experienced rising rates of primary care clinic utilization. Review of the California Office of Statewide Health Planning and

Development Annual Utilization Report of Primary Care Clinics between 2005 and 2009 found that the number of persons utilizing the clinics has increased by 32.7%. Between 2008 and 2009, utilization increased by 14.4% (OSHPD, 2010)

Competing Demands for the Family Budget – The loss of income, jobs and assets associated with a recession forces families in distress to make choices about how they will use their limited resources. For many, that means deciding among competing demands for food, housing and healthcare (Ku, 2009).

Impact on Hospitals – A special report issued by the California Hospital Association in July 2009, highlighted some of the serious negative impacts the economic recession is having on California hospitals (CHA, 2009). These include:

- Decreases in total operating margins – 45% of hospitals reported decreases in operating margins.
- Declining reimbursement rates – During the first quarter of 2009, 51% of hospitals reported an increase in patients covered by Medi-Cal.
- Increases in bad debt and charity care costs – 60% of hospitals reported an increase in bad debt and charity care provided.
- Increases in non-payment of hospital bills – During 2009, bad-debt expenses rose 14% due to patients' inability to cover their cost of care, even if they had health coverage.
- Declines in the number of elective procedures – 58% of hospitals reported a decrease in elective procedures and 51% reported an overall decrease in admissions.

Health Insurance Coverage

The U.S. Census Bureau reported recently that the number of people with health insurance in the United States has dropped for the first time in 23 years. According to the latest data available, there were 253.6 million people with health insurance in 2009, down from 255.1 million in 2008. This marks the first time that a decline was noted in the number of people with health insurance since the government started collecting insurance coverage data in 1987 (Census, 2010).

The U.S. Census Bureau's *Current Population Report Income, Poverty and Health Insurance Coverage in the United States: 2009,* reported the following.

IOM Findings on the Consequences of Uninsurance

The clinical literature overwhelmingly shows that uninsured people, children as well as adults, suffer worse health and die sooner than those with insurance. Families with even one member who is uninsured lose peace of mind and can become burdened with enormous medical bills. Uninsurance at the community level is associated with financial instability of healthcare providers and institutions, reduced hospital services and capacity, and significant cuts in public health programs, which may diminish access to certain types of care for all residents, even those who have coverage. The economic vitality of the nation is limited by the productivity lost as a result of the poorer health and premature death or disability of uninsured workers.

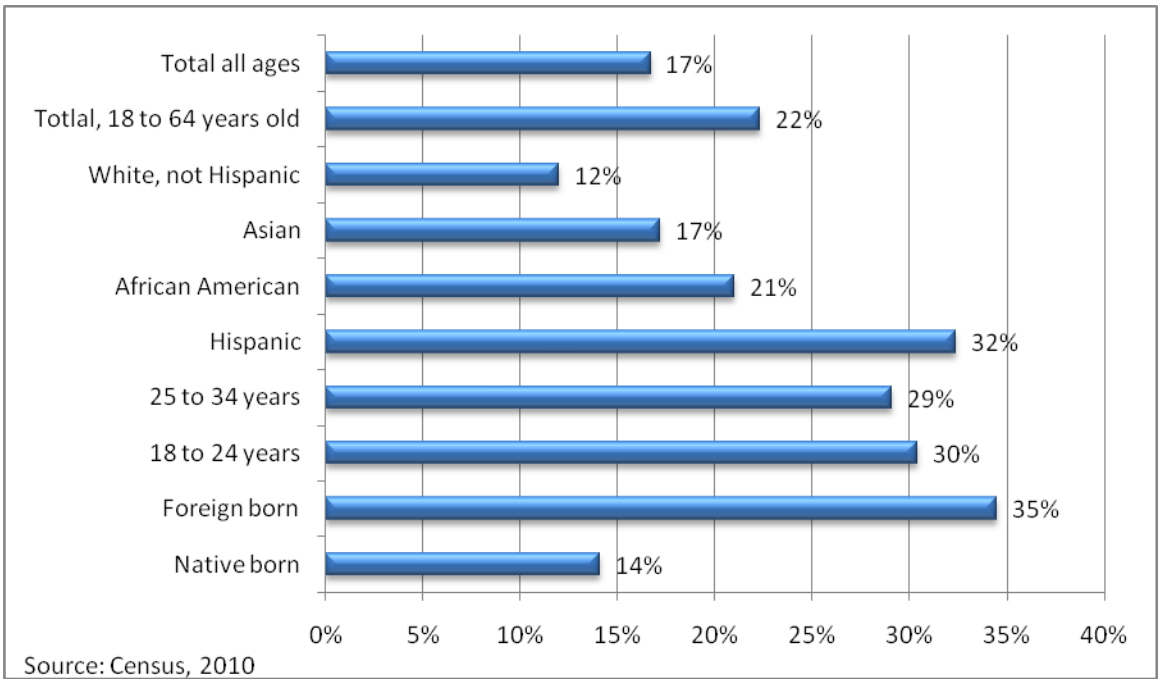
America's Uninsured Crisis (IOM, 2009)

Status	2006	2007	2008	2009
Number uninsured (in millions)	47.0	45.7	46.3	50.7
Uninsured percent	15.8%	15.3%	15.4%	16.7%
Number covered by private health insurance (in millions)	201.7	202.0	201.0	194.5
Number covered by government health insurance (in millions)	80.3	83.0	87.4	93.2
Percent covered by employment-based health insurance	59.7%	59.3%	58.5%	55.8%

Nearly every demographic group experienced a significant rise in the uninsured rate between 2008 and 2009, with the exception of children, who remained stable at about 10%. Review of the 2009 uninsured

rates across different demographic groups found a number of disparities, as shown in the following chart.

People in the U.S. without Health Insurance Coverage by Select Characteristics – 2009



Race and Ethnicity

In 2009, the uninsured rate and number of uninsured among non-Hispanic whites, African Americans and Hispanics increased from 2008 levels. The uninsured rate for Asians in 2009 was not statistically different from 2008.

Age

The uninsured rate for those under 65 increased in 2009 to 18.8% from 17.3% in 2008. Only the rate among children without health insurance under 18 (10.0%) did not change significantly from 2008.

Nativity

The uninsured rate of both the native-born population and foreign-born population increased to 14.1% and 34.5%, respectively. Among foreign-born non-citizens the uninsured rate in 2009 was 46.0%.

Economic Status

Among the four household income categories, the uninsured rate in 2009 was significantly higher than in 2008 for three categories: less than $25,000, $50,000 to $74,999 and $75,000 or more, 26.6%, 16.0% and 9.1%, respectively.

Region

Between 2008 and 2009, the uninsured rate increased in all four regions – 11.6% to 12.4% in the Northeast; 11.6% to 12.4% in the Midwest; 17.4% to 18.3% in the West and 18.2% to 19.7% in the South. All of these increases were significant.

Healthcare Quality

Defining healthcare quality is complex and can have many dimensions. The definitions used by the Institute of Medicine and the U.S. Agency for Healthcare Research and Quality provide a good starting point for a discussion of healthcare quality.

"The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge." (IOM, 2001)

"Quality health care means doing the right thing at the right time in the right way for the right person and having the best results possible." (AHRQ, 1998)

Since 2003, the AHRQ has led the effort to develop The National Health Care Quality Report as a conceptual framework for measuring the performance improvement of the U.S. health system in its provision of high-quality care. The framework addresses two main dimensions: health care quality and consumer perspectives on health care needs. Components of the health care quality dimension include:

- Safety – Avoiding injuries to patients from the care that is intended to help them.
- Effectiveness – Providing healthcare services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit.
- Patient-centeredness – Providing healthcare that is in partnership with practitioners, patients and their families (when appropriate) to ensure that decisions respect patients' wants, needs and preferences and that patients have the education and support they need to make decisions and participate in their own care.
- Timeliness – Providing healthcare without delay after a need is recognized. Measures of timeliness include time spent waiting in doctors' offices and emergency departments and the interval between identifying a need for specific tests and treatments and actually receiving those services.

Consumer perspectives on health care needs and reasons for seeking care are:

- Staying healthy (preventive care) – Caring for healthy people is an important component of health care. Educating people about healthy behaviors can help postpone or avoid illness and disease. Additionally, detecting health problems at an early stage increases the chances of effectively treating them, often reducing suffering and expenditures.
- Getting better (treatment for acute illness) – When acute care is needed, delivering optimal treatments for acute illness can help reduce the consequences of illness and promote the best recovery possible.
- Living with illness or disability (chronic disease management) – Chronic diseases such as diabetes must be managed across a lifetime and often involve lifestyle changes and regular contact with a provider to monitor the status of the disease. Effective management of a chronic disease can mean the difference between normal, healthy living and frequent medical problems.
- Coping with the end of life.

Utilizing process and outcome measures, healthcare quality is evaluated in several ways, including:

- Clinical performance measures of how well providers deliver specific services needed by specific patients, such as whether children get the immunizations they need.
- Assessments by patients of how well providers meet health care needs from the patient's perspective, such as whether providers communicate clearly.
- Outcome measures, such as death rates from cancers preventable by screening, that may be affected by the quality of healthcare received.

The following briefly highlights some of the key findings from the 2009 National Healthcare Quality Report published by AHRQ (NHQR, 2009). These include:

- Healthcare quality in America is suboptimal.
- There is a substantial gap between best possible care and that which is routinely delivered.
- The quality of healthcare delivered varies widely. For example, caregivers reported that 95% of hospice patients received the right amount of pain medication, but only 8% of patients needing care for alcohol problems received such treatment at a specialty facility.
- Across the core NHQR report measures tracked, the median level of receipt of needed services was 58%.
- Despite efforts to improve the effectiveness of preventive and chronic illness care in the U.S. health care system, it continues to perform better when delivering diagnostic and therapeutic care in response to acute medical problems. The U.S. healthcare system achieves higher performance on hospital measures, such as acute treatment for heart attacks, than on outpatient measures, such as cancer screening and diabetes management. In fact, all 10 of the worst-performing process measures tracked in the 2009 NHQR are measures of outpatient care, and six are related to preventive services.

- There are significant disparities in care for individuals without health insurance. In fact, the quality of care for those without health insurance is getting worse. Uninsured people are less likely to get recommended care for disease prevention and management. Large differences were observed between individuals with private insurance and those with no insurance for measures related to:
    - Preventive services, including cancer screening, dental care, counseling about diet and exercise, and flu vaccination.
    - Diabetes management.
- The analysis of trends for 2009 NHQR finds that quality improvements are and continue to be unevenly spread across the settings of care. Some areas have shown increasing rates of improvement, while improvements in other areas have slowed. For example, care delivered in hospitals improved at an annual rate of change of almost 6%, which continues to be the highest rate of quality improvement among the major health care delivery settings. In contrast, care in outpatient settings improved at a rate that only slightly exceeded 1%.
    - Measures of hospital care improve more quickly than measures of outpatient care.
    - Measures of acute treatment improve more quickly than measures of preventive care and chronic disease management.

Healthcare Disparities

Healthcare disparities are the differences or gaps in care experienced by one population compared with another. The National Healthcare Disparities Report (NHDR) shows that some Americans receive worse care than other Americans. Within the scope of healthcare delivery, these disparities may be due to differences in access to care, provider biases, poor provider-patient communication, poor health literacy, or other factors (NHDR, 2009).

Review of the 2009 NHDR found three major themes:

- Disparities are common and uninsurance is an important contributor. Disparities related to uninsurance were found in almost all aspects of healthcare, including:
    - All dimensions of health care quality — effectiveness, patient safety, timeliness and patient centeredness
    - All dimensions of access to care
    - In many types of care — preventive care, treatment of acute conditions and management of chronic diseases
    - For many clinical conditions — cancer, diabetes, end stage renal disease, heart disease, HIV disease, mental health and substance abuse, and respiratory diseases
    - In many care settings — primary care, home health care, hospice care, emergency departments, hospitals and nursing homes.

- Within many subpopulations — women, children, older adults, residents of rural areas and individuals with disabilities and other special health care needs.

- Many disparities are not decreasing. In fact, quality of care and access to care measures during the past five years show that disparities persist for all populations.

Healthcare Reform -- Patient Protection and Affordable Care Act (P.L. 111-148)

The healthcare reforms contained in the Patient Protection and Affordable Care Act (ACA) have the potential to dramatically change American healthcare. According to a recent analysis of ACA, the five key strategies contained in the law (TCF, 2010) include:

- Making health insurance coverage more available and affordable
- Creating incentives to improve quality and achieve savings
- Organizing care delivery systems to ensure accountable, accessible, patient-centered, coordinated care
- Creating standards and goals for better health outcomes, higher quality and greater efficiency
- Developing leadership and public–private collaboration to set and achieve national goals

During the first five years of ACA, many provisions will be phased in. The following briefly highlights some of the major provisions of ACA, by year of implementation, that address the issues of cost, access and quality improvement. Items presented in this table are based on an analysis of ACA by The Commonwealth Fund.

Year	Provision of the ACA	Cost	Access	Quality
2010				
	Coverage for young adults: Parents will be able to keep their children on their health policies until they turn 26		✓	
	Preexisting condition insurance plan: People with preexisting conditions who have been uninsured for at least six months will have access to affordable insurance.		✓	
	New insurance rules: Insurance companies will be banned from rescinding people's coverage when they get sick.		✓	
	Protection for children: Insurers can no longer deny health coverage to children with preexisting conditions or exclude their conditions for coverage.		✓	
	Preventive care: All new group and individual health plans will be required to provide free preventive care for recommended preventive services and immunizations.			✓
	Access to care: Additional funding for community health centers and the National Health Services Corps to serve more low-income and uninsured people.		✓	

Year	Provision of the ACA	Cost	Access	Quality
2011				
	Physician quality reporting: Medicare will provide information to beneficiaries allowing them to compare measures of physician quality and patient experience.			✓
	Limits on non-medical spending by health plans: Health plans will be required to offer rebates to enrollees if they spend less than a designated percent of their premiums on medical care (80% or 85% depending on the type of market).	✓		
	"Doughnut-hole" discounts: Medicare beneficiaries who hit the Part D prescription drug coverage gap will receive 50% discounts on all brand-name drugs.	✓		
2012				
	Hospital readmissions: Medicare will reduce payments to hospitals for potentially preventable readmission for select conditions.			✓
	Hospital value-based purchasing program: Medicare will reward hospitals that provide higher quality or better patient outcomes.			✓
	Accountable care: Medicare will launch a program that encourages providers to organize into accountable care organizations, which will share in savings generated by meeting quality targets and reducing costs.	✓		✓
2013				
	Preventive services in Medicaid: The current state Medicaid option to provide diagnostic, screening, preventive and rehabilitation services will be expanded to include more services.			✓
2014				
	Insurance industry fee: Insurers will pay an annual fee, based on market share, to help pay for reform.	✓		
	Insurance exchanges: New state-based marketplaces will offer small businesses and people without employer coverage a choice of affordable health plans that meet new, essential benefits standards.		✓	
	New rules for insurers: Insurers will be banned from restricting coverage or basing premiums on health status or gender.		✓	
	Premium subsidies: Premium and cost-sharing assistance on a sliding scale will make coverage affordable for families with annual incomes between $30,000 and $88,000 that buy plans through the exchanges.		✓	

Year	Provision of the ACA	Cost	Access	Quality
	Shared responsibility for coverage: Individuals will be required to carry health insurance or pay a penalty, with some exceptions, and employers with 50 or more workers will be required to offer health benefits or be subject to a fine of $2,000 per employee (not counting the first 30 employees) if any worker receives federal premium subsidies for plans purchased through the insurance exchanges.		✓	
	Medicaid expansion: Medicaid eligibility will be expanded to all legal residents with incomes up to 133 percent of the federal poverty level.		✓	
	Medicare managed care plans: Four- and five-star Medicare private plans will receive 5% bonuses as a reward for providing better clinical quality and patient experiences.			✓

While under ACA, 32 million additional Americans will be able to obtain coverage by 2019, a major shortfall still exists: an estimated 23 million people uninsured, and many others who will still face financial barriers to obtaining needed care or face hardship in paying premiums or medical bills (TCF, 2010).

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SOCIAL DETERMINANTS OF HEALTH

Social determinants of health refer to factors and resources that are essential to the health of communities and individuals. These include income, shelter, education, access to nutritious food, services, community norms and cohesion, and social justice. They are the circumstances in which people are born, grow up, live and work and the resources available to support their health and help them deal effectively with illness and disease. They can be described in terms of factors threatening health, promoting health and protecting health (Dahlgren and Whitehead, 1991). From the perspective of a health Charting the Course VI, the social determinants of health can provide a lens through which to view different populations and communities in terms of which social determinants are most important in impacting the population's health and which contribute to the root causes of the negative issues impacting the population's health.

> Why treat people's illnesses without changing the conditions that made them sick? (WHO, 2008)

Research on social determinants of health suggests there are three overarching factors (CTB, 2010), these are:

- **Income inequality** – Income inequality describes the extent to which income is distributed unevenly among residents of a region. By most measures, income inequality has increased steadily in the United States during the past four decades (Community Vitality Project, 2008).
- **Social connectedness** – Various studies indicate that "belonging," whether to a large extended family, a network of friends, a social or volunteer organization, or a faith community, is related to longer life and better health, as well as to community participation.
- **Sense of personal or collective efficacy** – This refers to people's sense of control over their lives. People with a higher sense of efficacy tend to live longer, maintain better health, and participate more vigorously in civic life.

Utilizing social determinants of health to help understand and solve health issues in a neighborhood or other geographic area requires an in-depth understanding of how social determinants may affect various populations living in the area of interest. The following is drawn from the materials published by Phil Rabinowitz and his colleagues at the University of Kansas Community Tool Box (CBT) and provides a brief overview of the what, why, who, when and how of addressing the social determinants of health (CBT, 2010).

First, it is important to understand that all communities and/or population subgroups are unique and many factors influence how social determinants may affect these subgroups. Their differences include:

- **Differences in exposure** – Because of economics, geography or other factors, some populations may be more likely than others to encounter particular health risks. For example, those living in

poverty are more likely to be exposed to higher levels of stress, depression, economic uncertainty and unhealthy living conditions than those with higher incomes.

- **Differences in vulnerability** – Due to poverty, exposure to stress and uncertainty, or other factors, this same population might be more vulnerable than others to health problems. Often, because of their inability to pay for regular healthcare or medical treatment, they are at an increased risk of chronic illness.
- **Differences in consequences** – Differences in wealth, social standing, connectedness and other factors can lead to very different health outcomes. For example, a minor health problem for a middle or upper-income family might be considered annoyance because of having to miss a few days of work and pay out-of-pocket for medical treatment. For a poor family, however, these same decisions can mean the difference between paying the rent and being homeless or between buying medicine and putting food on the table. Disparities in health and healthcare are the result of many factors, including discrimination and employment status.

When examining the social determinants of health, you must address 10 factors. (Solid Facts, 2003) These factors include:

Economic factors	Unemployment is one of the most critical economic factors impacting a person's health. In fact, the negative health effects typically begin when an individual first feels their job is threatened. Issues related to job insecurity and unemployment include anxiety and depression, substance abuse, domestic violence, and physical illness.
Social inclusion	Social inclusion describes the connectedness and cohesion people have with their community. It has been shown to have a direct relationship to good health and lower mortality rates. As people put in more hours at work, they have less time for friends, family, volunteering, leisure and recreation. Social exclusion from participation in and access to opportunities and activities of community life is a major impact of poverty.
Education	More education means not only better jobs and more affluence, but also a greater sense of control over one's life. People with more education have more choices in health, housing, careers and other areas that affect the quality of their lives.
Racial or ethnic bias	Racial or ethnic bias and discrimination are forms of social exclusion, often resulting in differences in levels of healthcare, education or other services. Depending on the community, discrimination may be aimed at almost any racial or ethnic group.

Community acceptance of particular behaviors or practices	Certain activities or behaviors, such as gang membership, alcohol and drug abuse, or smoking, may be an accepted part of a community's culture. Acceptance of these behaviors may result in more people adopting such behaviors.
Cultural factors	There are many facets of culture that impact the social determinants of health. These include gender roles, food preferences, religion, attitudes toward mainstream culture, beliefs about the causes of illness and disease, and language barriers.
Influence of mass media	Media, including movies, radio, magazines and TV can help or hinder health improvement efforts through the messages sent about health.
Politics	Almost all health issues are political to some degree.
Living conditions	Poor or inadequate housing, dangerous streets, noise and rundown neighborhoods impact those who experience them every day.
Geography	Location often has a great deal to do with whether people receive needed services in a timely manner. Even in urban areas, poor neighborhoods frequently have less access to affordable fresh and healthy foods when compared to higher income neighborhoods.

Why address social determinants of health?

There are a number of reasons to address the social determinants of health when attempting to solve or prevent a health related problem. Experience has shown that simply treating the symptoms of a disease or social issue will not solve the problem.

Root cause – To effectively resolve a problem, we must first identify, understand and effectively address the root cause of the problem to bring about fundamental changes. In terms of social determinants, the root causes may be found in one or more of the 10 social factors. For example, a common health issue among some populations is the lack of preventive care they receive. Some of the possible root causes for this may include low levels of education, cultural beliefs about illness and disease, poor economic conditions or geographical barriers. All of these social determinants are likely to impact an individual's willingness to participate in preventive care and must be considered and addressed, if relevant, when planning a program designed to increase access to preventive care services.

Social factors – The social ecological model provides an excellent framework for understanding how social factors may need to be addressed to effectively approach some health issues. An example of this approach is to explore the health issues related to lack of regular physical activity. When examined in the context of social determinants, barriers to regular physical activity may include low levels of

education, living conditions (unsafe neighborhoods), geography (lack of open space, parks or sidewalks), and economic factors (limited time, lack of childcare).

Addressing the social determinants of a health issue is part of the critical thinking process that is essential to understanding the issue fully, so that any strategies and tactics developed for addressing the issue correspond to reality. Strategies have a higher likelihood of failure if they do not address the root causes and social factors related to the issue.

Who should address social determinants of health?

Everyone involved in health related program development must consider the issues being addressed in the context of the social determinants of health. This includes those affected by the issue as well as those addressing the issue, to ensure that everyone knows its full context and history, as well as what various segments of the community might be willing and unwilling to do about it. Those involved may include:

- Those directly affected by the issue: This would include people at risk for, or already subject to, a particular health condition, or potential victims. For example, victims of violence might benefit from a violence prevention program. Groups that often fall into these categories are the poor, those who may feel discriminated against or marginalized, and those without a connection to power in the community.

- Policy makers, legislators, officials or others who can directly affect the issue.

- Agency staff and administrators or others who are responsible for dealing directly with the issue. Some possibilities might be health and human services personnel, police officers, teachers and other educators, coalition members, and local officials.

- Respected local figures, including community advocates, clergy and others in the community to whom people turn for support.

- Members of groups that may be asked to change or sacrifice or take action in order to address the issue. Employers, landlords and other property owners, health and human services workers, police, and teachers all might fall into this category.

When to address social determinants of health?

Social determinants of health should be looked at to determine their role in health issues impacting the individuals, neighborhoods or geographic area of interest. There are times when an analysis of these factors may be particularly important, including:

- When efforts to improve a health issue have not produced the desired change — An example of this might be the challenges presented by trying to improve the nutrition and activity levels of persons living in very low-income neighborhoods. Until some of the material conditions in these neighborhoods are addressed, i.e., lack of food outlets, crime, poverty and lack of safe open space, activities focused on changing individual behaviors will have minimal impact on the health issues.
- When advocating for legislation, policy change or funding to address an issue — The legislation, policy, or funding must address the underlying causes of the problem it is trying to solve, as well as its symptoms. Otherwise the symptoms will continue to reoccur.
- When trying to demonstrate that fundamental change is needed — Changing individual behaviors and attitudes is difficult. Trying to change the behaviors and attitudes of an entire community may seem impossible. Being able to explain how desired changes are related to positive results, both at the individual and community level, may make this process easier and increase the likelihood of success.
- When looking for long-term solutions to long-term problems — Long-term solutions are impossible without taking into account the root causes of the problems needing to be solved. Analyzing the social determinants of those problems makes it possible to address them and develop permanent solutions.
- When focusing on community wellness and prevention — Whether trying to prevent disease or chronic conditions, or trying to create a healthy community, examining the issue through the lens of the social determinants will increase the likelihood of success.

How to address social determinants of health?

There are two steps to addressing social determinants. The first is identifying how various social factors affect the issue of concern and the second is the development and implementation of an action plan based on an understanding of how to approach the issue in order to successfully make changes in a way that will resolve the problem. The following has been adapted from The Community Tool Box, Chapter 17 – Addressing Social Determinants of Health and Development, and is based on a concept paper by Steve Fawcett and colleagues, World Health Organization Collaborating Center for Community Health and Development, University of Kansas (CTB, 2010).

Step 1 – Assess the neighborhood or community in which social determinants are most impacting the issue. The purpose of this phase is to identify which social determinants of health are impacting the issue at hand. The process typically starts by talking to people:

- Neighborhood and community leaders
- Members of the group most affected by the issue
- Government officials
- Staff and volunteers of non-governmental health and community development organizations
- Community activists and organizers
- Anyone who has a stake in the issue you are trying to address

> *"Environmental" refers not just to the natural environment, but to the total environment of the people in question. This includes the built environment such as buildings, roads, sidewalks, parks, schools, stores and open spaces. It also includes the social environment – culture, social rules and norms, business, education, economics, etc. In the context of social determinants of health, the term "environment" encompasses all the natural and human physical, social, economic, and political structures that surround people's lives* (CTB, 2010).

This phase can be achieved through both informal and formal methods including:

Informal

- Informal conversations
- Listening and observation at gatherings held for other purposes
- Learning about community history

Formal

- Individual interviews
- Group interviews
- Focus groups
- Community meetings

Step 1 will increase the understanding of what social determinants are impacting the issue being examined. By asking the right questions, a picture of the neighborhood or community can be developed showing those most affected, how they are affected, identification of possible barriers to change, what interests are at stake, the potential costs of action and inaction, and who will pay them.

Step 2 – Addressing social determinants. Trying to change huge issues impacting health, such as economic inequality, which has existed since the beginning of time, can be almost impossible. Rather, by using elements within the social determinants of the health model, such as environmental and policy conditions, it can be possible to affect differences in the exposure, vulnerability and consequences of certain types of health issues. Examples of how to address determinants of health related to environmental and policy conditions include:

- **Knowledge and skills** – Helping people gain knowledge and skills can be an intervention in itself or it can be part of a broader intervention to provide participants with tools needed to improve their health and lives. Literacy classes are an example of type of intervention that gives people who have typically been powerless the ability to take more control of their lives and provide long-term opportunities for economic improvement.
- **Working together with others in the community** – Working together with other individuals and groups within the community to address problems can provide access to needed goods and services. By organizing and bringing groups together at the community level to advocate for their interest, groups will be able to deal more effectively with governmental agencies.
- **Success breeds success** – Because there are consequences of actions, it is critical that any actions be planned in small steps so people can easily experience success. If the process is difficult, slow and tedious, and often ends in failure, it won't be long before people stop trying. A series of small successes rather than a grand failure is more likely to develop a sense of efficacy and keep people moving ahead.
- **Policies** – Community health is impacted by a wide array of policies related to environmental issues, law enforcement, education, housing and social welfare. Changing or instituting policy is generally a matter of advocacy. Policies can, and do, affect differences in exposure, vulnerability and consequences that create less healthy conditions for populations at risk. Policy change, while difficult, is in the long run the most effective means of improving health outcomes because it can lead to real social change.

In summary, there are two critical goals of addressing social determinants. First is strengthening the ability of the community to sustain the changes that an intervention brings about. If a population is malnourished, giving them food is only a temporary solution: helping them to develop self-sufficient and sustainable farming practices, or training them for necessary and available work, on the other hand, can be a permanent fix.

The second goal is to take on tasks that can actually be accomplished. Success breeds success, and an effort is far more likely to be successful when attempting something that's challenging but doable. A task that has been accomplished forms a foundation from which to address the next issue, or the next level of issues.

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WEIGHT STATUS, NUTRITION, ACTIVITY AND FITNESS

Overweight and Obesity Among Adults

Nationally, the prevalence of obese adults (those with a body mass index [BMI] of 30 or more) has increased by 68% since 1995, from 16% to almost 27%. During this same period, the prevalence of overweight adults has increased by only two percent, 35.5% to 36.2%.

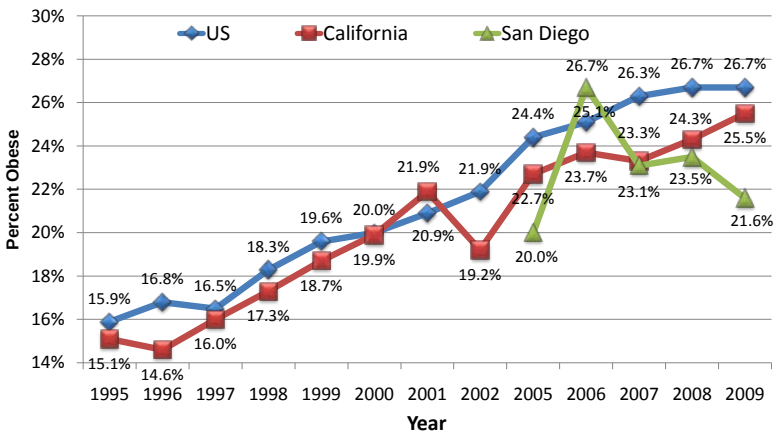
2009 Behavioral Risk Factor Surveillance System (BRFSS) data for San Diego County indicates that almost 59% of the adult population is considered either overweight or obese. Since 2005, the first year BRFSS data was reported for San Diego County, the prevalence of obese adults has ranged from 20% in 2005 to 26.7% in 2006, with the most current measure at 21.6%

Since 2006, the prevalence of overweight adults in San Diego County has increased slightly from 36.5% to 37.7%.

Review of adult overweight and obesity prevalence data by ethnicity, race and gender indicates the prevalence rates of obesity among Latinos and African Americans are significantly higher than those for whites at the national, state and county levels.

Obese

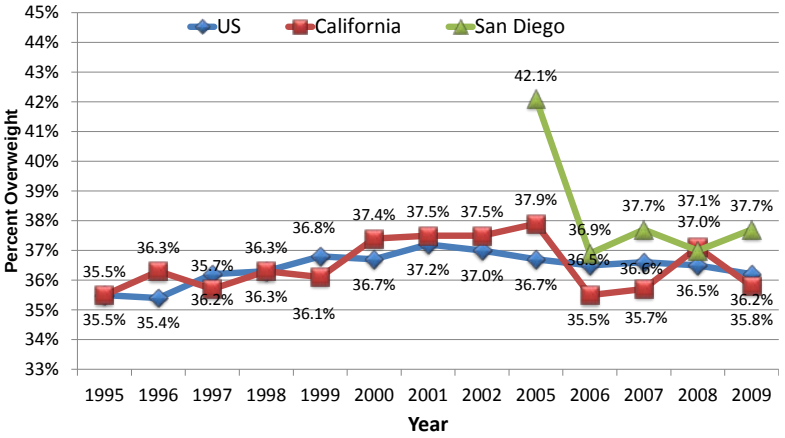
Adults Age 18 and Older with a BMI ≥ 30
National, California and San Diego County Trends



Behavioral Risk Factor Surveillance System (BRFSS), 1995 - 2009

Overweight

Adults Age 18 and Older with a BMI of 25 – 29.9
National, California and San Diego County Trends



Behavioral Risk Factor Surveillance System (BRFSS), 1995 - 2009

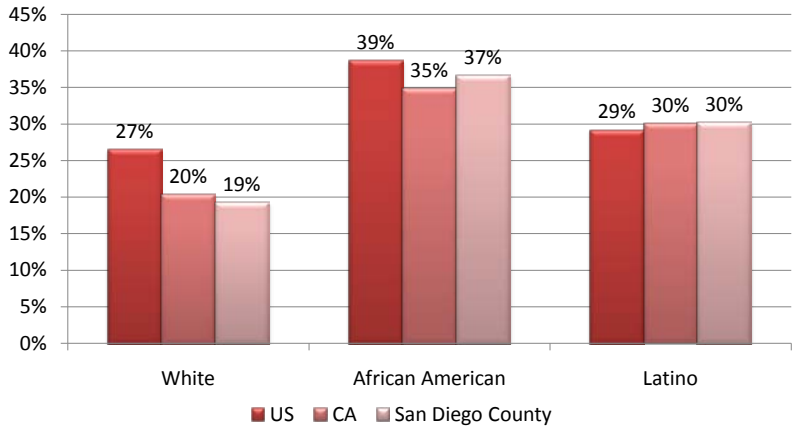
Obesity rates by gender also varied significantly in the 2007 California Health Interview Survey (CHIS), the most recent county level data available by gender, with 25.4% of males and 18.1% of females having a BMI of 30.0 or higher. Moreover, males were significantly more likely to be overweight (BMI between 25.0 and 29.99) than females, 40.5% and 25.8%, respectively.

Review of obesity and overweight rates for San Diego County for other demographics variables contained in the CHIS found the following significant differences in prevalence rates:

- Those with less than a BS/BA degree were twice as likely to be obese than those with a BS/BA degree or higher, 26.4% and 13.8%, respectively.
- Obesity prevalence rates among persons ages 25 to 64 were higher than for those 18 to 24 and 65 or older, 24.1%, 12.2% and 18.1%, respectively.
- Persons reporting their general health as very good or excellent had lower rates of obesity compared to all others, 13.2% and 32.6%, respectively.
- Obesity prevalence rates among the disabled were higher than among those not disabled, 19.1% and 28.7%, respectively.
- Persons with mental disorders, based on having taken prescription medicine for an emotional/mental health issue in the past year, had a higher rate of being obese or overweight compared to others, 64.7% and 53.6%, respectively.

Obesity Prevalence Rate

US (2009), CA & San Diego (2007) by Race/Ethnicity
Respondents 18 years or Older



(2009 BRFSS & 2007 CHIS)

Why Use BMI?

Calculating BMI is a widely used method for population assessment of overweight and obesity. Because calculation requires only height and weight, it is inexpensive and easy to use for clinicians and for the general public. The use of BMI allows people to compare their own weight status to that of the general population.

Limitations of BMI

BMI is not a direct measure of body composition but an estimate of body fat and a gauge of a person's risk for diseases that can occur with more body fat. Because BMI does not distinguish between lean tissue and body fat, it has limitations for persons such as well-trained athletes, who may have a high BMI due to increased muscle mass instead of increased fatness (CDC, 2010).

Overweight and Obesity among Children and Adolescents

Assessing if a child is at a healthy weight is a more complex process than for an adult. A widely used screening method is the children's BMI classification system, which provides a BMI number that is then plotted on a Centers for Disease Control (CDC) BMI-for-age growth chart for the appropriate gender to obtain a percentile ranking. These percentiles indicate the relative position of the child's BMI number among children of the same sex and age. The growth chart shows the weight status categories of either underweight, healthy weight, overweight or obese. The percentile range for overweight is 85th to less than the 95th percentile and the obese range is equal to or greater than the 95th percentile (CDC, 2009).

Utilizing this process, the prevalence rates for overweight and obese children and adolescents has been measured and published in a variety of sources, including California State Board of Educations physical fitness test (PFT), CHIS, and Youth Risk Behavior Surveillance System (YRBSS). The challenge is finding children and adolescent overweight and obesity prevalence data that is meaningful in the context of a Charting the Course VI. To this end, we have selected three sources that allow us to evaluate the issue at the county level for children and adolescents ages 12 to 17 years. The first is data from the CHIS, which is available from the 2007 survey. The second source is PFT data from California Department of Education for children in grades 5, 7, and 9. The final source is the YRBSS data for teens in grades 9, 10, 11 and 12. This data is from the 2009 survey and is available for the San Diego Unified School District only.

California Health Interview Survey

During the 2007 survey, CHIS found the prevalence of obesity among San Diego County children and adolescents to be 12.1% and the prevalence of being overweight to be 10.8%. Because the CHIS sample size is relatively small for San Diego County, an analysis of weight status for children and adolescents ages 12 to 17 by gender, race/ethnicity or region is not meaningful (i.e., the statistical confidence levels are too large to distinguish a significant difference).

To gain additional insight into the weight status of children and adolescents, the table below presents California State level prevalence rates for overweight and obesity by gender and race/ethnicity.

Weight Status	Boy	Girl	Latino	White	African American	Total
Overweight	15.0%	13.8%	17.0%	10.5%	13.7%	14.4%
Obese	16.9%	9.5%	17.4%	8.5%	23.1%	13.3%
Total	31.9%	23.3%	34.4%	19.0%	36.8%	27.7%

(CHIS, 2007)

Review of the prevalence data for obesity found the following:

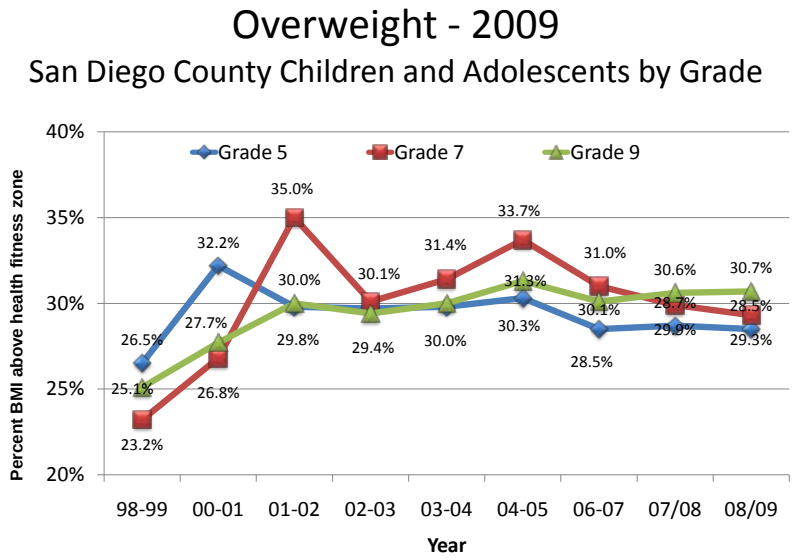
- Boys have a higher likelihood of being obese than girls
- Latinos and African Americans have a higher likelihood of being obese than whites

Physical Fitness Test

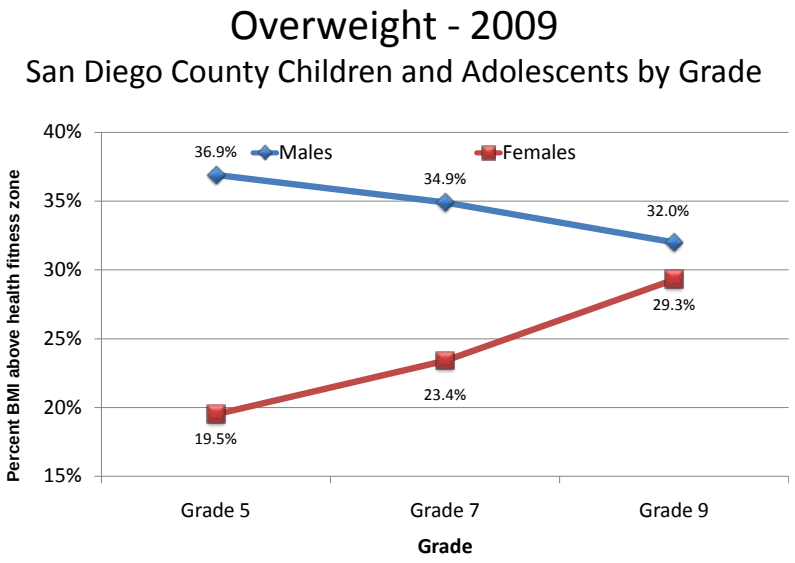
The California State Board of Education designated the *FITNESSGRAM* as the physical fitness test for students in California public schools. The *FITNESSGRAM* is a comprehensive, health-related physical fitness battery of tests developed by The Cooper Institute. One of the six elements of the test is body composition, which provides a weight status measure using BMI. This information is available at many levels, including statewide, countywide, individual school district and school. All PFT data is presented by year for grades 5, 7 and 9 and can be reported by gender and race/ethnicity.

Since 1998, the proportion of San Diego County children and adolescents in grades 5, 7 and 9 who are overweight has increased significantly. Current data indicates that the prevalence of overweight children and adolescents in grades 5, 7 and 9 has increased, 10.6%, 22.8% and 22.3%, respectively.

Review of current weight status data by gender indicates a higher percentage of males are overweight by a wide margin beginning in grade 5. By grade 9, this margin has closed markedly, with fewer boys being overweight, while the percent of girls in the overweight category increases from 19.5% to 29.3%.



California Department of Education Physical Fitness Report 1999 -2009



California Department of Education Physical Fitness Report 2009

One of the unique features of the PFT is the data it contains on the different racial and ethnic groups. Based on current data, certain racial and ethnic populations have higher rates of overweight and obesity than others. It is evident that the percent of African American, Latino and American Indian adolescents who are overweight is higher than for Asian and white adolescents.

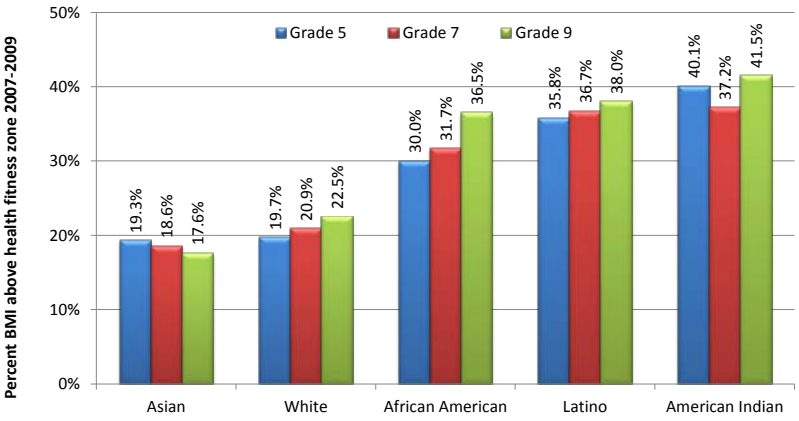
Another unique feature of the PFT data is the availability of weight status measures for Filipinos, Hawaiians and other Pacific Islanders. In addition, there is BMI data available for at least six different Asian cultures.

Review of current BMI measures for these ethnic groups finds Samoans with the highest prevalence of overweight — almost two-thirds of ninth graders.

Among the different Asian cultures, Laotians in grades 7 and 9 tended to have the highest prevalence of overweight.

Overweight

San Diego County Children and Adolescents by Race/Ethnicity



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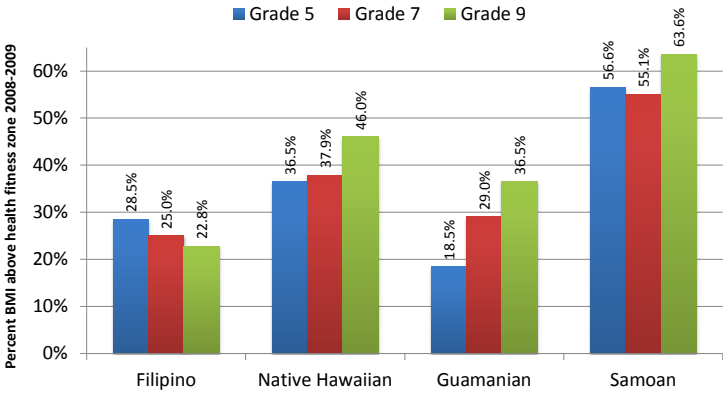
Overweight

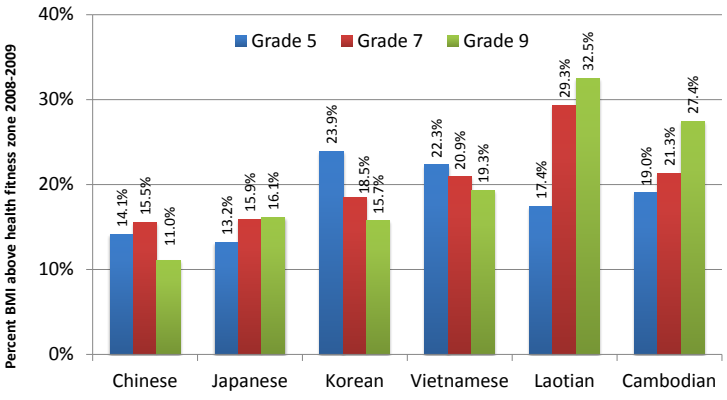
San Diego County Children and Adolescents by Race/Ethnicity



California Department of Education Physical Fitness Report 2009

Overweight

San Diego County Children and Adolescents by Race/Ethnicity



California Department of Education Physical Fitness Report 2009

Youth Risk Behavior Survey

The 2009 San Diego Youth Risk Behavior Survey (YRBS) conducted by the CDC was the final measure of weight status among youth that was reviewed. Participants in this survey are a sample drawn from more than 40,400 San Diego Unified School District (SDUSD) students grades 9 through 12. The YRBSS is only completed by SDUSD students in San Diego County, which accounts for approximately 25% of all high school students in San Diego County. This data provides an indication of the current weight status of this population.

During 2009, the YRBS found 11.5% of San Diego Unified School District students grades 9 through 12 were obese (students who were ≥ 95th percentile for BMI, by age and sex, based on reference data).The obesity rate among female students was 7.9%, while the rate among male students was 14.9%. Note that the overall rate of 11.5% was similar to the 12.1% reported for the 12 to 17 age category reported by CHIS in 2007 and the prevalence rate of 12% reported nationally for all participants in the 2009 YRBS (MMWR, 2010). In addition, 14% of students were overweight (students who were ≥ 85th percentile but < 95th percentile for BMI, by age and sex, based on reference data).

The YRBS process in San Diego

The YRBS was administered to 1,667 students in 31 San Diego Unified School District public high schools during the spring of 2009. Students completed a self-administered, 99-item questionnaire. Survey procedures were designed to protect the privacy of students by allowing for anonymous and voluntary participation. SDUSD had a 100% school response rate and a 90% student response rate (SDUSD, 2010).

Overall, based on 2009 YRBS results, 22.3% of female high school students and 28.5% of male high school students are either overweight or obese. Nationally, 2009 YSRB weight measures were 24.2% among females and 31.0% among males.

Health Consequences of Obesity in Early Life

Obese children are 70% more likely to continue being obese into adulthood and more likely to die prematurely before the age of 55, compared with healthy-weight children (RWJF, 2010). Additionally, they are at greater risk for a variety of serious medical issues including:

- Heart disease
- High cholesterol
- High blood pressure
- Diabetes
- Sleep apnea
- Cancer

In addition to the clinical consequences of obesity, these children are more likely to experience social discrimination, low self-esteem and depression.

Health Consequences of Obesity in Adulthood

Being overweight or obese as an adult increases the risks for the following (NIH, 1998):

- Coronary heart disease
- Congestive heart failure
- Type 2 diabetes
- Cancers (endometrial, breast, colon and gallbladder)
- Hypertension
- Dyslipidemia (manifested by high total cholesterol or high levels of triglycerides)
- Stroke
- Liver and gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis
- Gynecological problems (menstrual irregularities, stress incontinence, infertility, pregnancy complications)
- Psychological disorders (social stigma, depression)
- Discrimination

Economic Consequences Associated with Overweight and Obesity

Closely linked to the prevalence of obesity-related diseases previously described are the costs related to direct medical costs for diagnosis and treatment of these conditions plus indirect costs such as absenteeism, disability and premature mortality. Numerous studies have estimated these costs using a variety of methodologies. These studies show that the economic costs associated with obesity are substantial and suggest total annual economic costs in excess of $215 billion (Hammond, 2010).

The following table highlights some of the key findings from a recent analysis of the research on the economic impact of obesity completed by Hammond and Levine of the Brookings Institution.

Description of direct medical cost	Relative cost	Total costs
Relative medical costs for being overweight vs. normal weight	10% - 20% higher	
Relative medical costs for being obese vs. normal weight	36% - 100% higher	
Annual direct costs of childhood obesity		$14.3 billion
Annual U.S. cost of “excess” medical spending attributable to overweight/ obesity		$86 - $147 billion

In addition to direct medical costs, there are a variety of indirect costs associated with obesity, including absenteeism, presenteeism (decreased productivity of obese individuals while at work), disability and premature mortality.

- Absenteeism – $3.4 - $6.4 billion annually (responsible for an estimated 40 million lost workdays)
- Presenteeism – $7.8 billion annually
- Disability – 5.6% to 6.9% increase in the probability of becoming disabled (as defined by receiving disability income support)
- Premature mortality – 1 to 13 years per obese person and 2.9 million quality-adjusted life years lost

Overall, the total productivity costs associated with obesity are substantial and have been estimated as high as $66 billion annually for the U.S. (Hammond, 2010).

The California Center for Public Health Advocacy (CCPHA) published a study in 2009, *The Economic Costs of Overweight, Obesity and Physical Inactivity Among California Adults – 2006,* which found that the cost of overweight, obesity and physical inactivity was $41 billion in 2006, nearly double the amount it had found in a study they published in 2000. Projections for 2011, based on 2006 costs, indicated this amount will reach $52.7 billion. The costs associated with overweight, obesity and physical inactivity in San Diego County for 2006 were estimated to be slightly over $3 billion (CCPHA, 2009). The following table presents a breakdown of these costs based on healthcare and lost productivity.

Economic Costs Associated with Overweight, Obesity and Physical Inactivity in San Diego County, 2006

Overweight & Obesity		Physical Inactivity		Total
Healthcare	Lost Productivity	Healthcare	Lost Productivity	
$817,945,377	$647,077,040	$577,254,252	$999,779,198	$3,042,056,184

(CCPHA, 2009)

Causes of Obesity

Many factors play a role in overweight and obesity, making it a complex health issue to address. Some of the factors that are major contributors to the obesity epidemic include (DH&HS, 2010):

- Genetic predisposition
- Environmental influences
- Behavior (dietary patterns and physical activity)
- Cultural influences

- Socioeconomic status

In the context of prevention, it is important to understand the effect each of these factors has on obesity and which can be changed as a means of reducing the prevalence of obesity.

Genetic Predisposition

Currently, genetic influences on weight are not considered modifiable; however, it is important to acknowledge that if a genetic predisposition to obesity exists, it will impact any prevention efforts (Brown & Nelson, 2006).

According to a review of the medical literature by researchers at the University of Delaware, the following are some of the important genetic factors that may predispose children to obesity (Brown & Nelson, 2006):

- Metabolic rate
- Behavioral predispositions to food preferences, such as sweet or high-fat foods
- Patterns of physical activity
- Early puberty

Environmental Influences

An obesogenic environment is one in which there are many factors that promote obesity and facilitate potential weight gain. Some of the characteristics that create such an environment include:

- Wide availability of inexpensive, high-calorie foods
- Limited access to affordable, healthy foods in low-income neighborhoods
- Increased opportunities to consume food throughout the day
- Reduced energy demands of daily activities (i.e., automobile, elevators, escalators rather than walking and climbing stairs)
- Increased sedentary leisure time (TV, video, movies, computers)
- Limited opportunities for recreational physical activity (lack of safe open spaces, lack of walking paths and safe bike routes, time demand related to work)

Behaviors

Dietary patterns

Dietary patterns are influenced by many factors, some of which are known to impact weight gain. A major trend over the past several decades has been an increase in the availability and convenience of food. This trend is evidenced by:

- Increased number of locations where ready-to-eat foods are available.
- Increased availability of high-calorie, inexpensive foods.
- Between 1976 and 2004, the proportion of U.S. consumers' food budget spent on food for consumption outside the home increased from 26% to 46% (Savage & Johnson, 2006).
- Preference for restaurants with limited menus, quick service and the option for take-out.
- Increased portion sizes.
- Increased distribution of food through vending machines.
- Increased proportion of foods available in traditional food stores designed for ease of preparation.

Parenting behaviors

Parents feeding practices are an important and potentially modifiable behavior that may either promote or protect against obesity because children are dependent on parents and other caregivers to provide food that promotes healthy diets, growth and development. Parents typically determine the foods and portion sizes that children are offered, the frequency of eating and the social surroundings in which eating occurs. There is, however, limited evidence that parents' feeding practices are influential in shaping children's eating environments, their food preferences and eating behaviors. Researchers are still trying to answer the question "Do parents' feeding practices influence children's weight status and the development of childhood obesity?" (Birch, 2006).

An extensive literature review of parenting feeding behaviors by the University of Delaware (Brown & Nelson, 2006) presented the following key findings:

- Breastfeeding – Mixed results showing the protective effects and benefits of breastfeeding related to childhood obesity.
- Monitoring and controlling – This relates to parents regulating food intake by children. Based on this theory, if parents restrict a child access to food that has been brought into the home, the result will be an increased preference for that food. Examples of this restriction are allowing a food to be eaten in only limited quantities, only after other foods have been eaten, or only for special occasions.

There is some evidence that having been denied the opportunity to develop self-control based on internal cues, children exposed to this type of parenting tend to respond to external cues and are more prone to excessive eating and weight gain.

- Modeling and family meals – While the research related to parental modeling and eating meals together does not indicate a direct link to preventing excessive eating and weight gain, it does positively relate to a healthier diet including an increased intake of fruits, vegetables and dairy products. Family meals are also felt to play a significant role in preventing unhealthy weight control practices among adolescents.
- Rewarding – Research strongly indicates that using sweet and high-fat foods as rewards establishes a preference for the reward foods.

Child Eating Habits

There are several highly researched aspects related to the eating habits of children and adolescents, including food preferences, self-regulation and the consumption of fast foods. Each of these is important and potentially modifiable. The following highlights some of the key findings related to each of these habits.

- Food preferences – While parents determine what foods are available to their children through their food purchasing and serving, children's preferences determine what they actually eat based on a complex set of influences. Eating preferences include social settings; emotional states; attitudes; knowledge and beliefs about nutrition; and food advertising, marketing and media pressure. Specific food preferences among children that have been found to be significantly related to overweight include sugar-sweetened beverages and high-fat foods.
- Self-regulation – Research related to the impact of self-regulation on obesity among children is complex. There are significant issues related to the impact of limited income and food insecurity (hunger) on obesity in children and mothers. There are also issues related to the environmental influence of portion size. Several studies have found that when served portions that are larger than their age-appropriate size, children tend to consume as much as 25% more food. Moreover, when children are allowed to serve themselves, they consume less.
- Consumption of fast food – Consumption of fast food among children in the United States seems to have an adverse effect on dietary quality in ways that increase the risk for obesity. A study of 6,212 children and adolescents 4 to 19 years old in the United States found those who frequently ate fast food, compared with those who did not, consumed more total energy, more energy per gram of food, more total fat, more total carbohydrates, more added sugars, more sugar-sweetened beverages, less fiber, and fewer fruits and non-starchy vegetables (Bowman, 2004).

Physical Activity

Regular physical activity is crucial for health and well-being (DHHS, 2002). Moreover, research indicates that physical activity in children — including structured or unstructured free play — is essential to maintaining an energy balance, promoting a healthy weight and supporting cognitive, physical, social and emotional development and well-being (Burdette & Whitaker, 2005).

Yet, the 2009 YRBS showed that only 18% of high school children engage in regular vigorous activity and only 37% of students had been physically active doing any kind of physical activity that increases their heart rate and makes them breathe hard some of the time for a total of at least 60 minutes per day on five or more days during the past week. In addition, almost 23% reported no recent physical activity at all. Locally, the rates of physical activity were somewhat higher, with only 26% of high school children engaging in regular vigorous activity and 47% of students doing any kind of physical activity that increases their heart rate and makes them breathe hard some of the time for a total of at least 60 minutes per day on five or more days during the past week. Only 15% reported no recent physical activity at all (CDC, 2010).

Among adults, based on the 2009 Behavioral Risk Factor Surveillance System survey (BRFSS), only 51% of California adults reported they participated in 30 or more minutes of moderate physical activity five or more days per week, or vigorous physical activity for 20 or more minutes three or more days per week. During this same period, 58% of San Diego County adults reported they participated in 30 or more minutes of moderate physical activity five or more days per week, or vigorous physical activity for 20 or more minutes three or more days per week.

Cultural Influences and Socioeconomic Status

In the United States, data suggest that poverty is associated with higher rates of obesity, while in many developing countries, higher rates of obesity are found in higher-income groups as a result of economic growth and improved standards of living. One explanation offered for these observations is that low-income individuals in the United States and high-income individuals in developing countries are either better able to afford or have greater access to energy-dense but nutrient-poor foods (Huang, 2009).

Children and adolescents in the U.S. that come from lower-income homes are at greater risk of being obese. This is a result of several factors that influence behaviors and activities.

- Lower-income children cannot always afford to participate in extracurricular activities, resulting in a decrease in physical activity. In addition, families who struggle to pay bills and make a living often choose convenience foods, which are typically higher in calories, fat and sugar, rather than home-prepared meals.
- Educational levels also contribute to the socioeconomic issues associated with obesity. Parents with limited education may not have been exposed to information about proper nutrition and healthy food choices. This makes it difficult to instill those important values in their children.

Opportunities for Prevention and/or Intervention

In 2001, the U.S. Surgeon General issued the *Call to Action to Prevent and Decrease Overweight and Obesity*, to encourage the development of actions targeting the obesity epidemic. The following year, Congress directed the Institute of Medicine (IOM) to develop an action plan focused on decreasing the number of obese children and youth in the U.S. In 2004, the IOM released *Preventing Childhood Obesity: Health in the Balance*, as a comprehensive action plan to help guide the prevention of childhood obesity in the United States (IOM, 2005). The IOM action plan consists of explicit goals and recommendations for preventing obesity and promoting a healthy weight. Moreover, it acknowledges the limited experimental evidence regarding the best ways to prevent obesity, but strongly urges that actions be based on the best available evidence regarding obesity prevention rather than waiting for the best possible evidence.

A dominant theme of the IOM Action Plan is the importance of collaboration among key stakeholders from across many different sectors, including:

- Federal government
- State and local governments
- Communities
- Schools
- Business and industry
- Media
- Families

The IOM Action Plan stressed that to be successful, key stakeholders must work together to create healthy environments in which we can live and healthy behaviors that can be formed and supported. Along with this recommendation was the acknowledgement that evaluation must be a critical part of all interventions to identify those that are effective as well as those that are ineffective.

The following provides a brief overview of some of the key concepts presented in the IOM Action Plan and other relevant information useful in understanding the conceptual framework of obesity prevention currently being supported by public health leaders.

Framework

In public health, there are a number of conceptual frameworks used to address or solve complex health issues. Some of these are based on limiting disease by focusing the prevention efforts on the segment of the population impacted by the disease, while another conceptual framework focuses prevention efforts on the progression of the disease, including:

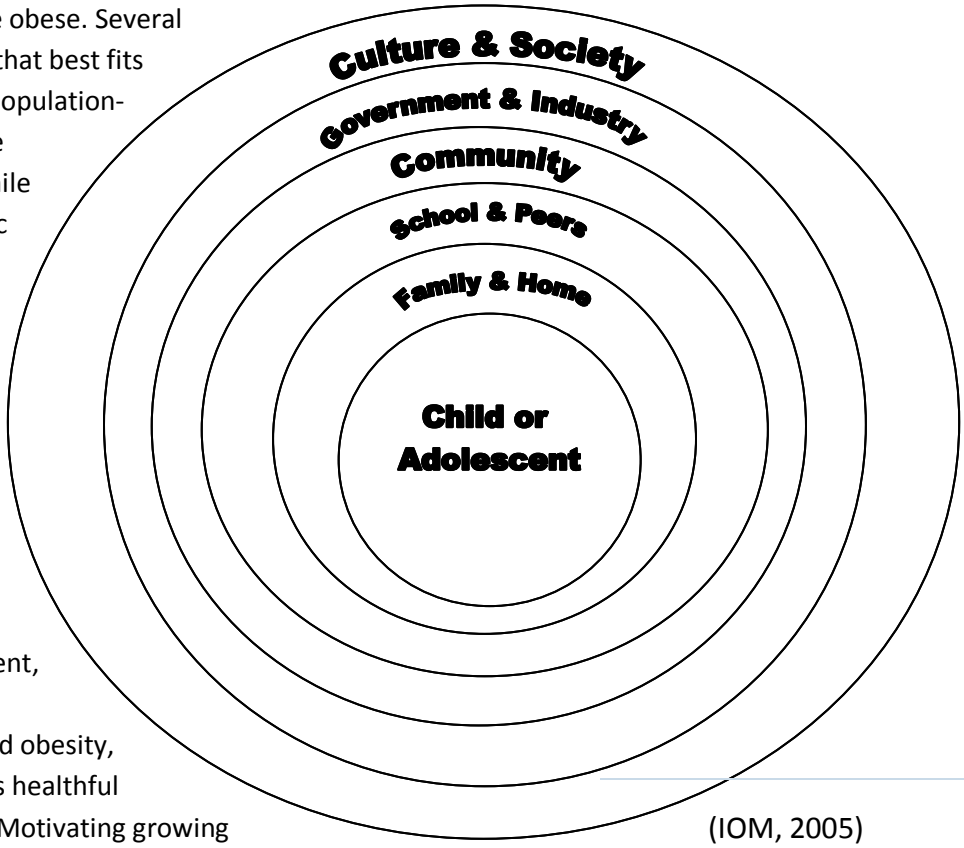
- Primary prevention, which involves avoiding the occurrence of a disease
- Secondary prevention, which relies on early detection of a disease to limit its occurrence and

- Tertiary prevention, which centers on limiting the consequences of the disease (DHHS, 2000).

A more recent conceptual framework, based on the social ecological model, presents a spectrum of potential prevention opportunities based on where the prevention actions are directed — from the individual to the broader environment. (Ecological can mean both the physical or social environment.)

Social Ecological Model

A major criterion for adopting a prevention framework for obesity is finding one that emphasizes efforts that can help the majority of people, adults, adolescents and children, who are at a healthy weight to maintain that status and not become obese. Several challenges in adopting a framework that best fits community needs include finding a population-based approach with actions that are directed at the entire population, while at the same time allowing for specific actions aimed at high-risk populations and subgroups. Examples of high-risk populations may include Latinos, American Indians, adults ages 25 to 65 and those living in low-income households.



(IOM, 2005)

It is important to have a clear understanding that prevention of obesity is very different than treatment, even if some aspects seem similar to treatment. In prevention of childhood obesity, for example, the targeted outcome is healthful weight gain rather than weight loss. Motivating growing children to maintain a healthful rate of weight gain is very different than motivating an adult to lose weight. Preventive strategies usually require long-term efforts, while treatment approaches focused on weight loss may be relatively short-term (IOM, 2005).

As part of this discussion about obesity prevention frameworks, it is important to clearly define several terms and provide a conceptual view of the prevention-to-treatment continuum.

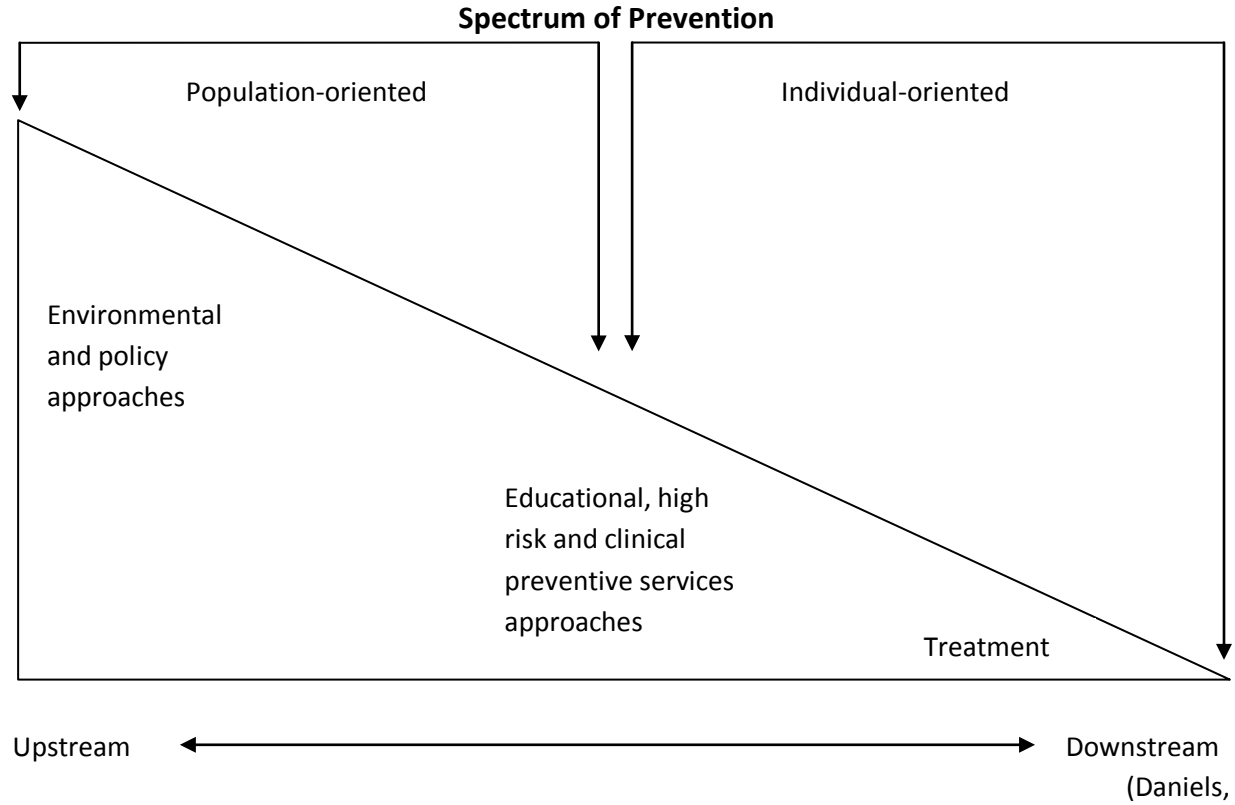
Population-oriented approaches focus on environmental and policy changes that will have the broadest reach. These approaches usually have the lowest intensity and cost and are critical for reaching the

segments of the population with the fewest resources (i.e., low socioeconomic status, limited education, etc.). These are represented by the outer rings in the social ecological model framework.

Individual-oriented approaches focus on those at high risk of becoming overweight and often resemble treatment approaches in their process and delivery setting. These approaches tend to be highly intensive, costly and have low reach in terms of the number of people that can potentially be served.

Preventive interventions can occur in a wide variety of settings, including home, healthcare clinics, schools and childcare centers.

The following figure graphically illustrates the Spectrum of Prevention framework.



(Daniels, 2005)

According to some in the prevention community, the burden of obesity in the population currently exceeds the healthcare delivery system's ability to deliver treatment for obesity. Moreover, they feel the reliance on treatment approaches, even if fully effective, is neither practical nor desirable (Kumanyika, 2003).

Based on these considerations and the results of other successful public health prevention efforts, including those related to highway safety and tobacco control, the IOM urges the use of the social ecological model with the individual at the center of the model, as a basis for the development of a framework for obesity prevention action planning. One of the major strengths of the ecological model is its belief that individual behavioral changes are affected not only by personal factors (e.g., age, gender, race/ethnicity) but also the individual's interactions with the larger social, cultural and environmental settings in which they live (e.g., family, socioeconomic status, school, community) (IOM. 2005).

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MENTAL HEALTH AND MENTAL DISORDERS

Background

According to the National Institute of Mental Health (NIMH), annually, an estimated 13 million American adults (approximately 1 in 17) have a seriously debilitating mental illness (NIMH, 2008). Furthermore, mental health disorders are the leading cause of disability in the U.S., accounting for 25% of all years of life lost to disability and premature mortality (WHO, 2004). Moreover, in 2007, suicide was the 11th leading cause of death in the U.S., accounting for over 34,500 deaths (NVSS, 2010).

Mental health and mental illness are not polar opposites, but points on a continuum. Somewhere in the middle of that continuum are "mental health problems," which most people experience at some point in their lives. The boundaries between mental health problems and milder forms of mental illness are often indistinct, just as they are in many other areas of health. At the far end of the continuum lie disabling mental illnesses such as major depression, schizophrenia and bipolar disorder. Left untreated, these disorders can become devastating. Recent psychiatric epidemiological studies have suggested that most mental illnesses begin far earlier in life than previously believed (Insel, 2005).

Importantly, one recent study, the National Comorbidity Survey Replication (NCS-R), reported an overall 12-month prevalence of any mental illness to be in the range of 30%, with an estimated 46% of Americans experiencing some form of mental illness during their lifetimes. Yet, the study concluded:

> *Most people with mental disorders in the United States remain either untreated or poorly treated. Interventions are needed to enhance treatment initiation and quality.*
>
> *Arch Gen Psychiatry. 2005;62:629-640*

The causes of mental illness are thought to be related to a variety of biochemical, genetic and environmental factors, which could include (NIMH, 2010; U.S. Public Health Service, 1999):

- Having other biological relatives with a mental illness
- Malnutrition or exposure to viruses before birth, which is linked to schizophrenia
- Stressful life situations, such as financial problems, a loved one's death or a divorce
- Chronic medical conditions, such as cancer
- Combat
- Taking psychoactive drugs during adolescence
- Childhood abuse or neglect
- Lack of friendships or healthy relationships

Types of Mental Illness

Many different conditions are recognized as mental illnesses. The more common types include:

Anxiety disorders, which affect over 18% of adults in the U.S., are characterized by a person responding to certain objects or situations with fear and dread, as well as with physical signs of anxiety or nervousness. An anxiety disorder is diagnosed if the person's response is not appropriate for the situation, if the person cannot control the response or if the anxiety interferes with normal functioning. Some common signs of acute anxiety include:

- Feelings of fear or dread
- Trembling, restlessness and muscle tension
- Rapid heart rate
- Lightheadedness or dizziness
- Perspiration
- Cold hands/feet
- Shortness of breath

Anxiety disorders include generalized anxiety disorder, post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), panic disorder, social anxiety disorder and specific phobias (U.S. Public Health Service, 1999).

Mood disorders affect almost 7% of adults annually in the U.S. and include a group of mental disorders characterized by depression or mania. The following group of mood disorders has been described by the U.S. Surgeon General in his 1999 report on mental illness, and includes:

Major depressive disorder (also known as unipolar major depression) – when a person has five or more symptoms of depression for at least two weeks. These symptoms include feeling sad, hopeless, worthless or pessimistic. In addition, people with major depression often have behavior changes, such as new eating and sleeping patterns.

Bipolar disorder – involves periods of excitability (mania) alternating with periods of depression. Changes between mania and depression can be very abrupt.

Dysthymia – is a chronic type of depression in which a person's moods are regularly low. However, it is not as extreme as other types of depression.

Cyclothymia – is a mild form of bipolar disorder in which a person has mood swings from mild or moderate depression to euphoria and excitement, but stays connected to reality.

Mood disorders have many serious complications, including:

- Suicide and self-inflicted injury
- Increased risk of alcohol- and drug-related problems
- Increased risk of tobacco dependence

- Increased risk of problems with physical health and premature death due to medical illness

Schizophrenia is one of a group of severe psychotic disorders that cause abnormal thinking and perceptions and it affects slightly more than 1% of the adult population in the U.S. (U.S. Public Health Service, 1999). People with psychoses lose touch with reality. Two of the most common symptoms are hallucinations, experiencing images or sounds that are not real, and delusions, which are the false beliefs that the ill person accepts as true, despite evidence to the contrary (MedlinePlus, 2010).

Comorbidity

An estimated 31% of persons with one mental disorder have co-existing illnesses, disease or health problems, also known as comorbidity (NIAAA, 2005). Some examples of co-existing illnesses:

- Depression often accompanies anxiety disorders such as post-traumatic stress disorder (PTSD), obsessive-compulsive disorder, panic disorder, social phobia and generalized anxiety disorder. Persons with PTSD are especially prone to co-occurring depression.
- Alcohol and other substance abuse or dependence also commonly co-occurs with depression and anxiety disorder. Research indicates that the co-existence of mood disorders and alcohol dependence is as high as 28.1% among men and 53.5% among women (NIAAA, 2005).
- Depression also often co-exists with other serious medical illnesses such as heart disease, stroke, cancer, HIV/AIDS, diabetes and Parkinson's disease. Studies have shown that people who have depression in addition to another serious medical illness tend to have more severe symptoms of both depression and the medical illness, more difficulty adapting to their medical condition, and more medical costs than those who do not have co-existing depression.

San Diego County – Prevalence of Serious Mental Illness

The estimated prevalence of individuals with serious mental illness in San Diego County presented on the following table is based on information provided by the California Department of Mental Health. These prevalence estimates do not take into account persons with milder mental health problems such as phobias, anxiety, mild depression, etc.

Overall, based on the 2007 prevalence estimates, which were updated in October 2009, there are 141,420 persons in San Diego County with serious mental illness, representing 4.9% of the household population in San Diego County (DMH, 2007). These estimates do not include persons in supervised care or in custody in institutions or those living in group quarters (all people who live in group quarters other than institutions such as college dormitories, military quarters, and group homes).

Estimated Prevalence of Need for Mental Health Services
San Diego County — 2007

	Total Household Population			Households under 200% Poverty Level		
	Prevalence	Population	Percent	Prevalence	Population	Percent
All ages	141,420	2,874,761	4.92%	72,538	881,768	8.23%
Youth – 0 to 17	55,066	744,586	7.40%	26,559	299,995	8.85%
Young adults – 18 to 24	9,352	283,656	3.29%	6,462	129,778	4.98%
Adults – 25 to 60	69,048	1,501,652	4.60%	35,488	346,699	10.24%
Older adults 60+	7,953	344,867	2.31%	4,029	105,296	3.93%

There is a lack of information concerning how well persons with serious mental illness in San Diego County are served. The following presents information from three existing sources, Mental Health Services of the County of San Diego, OSHP&D hospital discharge data, and the Emergency Department Discharge Patient Summary report. Missing from this data is information regarding the mental health services provided by private physicians and other private practice mental health providers in their offices. (Note that OSHP&D provides annual data related to primary clinic utilization, which contains the number of primary care clinic encounters with a diagnosis of mental disorder. These are based on ICD-9-CM codes 290 – 319. During 2009, primary care clinics in San Diego County reported 73,269 patient encounters with a diagnosis of mental disorder, which represented 4% of all clinic encounters.)

Who is most impacted?

The following information, provided by Mental Health Services of the County of San Diego represents a subset of services provided to those receiving mental health services and does not include services provided by private physicians and other private practice mental health providers in their private offices.

Youth – ages 0 to 17

During fiscal year 2007 – 2008, the Children's Mental Health Services (CMHS) of the County of San Diego Health and Human Services provided services to more than 17,600 youths. The demographic distribution of clients most often served by CMHS includes: males (60%), adolescents, ages 12 – 17 (55%), and Hispanics (51%).

The most common diagnoses among youth served by the CMHS are:

- Oppositional defiant disorders, including conduct and disruptive behaviors – 19.7%
- Adjustment disorders – 19.5%
- Depressive disorders – 19.0%
- Attention deficit hyperactivity disorder – 15.7%

Adults and older adults

During fiscal year 2007 – 2008, the Adult Mental Health Services (AMHS) of the County of San Diego Health and Human Services Agency provided services to 5,840 transition-age youth (TAY), 18 to 24 years of age, 31,496 clients ages 25 to 59 and 3,796 clients age 60 and older. The demographic distribution of those most often served by AMHS includes: males (50%); adults, ages 25 to 59 (77%); and white (51%), Hispanic (22%) and African American (13%).

Among all adults served by AMHS, the most common diagnoses are:

- Major depression disorder – 25%
- Schizophrenia and schizoaffective disorder – 23%
- Other depression/adjustment disorders – 16%
- During FY07-08, 25% of adult clients receiving services who had a primary diagnosis on record also had a secondary substance abuse diagnosis

Older adults (60 years and older)

During FY07/08, 75% of older adults served by AMHS were between the ages of 60 and 69.

- The most common diagnosis was major depression disorder (31%), followed by schizophrenia and schizoaffective diagnosis (25%).
- Females made up 60% of the older adult population served.
- AMHS older clients are predominantly white (56%), followed by Hispanic (16%) and African American and Asian (8%).
- The first mental health services received by 39% of new AMHS clients was through the Psychiatric Emergency Response Team (PERT).

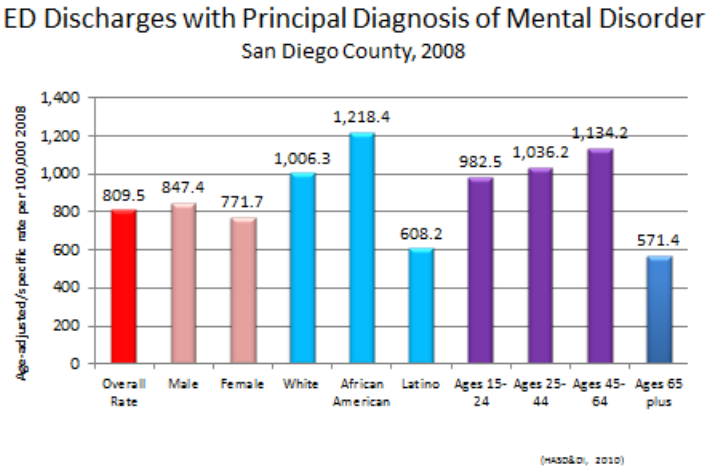
<u>Trends</u>

- Over the past two years, the number of CMHS clients has increased slightly from 16,874 in FY05-06 to 17,600 in FY07/08, a 4.3% increase.
- Since FY06/07, there has been an 8% increase in AMHS clients served, with 41,132 adults and older adults served in FY07/08.

<u>Emergency Department Discharges</u>

During 2008, there were 25,468 discharges from San Diego County hospital emergency departments (EDs) with a primary diagnosis of mental disorder, accounting for 4.1% of all ED discharges. (Note: The primary diagnosis of mental disorder includes a wide range of diagnoses, including alcoholic and drug psychoses, dependence and abuse.) The overall rate of ED discharges with a diagnosis of mental disorder was 809.5 per 100,000 population.

Emergency Department Discharge Trend – Between 2006 and 2008, in San Diego County, 69,246 persons were discharged from hospital EDs with a principal diagnosis related to mental disorders, averaging 23,081 persons per year. During this three-year period, the annual number of ED discharges following treatment related to mental disorders increased by 21.8%. The age-adjusted ED discharge rate has increased from 681.8 per 100,000 in 2006 to 809.5 per 100,000 in 2008, a change of 18.7%.

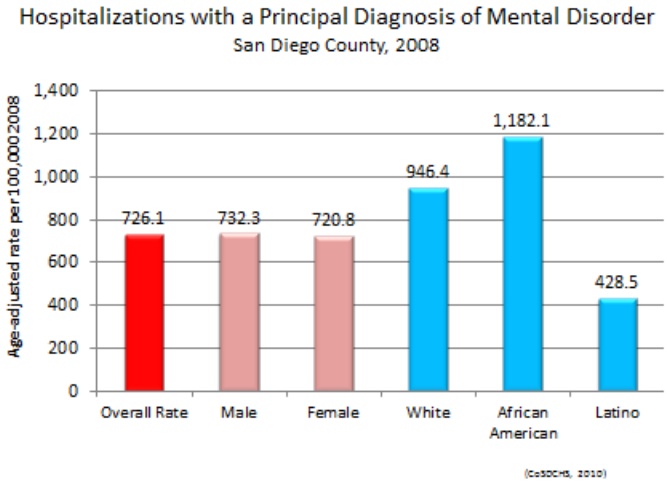


Those most impacted by ED discharges following diagnosis of mental disorders during 2008, as measured by the rate per 100,000, include males, whites and African Americans and persons ages 15-64. Additionally, ED discharge rates in the Central and East regions were higher than the other regions in the County, 1,046.1 and 897.0 per 100,000, respectively.

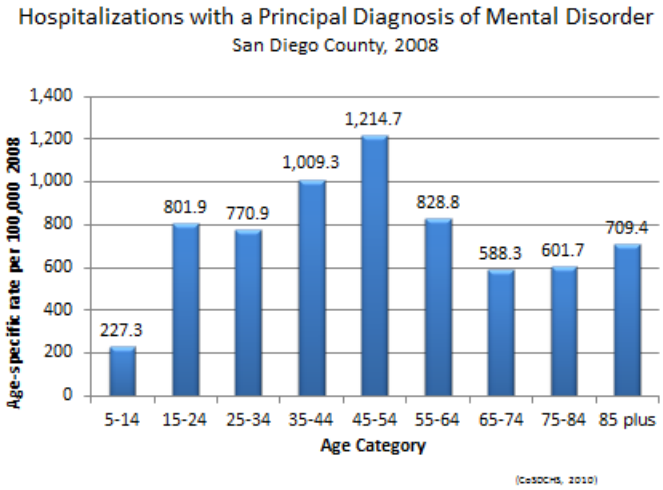
Hospitalizations

During 2008, there were 22,971 hospitalizations in San Diego County hospitals with a principal diagnosis code of mental disorders (ICD-9-CD code 290 – 319), accounting for 7.4% of all hospitalizations. These hospitalizations included 17,556 with a principal diagnosis of psychoses, accounting for 59% of all mental health hospitalizations. There were 6,210 with a principal diagnosis of schizophrenic disorders and 4,583 with a principal diagnosis of major depressive disorder, accounting for 27% and 20% of all mental health hospitalizations, respectively (CoSDEPI, 20010).

Hospitalization Trend – Between 2006 and 2008, there were 66,708 hospitalizations in San Diego County with a principal diagnosis related to mental disorders, averaging 22,236 per year. During this three-year period, the annual number of hospitalizations related to mental disorders increased by 4.9%. The age-adjusted hospitalization rate has increased from 714.3 per 100,000 in 2006 to 726.1 per 100,000 in 2008, a change of 1.7%.



Those most impacted by hospitalizations for mental disorders during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites and African Americans and persons ages 35-54. Additionally, age-adjusted hospitalization rates in the Central and East regions were higher than the overall County rate, 1,129.2 and 1,009.9 per 100,000, respectively.



Suicide and Self-Inflicted Injury

Suicide occurs when a person ends his or her life, and it is a major, preventable public health problem. In 2008, suicide was the eighth-leading cause of death in San Diego County, accounting for 359 deaths, with an overall age adjusted rate of 11.3 suicide deaths per 100,000 people (SDEpi, 2010). Suicide deaths are only part of the problem: more people survive suicide attempts than actually die. Those who attempt suicide are often seriously injured and require medical and psychiatric care. The following section reviews the prevalence of suicide in San Diego County, along with self-inflicted injury hospitalizations and ED discharges following treatment for self-inflicted injuries. Included in this section are trends and profiles of those most impacted.

Self-inflicted injury is the deliberate harm of one's own body to cause injury. The self-inflicted injury data shown in this report does not indicate if the intent was suicidal. Common types of self-inflicted injury include cutting, scratching, hitting, biting and burning.

While the data reported here represents those who have committed or attempted to commit suicide, it has been estimated that there may be from eight to 25 attempted suicides per every one suicide death (Moscicki, 2001).

Risk Factors for Suicide

According to the National Institute of Mental Health (NIMH) there are at least eight generally accepted risk factors for suicide. These include:

- Depression and other mental disorders, or a substance-abuse disorder (often in combination with other mental disorders). More than 90 percent of people who die by suicide have these risk factors.
- Prior suicide attempt.
- Family history of mental disorder or substance abuse.
- Family history of suicide.
- Family violence, including physical or sexual abuse.
- Firearms in the home, the method used in more than half of suicides.
- Incarceration.
- Exposure to the suicidal behavior of others, such as family members, peers, or media figures.

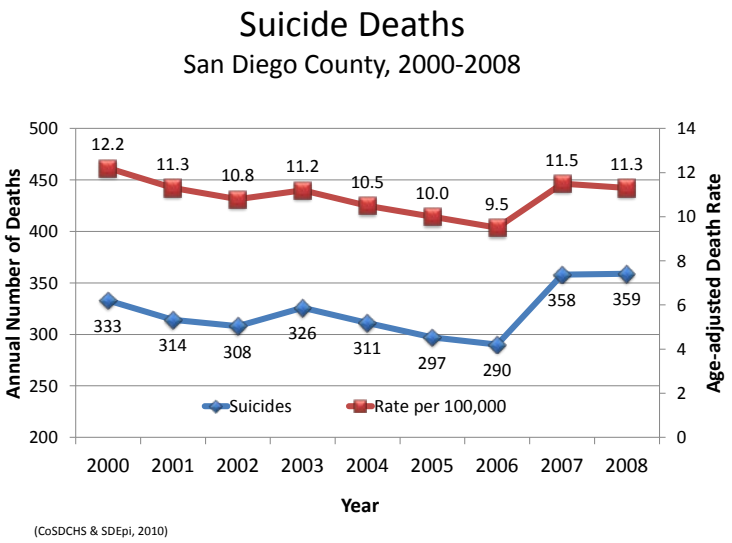
Suicide

During 2008, 359 San Diego residents died as a result of suicide, and the age-adjusted rate was 11.3 per 100,000 population. Between 2000 and 2008, there was a 3.3% increase in the number of suicides; however, the rate of suicides declined by 7.4%. Between 2000 and 2008, 2,896 San Diegans died as a result of suicide.

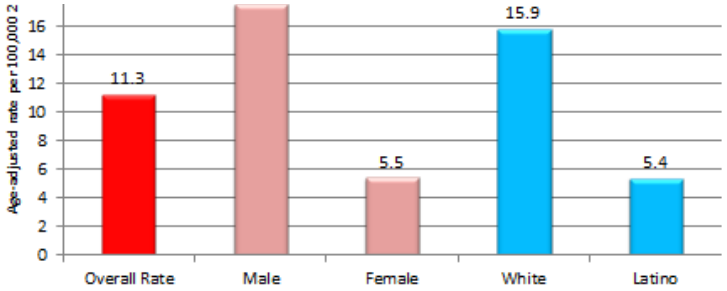
Review of non-natural causes of death in San Diego County between 1998 and 2007 found that suicide was the second leading cause of non-natural death for all ages. During this period:

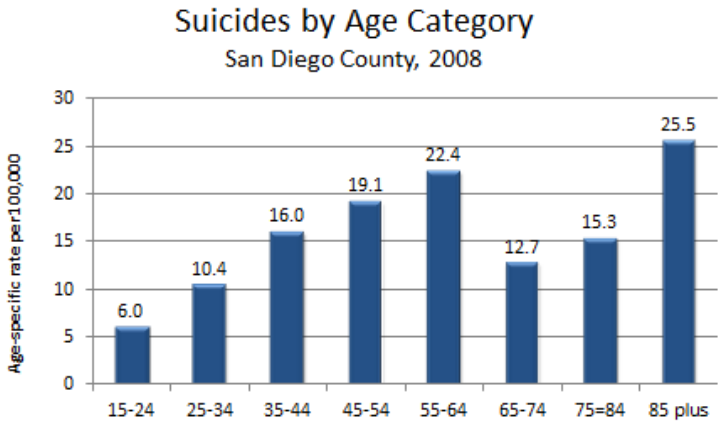
- Among those ages 55 to 74, suicide was the leading cause of non-natural death
- Among those ages 10 to 14, 20 to 54 and 75 and older, suicide was the second leading cause of non-natural death

Those most impacted by suicide during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites, persons between the ages of 35 and 64, and those ages 85-plus. Additionally, age-adjusted suicide rates in the East, North Coastal and Central regions were higher than the overall County rate, 13.8, 12.4 and 11.7 per 100,000, respectively.



(CoSDCHS & SDEpi, 2010)





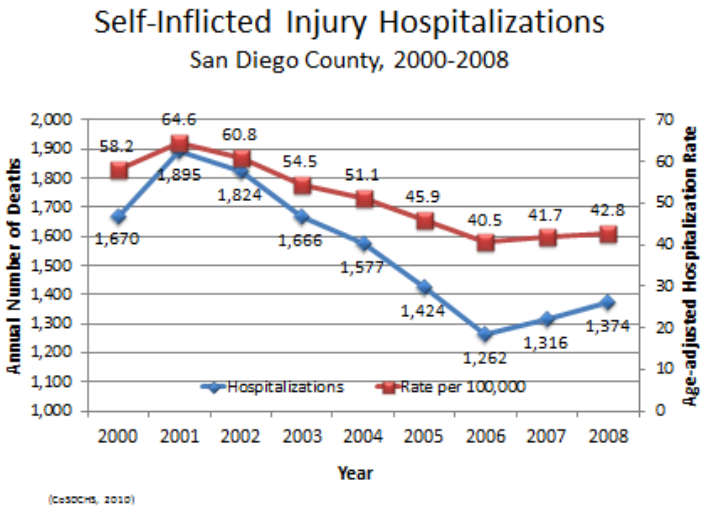
(SDEPI, 2010)

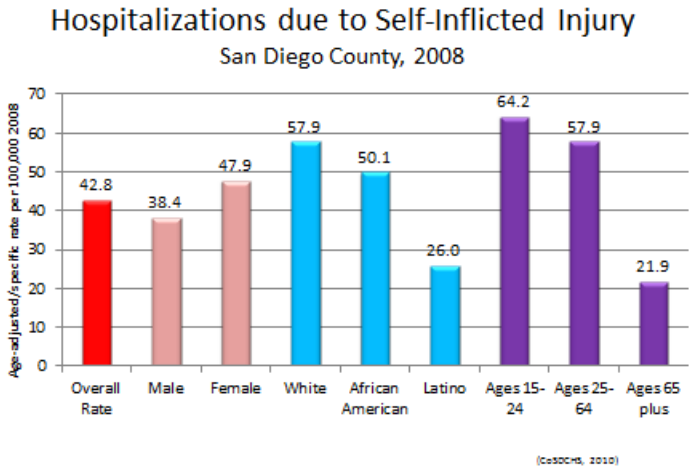
Self-Inflicted Injury

Self-inflicted injury, as reflected by hospitalizations and ED discharges, are four to seven times more common than completed suicides. The following provides trends, and profiles those most impacted by self-inflicted injury.

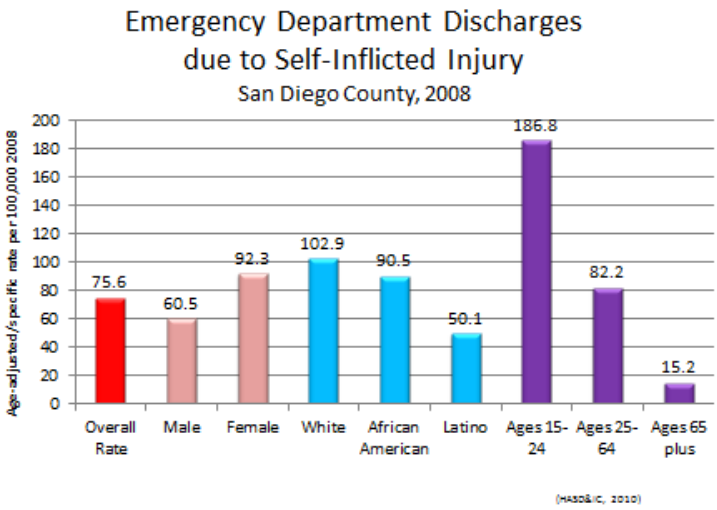
Hospitalizations – Between 2000 and 2008, 14,008 persons in San Diego County were hospitalized as a result of self-inflicted injuries, averaging 1,556 persons per year. During this nine-year period, the annual number of hospitalizations related to a self-inflicted injury decreased by 17.7%. The age-adjusted hospitalization rate decreased by 26.5%.

Those most often hospitalized as a result of self-inflicted injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 15 or 64. Additionally, hospitalization rates in the Central, South and East regions were higher than the overall County rate, 63.4, 52.4 and 49.1 per 100,000, respectively.





Emergency Department Discharges – Between 2006 and 2008, 6,525 persons in San Diego County were discharged from hospital EDs following treatment for self-inflicted injuries, averaging 2,175 persons per year. During this three-year period, the annual number of ED discharges following treatment for self-inflicted injuries increased by 27.4%. Between 2006 and 2008, the age-adjusted ED discharge rate increased by 24.6%., from 60.7 to 75.6.



Those most impacted by self-inflicted injury based on ED utilization during 2008, as measured by the rate per 100,000, include females, whites and African Americans, and persons ages 15 or 64. Additionally, ED discharge rate of 135.8 per 100,000 in the East Region was the highest of the six County regions.

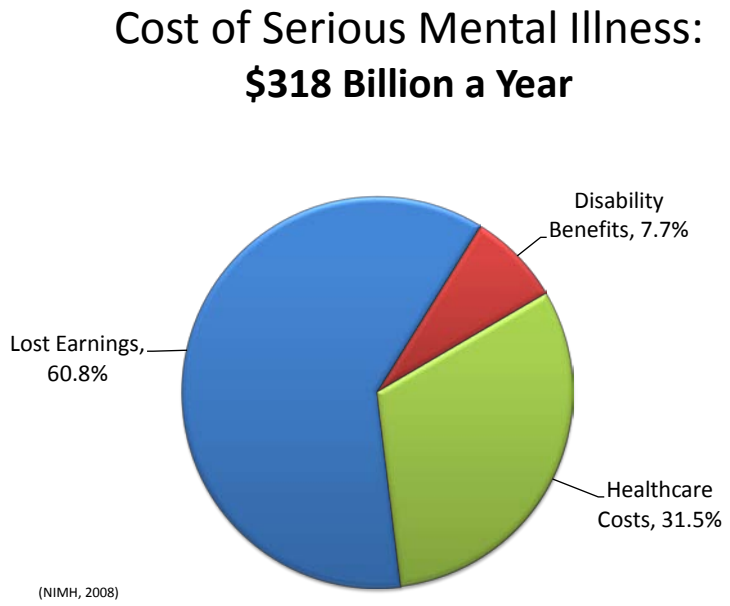
Health consequences

The health consequences related to serious mental illness (SMI) as recently reported by the Substance Abuse and Mental Health Services Administration (SAMHSA) include:

- Up to 83% of people with SMI are overweight or obese.
- People with SMI have shortened life spans, on average living only to age 53. Those with SMI die 25 years earlier than other Americans, largely due to treatable medical conditions.
- More than 90% of those who die by suicide have a mental disorder.
- Persons with SMI are more likely to have poor health status, smoke and exercise infrequently.
- According to the NIMH, mental disorders are the leading cause of disability in the U.S. among persons ages 15 to 44.
- Over 50% of students with a mental disorder age 14 and older drop out of high school.

Economic costs

The cost of serious mental illness is overwhelming. In the U.S., these disorders cost an estimated $318 billion in direct health costs and indirect costs (NIMH, 2008), including decreased productivity, absenteeism, and lost jobs and wages. There is also the additional burden of pain and suffering, family and friendship issues and suicide.



Emerging Issues

Healthy People 2020 has identified several mental health issues that have emerged among some special populations. These include:

- **Post-traumatic stress disorder** (PTSD) among veterans and others who have experienced some type of traumatic event. These traumatic events may include:
    - War
    - Rape
    - Natural disasters
    - A car or plane crash
    - Kidnapping
    - Violent assault
    - Sexual or physical abuse
    - Medical procedures (especially in children)

According to the U.S. Department of Veterans Affairs (VA), National Center for PTSD, about 60% of men and 50% of women experience at least one trauma in their lives. Women are more likely to experience sexual assault and child sexual abuse. Men are more likely to experience accidents, physical assault, combat, disaster or to witness death or injury. Of those experiencing some type of trauma, only a small percent develop PTSD. Some general population estimates of the prevalence of PTSD provided by the National Center for PTSD (VA, 2010) include the following:

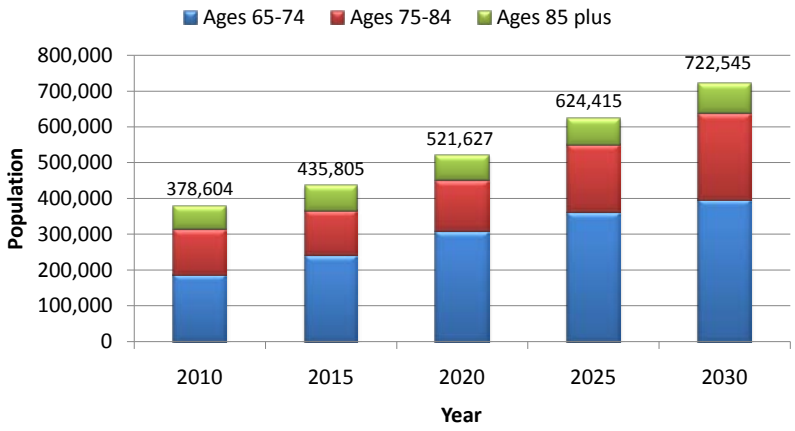
- 7-8% of the general population will have PTSD at some point in their lives.
- 5.2 million adults have PTSD during a given year. This is only a small portion of those who have gone through a trauma.
- Women are more likely than men to develop PTSD. About 10% of women develop PTSD sometime in their lives compared with 5% of men.

Among veterans, the VA estimates that PTSD occurs at the following rates:

- 11-20% of veterans of the Iraq and Afghanistan wars
- 10% of Gulf War veterans
- 30% of Vietnam veterans
- **Aging**, as the baby boom population grows older, will present challenges for the treatment of older adults. These include:
- Increases in the number of new cases of depression and the accompanying risk of suicide among older adults
- Increases in the number of new cases of dementia and the associated costs of treatment
- The co-occurrence of depression and chronic diseases associated with aging, such as cardiovascular disease, rheumatologic disorders, diabetes and high blood pressure
- An sufficient geriatric mental health workforce to provide treatment and care for this population

Projected Growth of the Older Population – 65 Plus

San Diego County, 2010 - 2030



SANDAG, 2010

In 2010, an estimated 378,604 persons ages 65 years or older lived in San Diego County, over 65,000 of whom were 85 years or older. Since 2000, the population of those 65 or older has increased by over 20% and is expected to grow steadily over the next 20 years. Current projections indicate that by the year 2030, this population will account for almost one in five residents of San Diego County.

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INJURY AND VIOLENCE

In California, injury, including both unintentional and intentional, is the number one killer and disabler of persons aged 1 to 44 (CDPH, 2010). Each year in California, injuries cause:

- Over 17,000 deaths
- Over 75,000 Californians to be permanently disabled
- Over 240,000 Californians to be hospitalized
- Over 2 million Californians to require treatment in emergency departments (EDs)
- An unknown number of injury-related treatment in physician offices and clinics

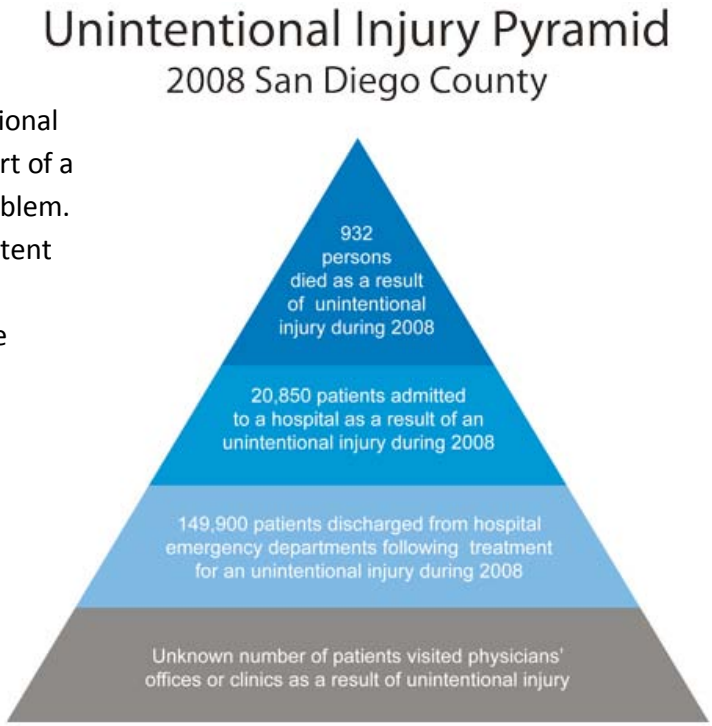
This chapter will review the prevalence, trends and the underlying causes of unintentional and intentional injury in San Diego County and provide insight into which residents are most impacted in terms of gender, age category, race/ethnicity and geographic region.

The term "unintentional injury" is referred to "accidents" because the latter implies events are inevitable and unavoidable whereas a high proportion of these incidents are regarded as being preventable (ISD, 2009).

Unintentional Injury

Unintentional injuries can occur at home, at work, while participating in sports and recreation, on the streets, and at school. The information in this section focuses on those injuries that are severe enough to result in a visit to a hospital ED, hospitalization or death. Causes of unintentional injuries include motor vehicle accidents, falls, firearms, fire/burns, drowning, poisoning (including drugs and alcohol, gas, cleaners and caustic substances) and injuries at work.

The number of deaths associated with unintentional injury is significant, yet presents only a small part of a much larger and more serious public health problem. Hospitalization data is more indicative of the extent of the injury problem than death data alone. As shown in the pyramid below, during 2008, while there were over 930 deaths, more than 20,800 San Diegans were hospitalized and nearly 150,000 were treated annually in EDs for unintentional injuries. The number of unintentional injuries treated in physicians' offices and clinics is unknown



Unintentional Injury Deaths

Unintentional injuries are one of the leading causes of death for San Diego County residents of all ages, regardless of gender, race or region. During 2008, unintentional injury was the leading cause of death for persons ages 1 to 4 years and 15 to 34 years, and the sixth leading cause of death overall. Over 930 San Diegans died in 2008 as a result of unintentional injuries. Between 2000 and 2008, 6,725 San Diegans died as a result of unintentional injuries, and the rate of death has increased by 9.8%.

The following paragraphs and charts show those most impacted by the results of unintentional injuries as reflected by rates of deaths, hospitalizations and ED discharges.

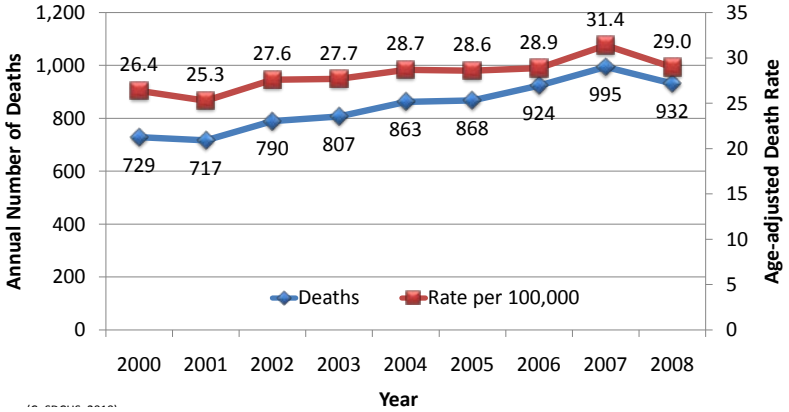
Deaths

Age Category – Between 2006 and 2008, there were 2,843 unintentional deaths in San Diego County, with higher death rates per 100,000 population among those in the 75 to 84 and the 85-plus age categories, 72.1 and 222.6, respectively.

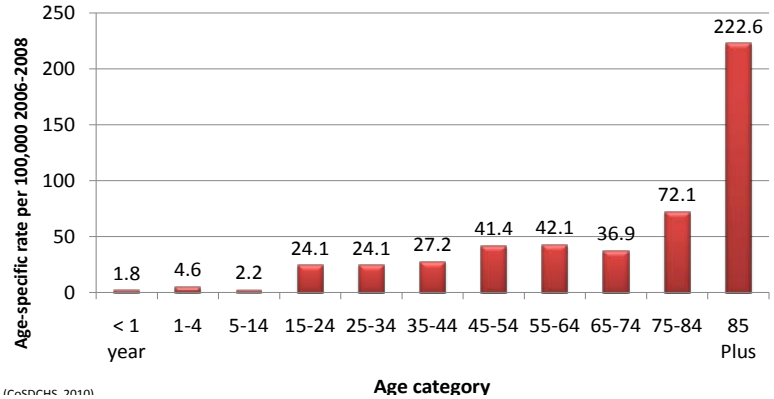
During this three-year period, unintentional injury deaths among those between the ages of 15 and 64 accounted for over two-thirds (68.7%) of the deaths for this cause of death.

Gender – During 2008, males accounted for almost two-thirds (65.1%) of the unintentional injury deaths in San Diego County. The death rate per 100,000 population among males was more than twice the death rate among females, 39.2 and 18.9, respectively.

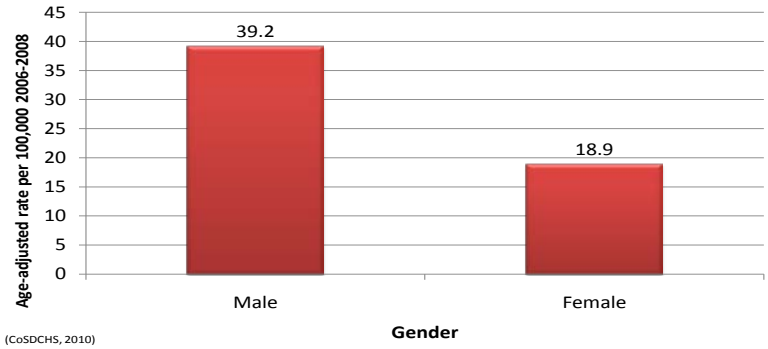
Unintentional Injury Deaths
San Diego County, 2000-2008



Unintentional Injury Deaths
San Diego County, 2006-2008

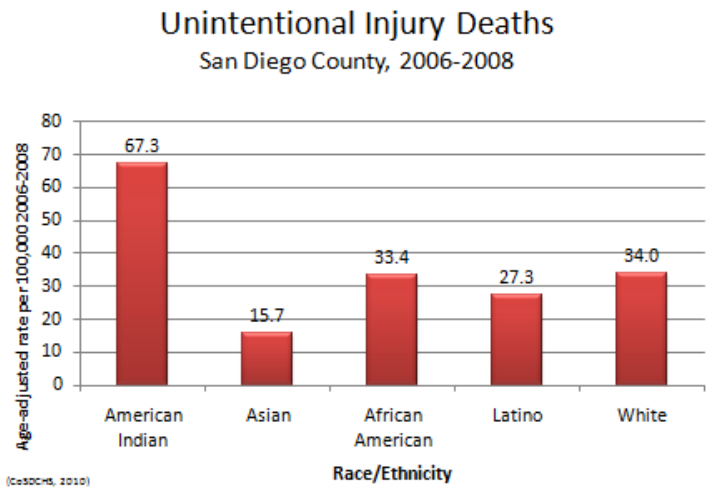


Unintentional Injury Deaths
San Diego County, 2008

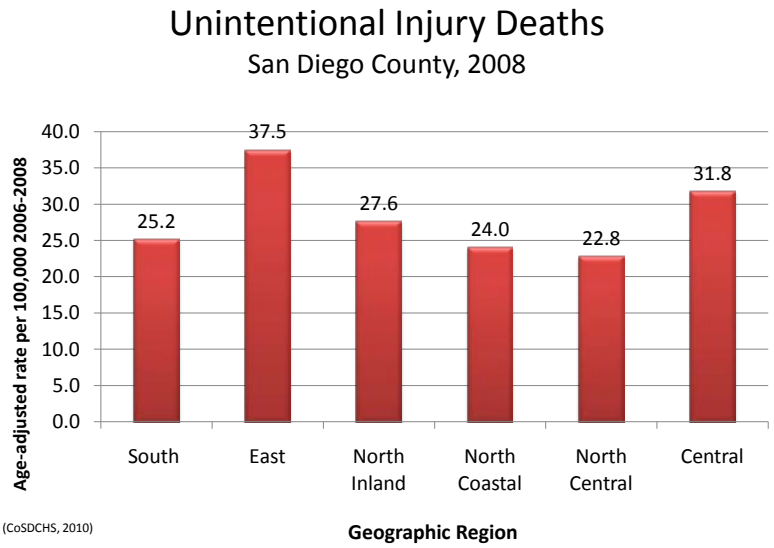


(CoSDCHS, 2010)

Race and Ethnicity – Between 2006 and 2008, age-adjusted death rates per 100,000 were highest among American Indians (67.3), whites (34.0) and African Americans (33.4). The death rate was lowest among Asians (15.7).

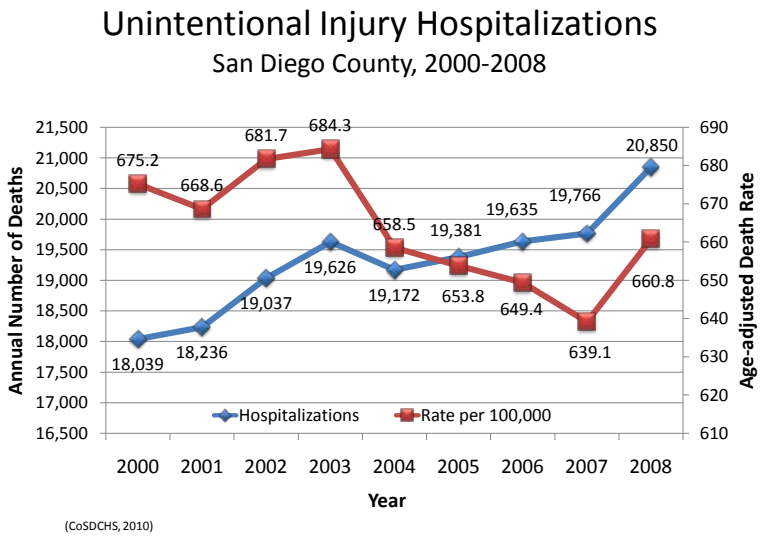


Geographic Region – During 2008, the East and Central Regions experienced the highest unintentional injury death rates, 37.5 and 31.8, respectively. In both of these regions, unintentional injury death rates were higher than the overall County rate of 29.0.



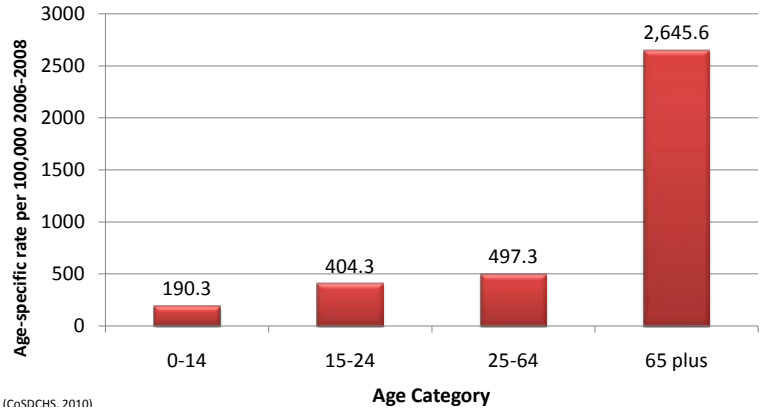
Unintentional Injury Hospitalizations

During 2008, there were 20,850 San Diego residents hospitalized as a result of an unintentional injury, and the age-adjusted rate was 660.8 per 100,000 population. Between 2000 and 2008, there was a 15.6% increase in the number of persons hospitalized. However, the rate of hospitalization declined by 2.1%. Between 2000 and 2008, 173,742 San Diegans were hospitalized due to unintentional injury.



Age Category – During 2008, persons 65 and older accounted for 45.1% of unintentional injury hospitalizations in San Diego County. The hospitalization rate per 100,000 population among those in this age category was more than five times the rate of those in younger age categories.

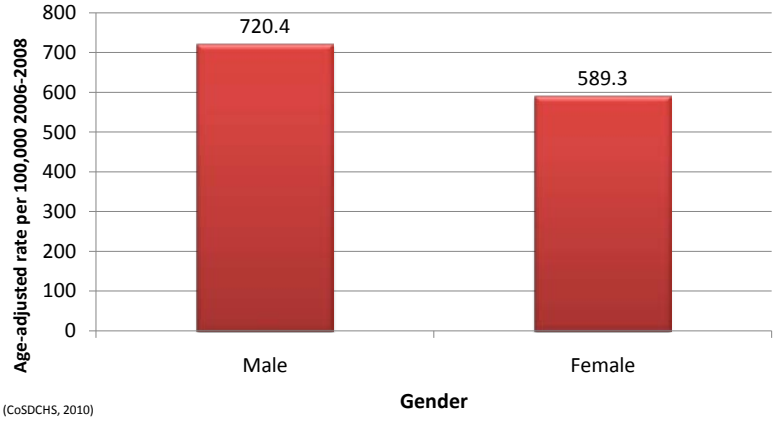
Unintentional Injury Hospitalizations
San Diego County, 2008



(CoSDCHS, 2010)

Gender – During 2008, males accounted for slightly more than half (51.5%) of unintentional injury hospitalizations in San Diego County. The age-adjusted hospitalization rate among males was 720.4 per 100,000, compared to 589.3 per 100,000 among females.

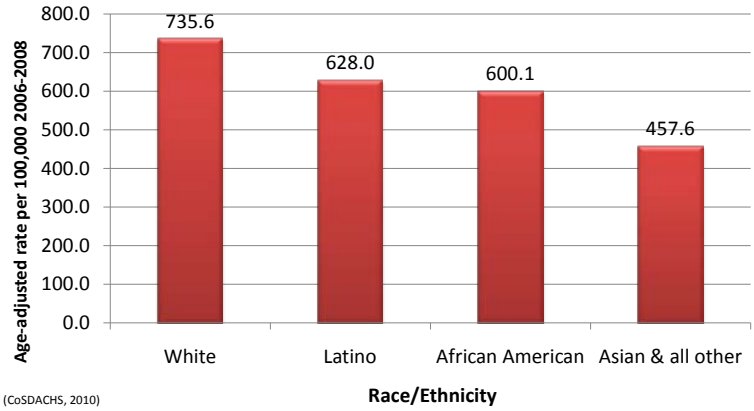
Unintentional Injury Hospitalizations
San Diego County, 2008



(CoSDCHS, 2010)

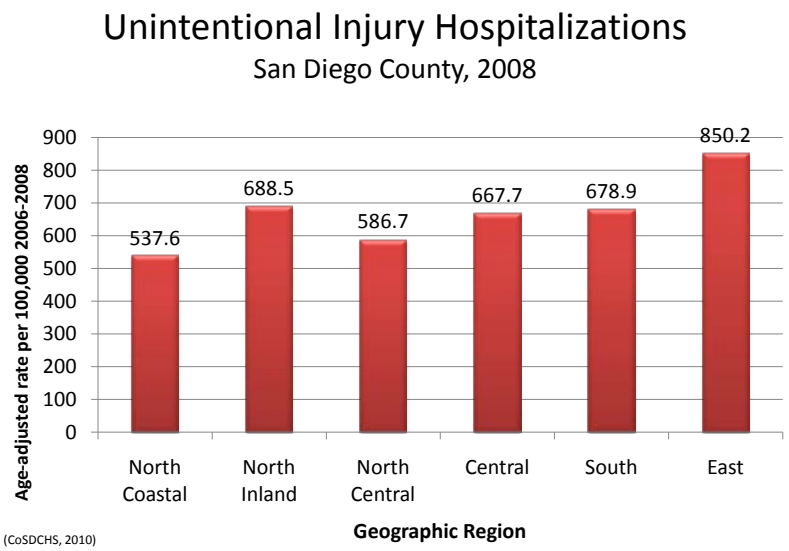
Race and Ethnicity – During 2008, more than 14,100 white San Diego residents were hospitalized as a result of unintentional injury, accounting for 67.7% of all hospitalizations related to unintentional injury. The rate for white residents was 735.6 per 100,000 compared to the overall County rate of 660.8.

Unintentional Injury Hospitalizations
San Diego County, 2008



(CoSDACHS, 2010)

Geographic Region – During 2008, residents of the East Region experienced the highest rate of hospitalization resulting from unintentional injury, 850.2 per 100,000. During this period, three other regions — North Inland, South and Central — had unintentional injury hospitalization rates higher than the overall County rate. The North Coastal Region had the lowest rate with 537.6 per 100,000.

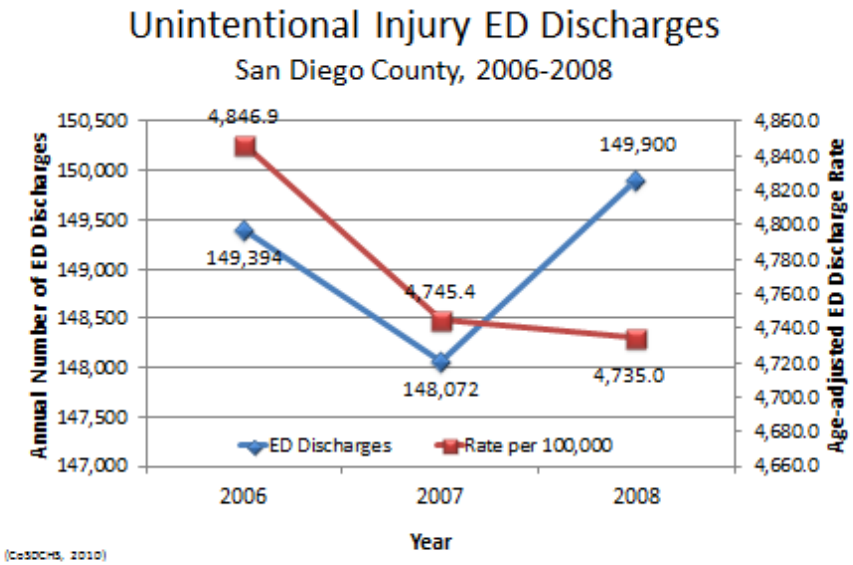


(CoSDCHS, 2010)

Unintentional Injury Emergency Department Discharges

The ED discharge information contained in this section describes all patients treated and discharged from participating EDs in San Diego County. This data does not include those patients treated and subsequently admitted to the hospital from the ED. Information related to patients admitted to the hospital from the ED is reflected in the hospital discharge database. During 2007, 17% of all patients who presented to a San Diego County ED were admitted to that hospital.

During 2008, there were 149,900 San Diego County ED discharges following treatment for unintentional injuries, accounting for almost one in four (24.2%) of all ED discharges during this period. The rate of ED discharges related to unintentional injury was 4,735 per 100,000 and represented the lowest rate during the past three years.



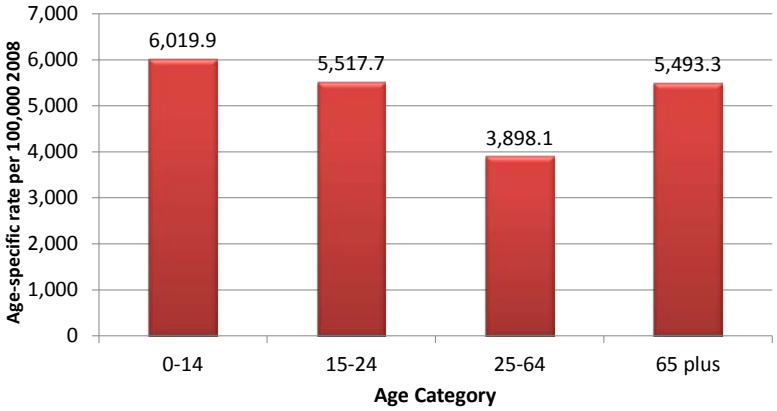
(CoSDCHS, 2010)

Age Category – During 2008, in San Diego County, persons between the ages of 25 and 64 accounted for 43.1% of ED discharges following treatment for unintentional injury. However, the ED discharge rate per 100,000 population was highest among those in the 0 to 14 and 15 to 24 age categories, 6,019.9 and 5,517.7, respectively. The ED discharge rate among those 65 and over was also higher than the county-wide rate, 5,493.3 and 4,735.0, respectively.

Gender – During 2008, males accounted for slightly more than half (53.4%) of the unintentional injury ED discharges in San Diego County. The age-adjusted hospitalization rate per 100,000 population among males was 5,101.4 compared to 4,366.2 among females.

Unintentional Injury ED Discharges

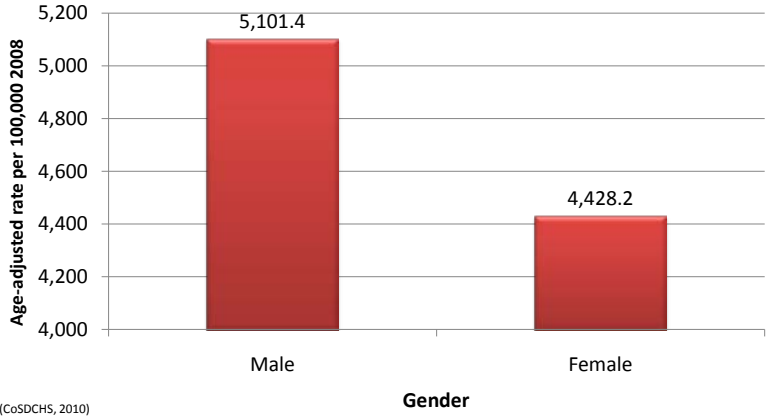
San Diego County, 2008



(CoSDCHS, 2010)

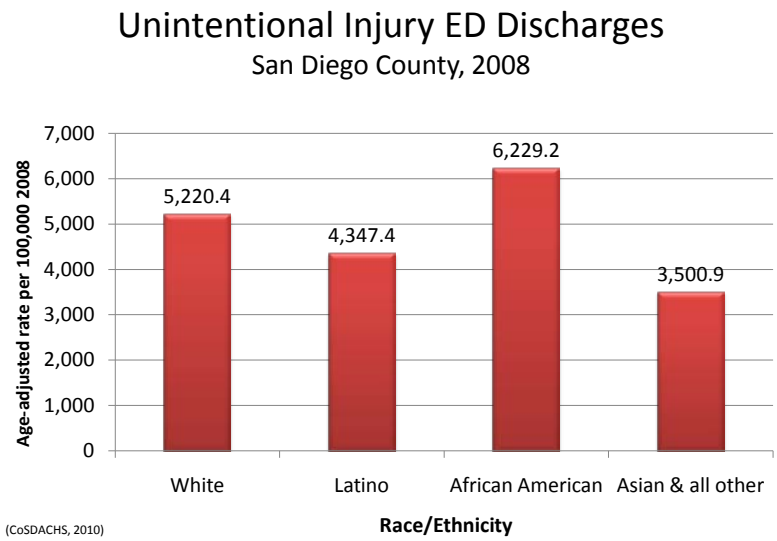
Unintentional Injury ED Discharges

San Diego County, 2008

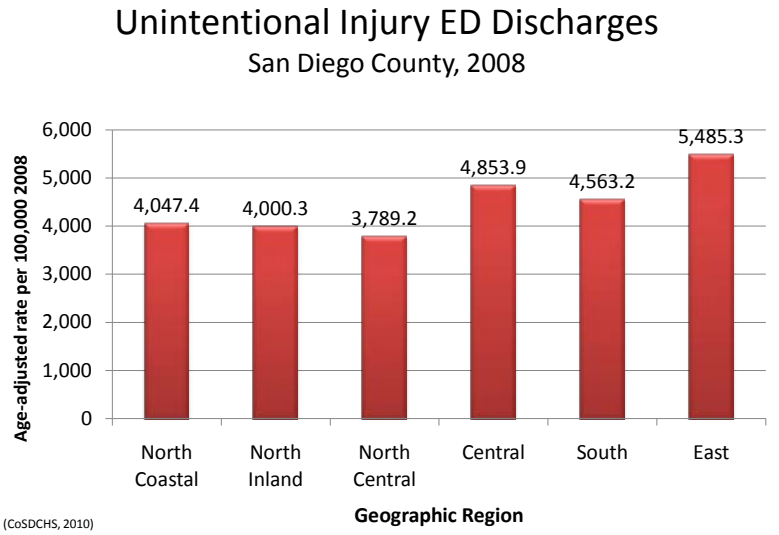


(CoSDCHS, 2010)

Race and Ethnicity – During 2008, more than 81,300 white San Diego residents were discharged from the ED following treatment for an unintentional injury, accounting for 54.3% of all ED discharges for treatment related to unintentional injury. The rate per 100,000 for white residents was 5,220.4 compared to the overall County rate of 4,735.0. The highest unintentional injury ED discharge rate however, was among African-Americans with a rate of 6,229.2.



Geographic Region – During 2008, residents of the East Region experienced the highest ED discharge rate following treatment for unintentional injury, 5,485.3 per 100,000. In addition, the Central Region had an unintentional injury ED discharge rate higher than the overall County rate, 4,853.9 versus 4,735.0 per 100,000, respectively.



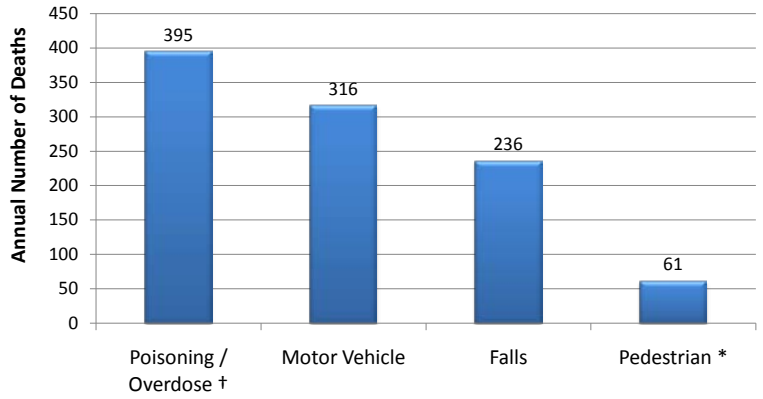
Underlying Cause of Death

There are several major underlying causes of unintentional injury death, hospitalization and ED discharges, including falls, motor vehicle related injury, overdose/poisoning and pedestrian injury. This section will review each of these underlying causes and will include the following:

- Trends related to the annual number of deaths, hospitalizations and ED discharges
- Trends related to the rate of deaths, hospitalizations and ED discharges per 100,000 population
- Most current year data for deaths, hospitalizations and ED discharges, to identify who is impacted most in terms of gender, race and ethnicity, age category, and geographic region

The charts on this page provide an overview of each of these underlying causes as reflected in rates of death, hospitalization and ED discharges.

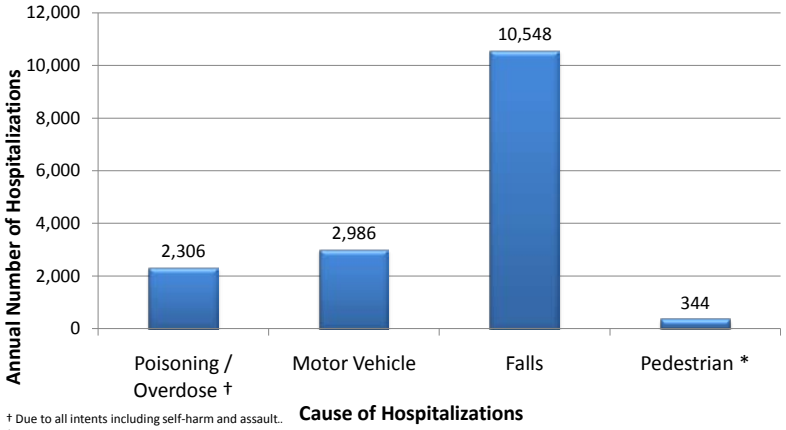
Unintentional Injury Deaths
San Diego County, 2007



† Due to all intents including suicide and homicide.
* Due to motor vehicle accidents

(CoSDCHS, 2010)

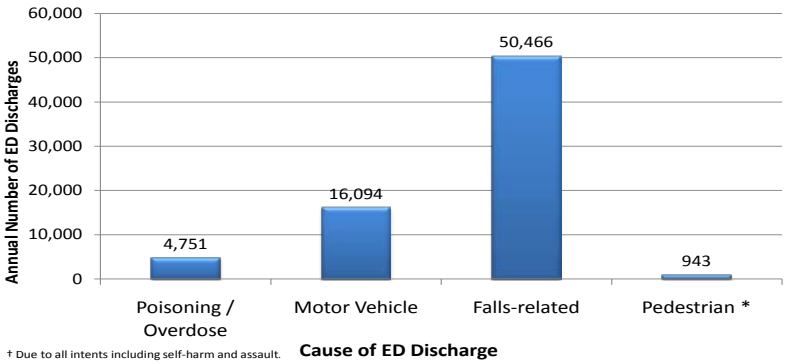
Unintentional Injury Hospitalizations
San Diego County, 2008



† Due to all intents including self-harm and assault..
* Due to motor vehicle accidents

(CoSDCHS, 2010)

Unintentional Injury ED Discharges
San Diego County, 2008



† Due to all intents including self-harm and assault.
* Due to motor vehicle accidents

(CoSDCHS, 2010)

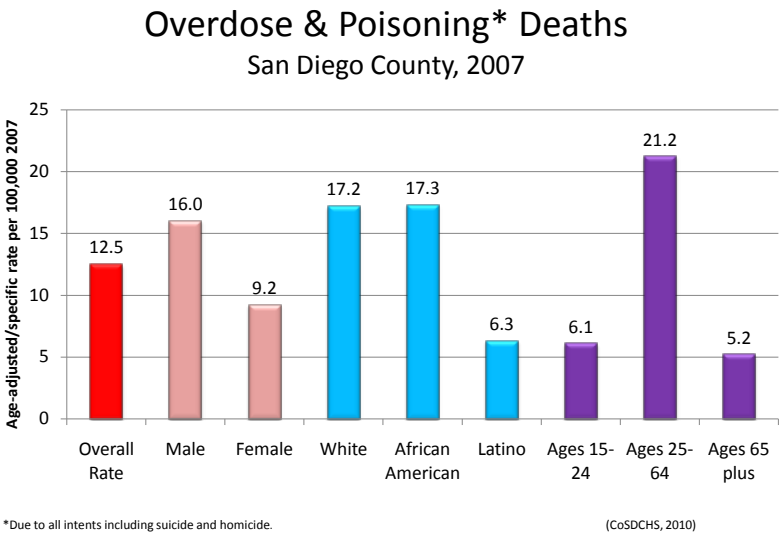
Poisoning/Overdose

Persons included in the overdose and poisoning statistics have incurred the damaging physiological effects of ingestion, inhalation or other exposure to a broad range of chemicals, including pesticides, heavy metals, gases/vapors, drugs and a variety of common household substances, such as bleach and ammonia. Included are accidental overdoses of drugs, a wrong drug given or taken in error, and a drug taken inadvertently. Note that data reported here includes overdose and poisoning due to all intents, such as suicide and self-inflicted drug overdose, not just unintentional causes.

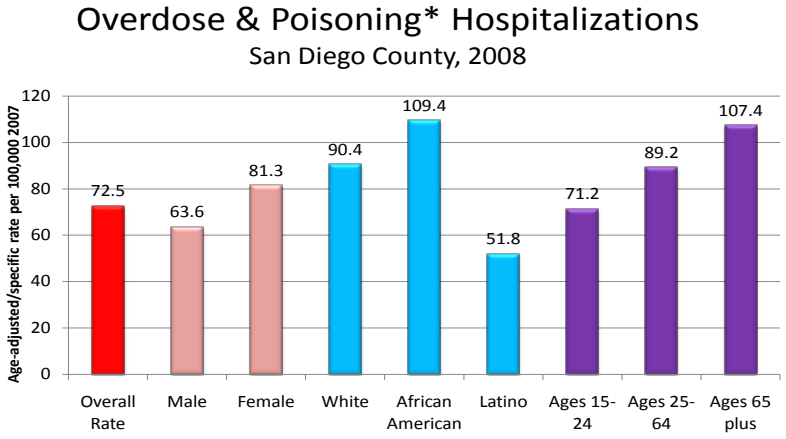
Deaths – Between 2000 and 2007, in San Diego County, 2,441 persons died as a result of poisoning and overdose, averaging 305 persons per year. During this eight-year period, the annual number of deaths related to poisoning and overdose increased by 44.7%. The age-adjusted death rate increased from 9.7 in 2000 to 12.5 per 100,000 in 2007, a change of 28.9%.

Those most impacted by overdose and poisoning deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, whites and African Americans, and persons ages 25-64. Additionally, age-adjusted death rates in the Central and East regions were higher than the overall County rate, 16.9 and 15.9 per 100,000, respectively.

Hospitalizations – Between 2000 and 2008, in San Diego County, 19,765 persons were hospitalized as a result of poisoning and overdose, averaging



*Due to all intents including suicide and homicide. (CoSDCHS, 2010)



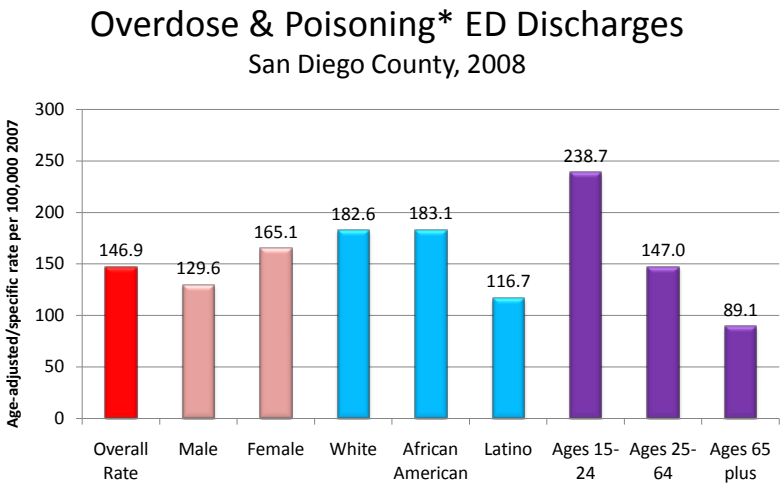
*Due to all intents including self-harm and assault. (CoSDCHS, 2010)

2,196 persons per year. During this nine-year period, the annual number of hospitalizations related to poisoning and overdose remained relatively stable, increasing by less than 1%. The age-adjusted hospitalization rate decreased from 81.5 per 100,000 in 2000 to 72.5 per 100,000 on 2008, a change of 11.7%.

Those most impacted by hospitalizations for overdose and poisoning during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 25 and older. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 103.2, 86.6 and 75.2 per 100,000, respectively.

Emergency Department Discharges – Between 2006 and 2008, in San Diego County, 13,411 persons were discharged from hospital EDs following treatment for poisoning and overdose, averaging 4,470 persons per year. During this three-year period, the annual number of ED discharges following treatment for poisoning and overdose increased by 11.4%. The age-adjusted ED discharge rate increased from 135.7 per 100,000 in 2006 to 146.9 per 100,000 in 2008, a change of 8.3%.

ED discharge rates show that those most impacted by overdose and poisoning during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 15-24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 154.2 and 208.5 per 100,000, respectively.



*Due to all intents including self-harm and assault. (CoSDCHS, 2010)

Motor Vehicle Injury

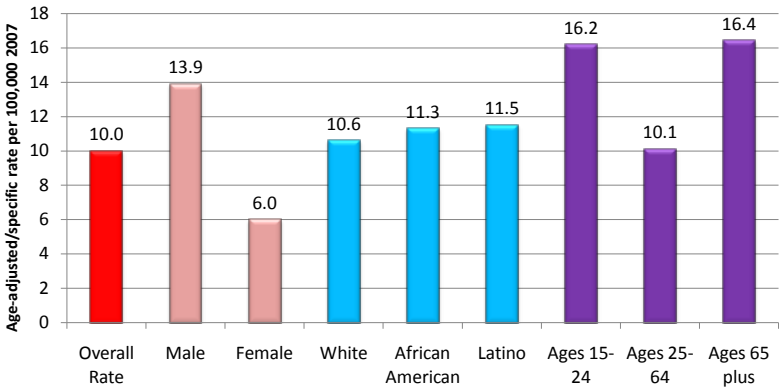
"Motor vehicle injuries" refers to accidents (collision or non-collision) occurring on a public roads. In addition to collisions between vehicles, these accidents include collisions between vehicles and animals, vehicles and pedestrians, or vehicles and fixed obstacles. Single vehicle accidents, in which one vehicle alone (and no other road user) was involved, are included. All fatality and injury totals include pedestrians, motorcyclists and bicyclists.

Deaths – Between 2000 and 2007, among San Diego County residents, there were 2,355 deaths resulting from motor vehicle accidents, averaging 291 deaths per year. During this eight-year period, the annual number of deaths related to motor vehicle accidents increased by 53.4%. The age-adjusted death rate increased from 7.2 per 100,000 in 2000 to 10.0 per 100,000 in 2007, a change of 38.9%.

Those most impacted by motor vehicle accident deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, Latinos, African Americans and whites; and persons age 15-24 and those age 65 and older. Additionally, age-adjusted death rates in the North Central, East and North Inland regions were higher than the overall County rate, 12.0, 10.7 and 11.8 per 100,000, respectively.

Deaths due to Motor Vehicles

San Diego County, 2007



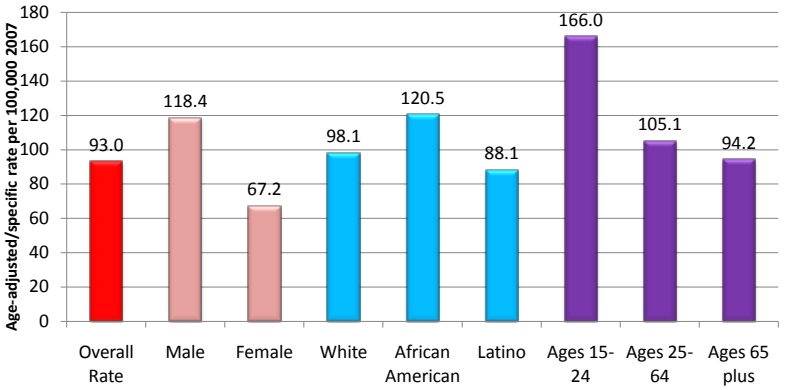
(CoSDCHS, 2010)

Hospitalizations – Between 2000 and 2008, in San Diego County, 29,326 persons were hospitalized as a result of motor vehicle accidents, averaging 3,258 persons per year. During this nine-year period, the annual number of hospitalizations related to motor vehicle accidents has declined by 10%. The age-adjusted hospitalization rate decreased from 116.5 per 100,000 in 2000 to 93.0 per 100,000 on 2008, a change of 20.2%.

Those most impacted by hospitalizations due to motor vehicle accidents during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites and African Americans, and persons ages 15 to 24. Additionally, age-adjusted hospitalization rates in the Central, South and East regions were higher than the overall County rate, 118.9, 114.4 and 109.6 per 100,000, respectively.

Hospitalizations due to Motor Vehicles

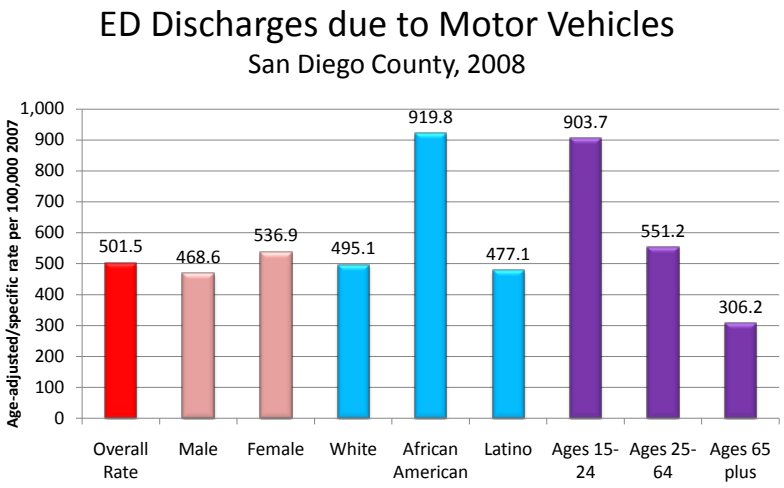
San Diego County, 2008



(CoSDCHS, 2010)

Emergency Department Discharges – Between 2006 and 2008, in San Diego County, 50,894 persons were discharged from hospital EDs following treatment for injuries resulting from motor vehicle accidents, averaging 5,655 persons per year. During this three-year period, the annual number of ED discharges following treatment for injuries due to motor vehicle accidents increased by 7.9%. The age-adjusted ED discharge rate has decreased from 557.6 in 2006 to 501.5 per 100,000 on 2008, a change of 10.1%.

ED discharge rates for 2008 show that those most impacted by injuries from motor vehicle accidents, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, African Americans and persons ages 15-24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 545.7 and 584.4 per 100,000, respectively.



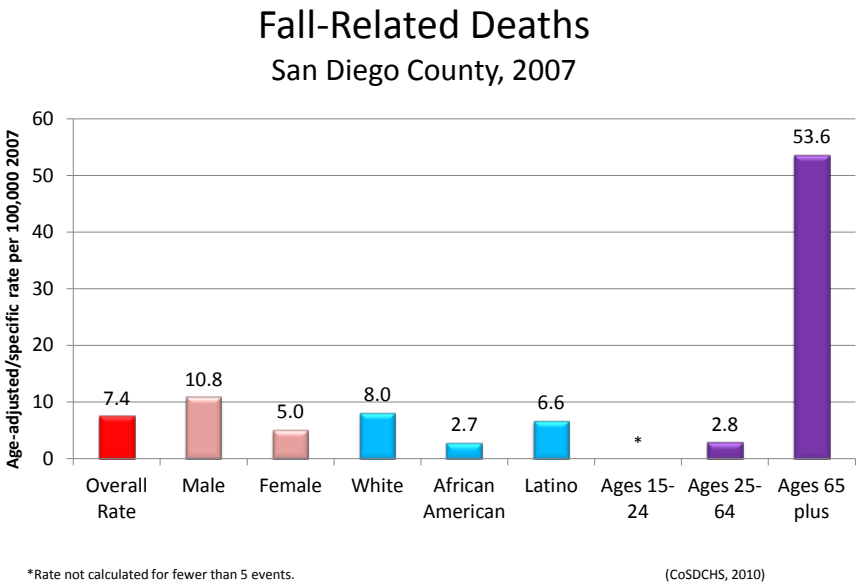
(CoSDCHS, 2010)

Fall-Related Injury

Falls, which are unintentional, are one of the leading causes of death, hospitalizations and visits to a hospital ED, especially among those ages 65 and older.

Deaths – Between 2000 and 2007, there were 1,242 fall-related deaths among San Diego County residents, averaging 155 deaths per year. During this eight-year period, the annual number of fall-related deaths increased by 84.4%. The age-adjusted death rate increased from 5.1 in 2000 to 7.4 per 100,000 on 2007, a change of 45.1%.

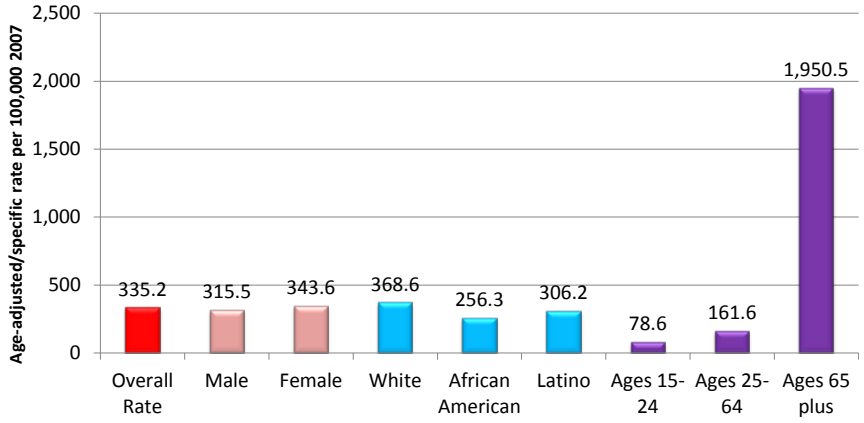
Those most impacted by fall-related deaths during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, whites and persons ages 65 and older. Additionally, age-adjusted death rates in all regions except the Central and South regions were higher than the overall County rate.



*Rate not calculated for fewer than 5 events.

(CoSDCHS, 2010)

Hospitalizations – Between 2000 and 2008, 82,665 persons in San Diego County were hospitalized as a result of a fall-related injury, averaging 9,185 persons per year. During this nine-year period, the annual number of hospitalizations related to a fall-related injury increased by 23.3%. The age-adjusted hospitalization rate changed less than 1% from 334.0 in 2000 to 335.2 per 100,000 on 2008.

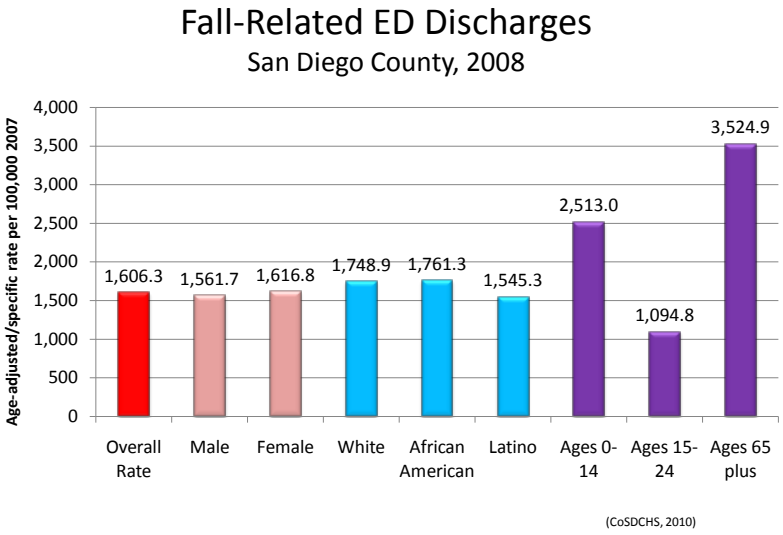


(CoSDCHS, 2010)

Those most impacted by fall-related hospitalizations during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites and persons ages 65 and older. Additionally, age-adjusted hospitalization rates in the East and North Inland regions were higher than the overall County rate, 424.1 and 340.8 per 100,000, respectively.

Emergency Department Discharges – Between 2006 and 2008, 144,564 persons in San Diego County were discharged from hospital EDs following treatment for a fall-related injury, averaging 48,188 persons per year. During this three-year period, the annual number of ED discharges following treatment for fall-related injuries increased by 8.3%. The age-adjusted ED discharge rate increased from 1,532.3 in 2006 to 1,606.3 per 100,000 on 2008, a change of 4.8%.

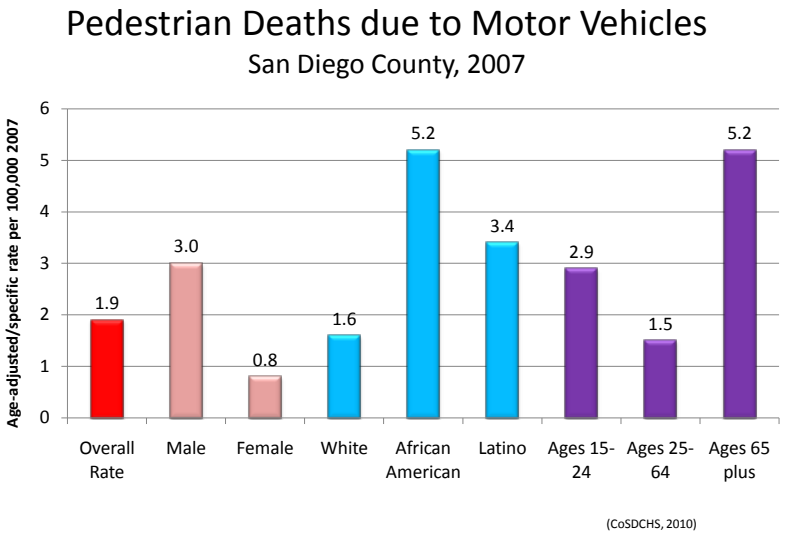
During 2008, ED discharge rates show that those most impacted by fall-related injury, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons under age 15 and those 65 and older. Additionally, age-adjusted ED discharge rates in the East Region were higher than the overall County rate, 1,825.9 per 100,000.



Pedestrian Injury

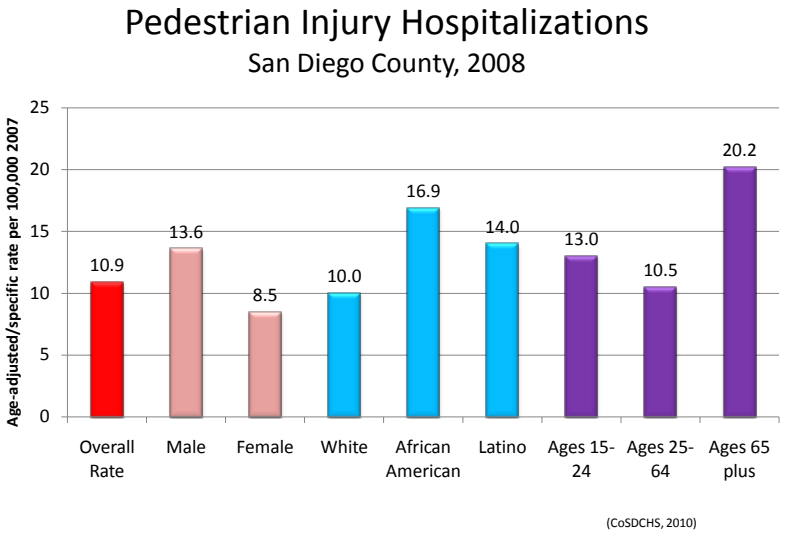
Deaths – Between 2000 and 2007, there were 480 pedestrian deaths due to motor vehicles among San Diego County residents, averaging 60 deaths per year. During this eight-year period, the annual number of pedestrian deaths increased by 19.6%. The age-adjusted death rate increased from 1.8 in 2000 to 1.9 per 100,000 on 2007, a change of 5.6%.

Those most impacted by pedestrian deaths due to motor vehicles during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000, include males, African Americans, Latinos, persons between the ages of 15 and 24 and those ages 65 and older. Additionally, age-adjusted death rates in the North Coastal and Central regions were higher than the overall County rate, 2.5 and 2.8, respectively.

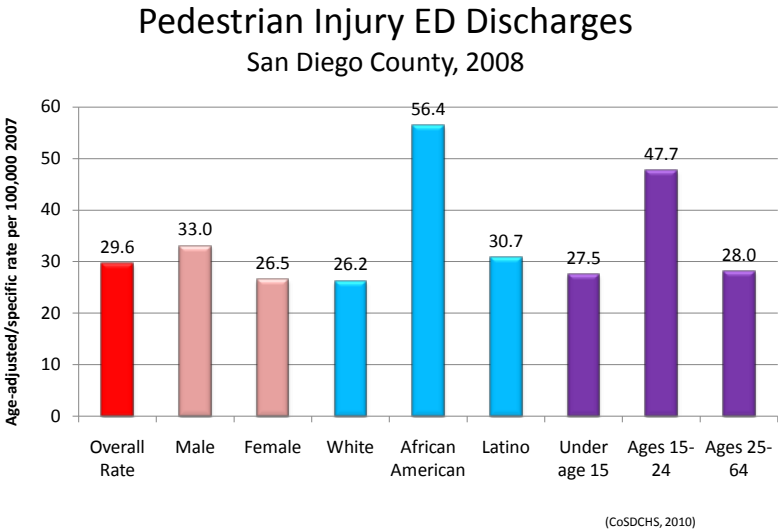


Hospitalizations – Between 2000 and 2008, 3,374 persons in San Diego County we 375 persons per year. During this nine-year period, the annual number of hospitalizations related to a pedestrian injury decreased by 23.3%. The age-adjusted hospitalization rate decreased by 20.4%, from 13.7 in 2000 to 10.9 per 100,000 in 2008.

Hospitalization rates show that those most impacted by pedestrian injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos , persons between the ages of 15 and 24 and those ages 65 and older. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 22.4, 12.8 and 11.4 per 100,000, respectively.



Emergency Department Discharges – Between 2006 and 2008, 2,860 persons in San Diego County were discharged from hospital EDs following treatment for a pedestrian injury, averaging 955 persons per year. During this three-year period, the annual number of ED discharges following treatment for pedestrian injuries increased by 5.0%. The age-adjusted ED discharge rate increased from 29.1 in 2006 to 29.6 per 100,000 in 2008, a change of 1.7%.



2008 ED discharge rates show that those most impacted by pedestrian injury, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos and persons ages 15 or 24. Additionally, age-adjusted ED discharge rates in the Central and East regions were higher than the overall County rate, 45.9 and 31.9 per 100,000, respectively.

Intentional Injury

The term "intentional" refers to injuries resulting from purposeful human action, whether directed at oneself or others. Intentional injuries include:

- Assault injury: the use of physical force with the intent to inflict harm or death upon another — known as violence
- Self-inflicted injury: is not only suicide attempts but also self-inflicted injury without intent to attempt suicide — known as self-harm or suicide

Violence

Violence includes a wide array of activities, most of which are reportable crimes. Yet, according to the Crime Victimization Survey, less than half, 49%, of all violent crimes were reported to the police in 2009. Violent crimes against females were more likely to be reported than violent crimes against males, 53% and 45%, respectively (NVCS, 2010).

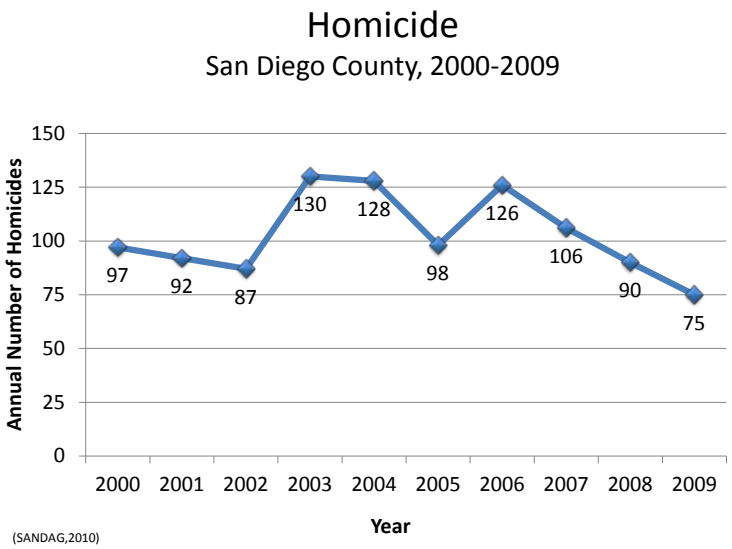
The following section provides an overview of the different types of violent acts currently reported to law enforcement and reported in SANDAG's Criminal Justice Clearinghouse.

During 2009, there were 12,776 violent crimes reported to law enforcement in the San Diego region. These included:

	2009	Percentage of total	Percentage change 2005 - 2009
Homicide	75	0.6%	-23.5%
Rape	746	5.8%	-8%
Robbery	4,033	31.6%	-2%
Aggravated assault	7,922	62.0%	-12%
Total violent crime	12,776	100.0%	-8%

Homicide

According to the Centers for Disease Control and Prevention's (CDC's) National Violent Death Reporting System (NVDRS, 2008):



(SANDAG,2010)

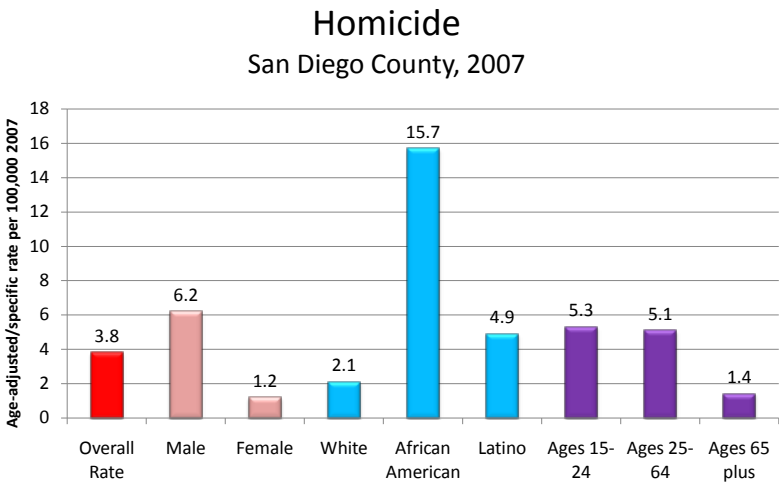
- Approximately one-third of homicides in 2005 were precipitated by another crime, including robbery, assault, drug trading, burglary, motor-vehicle theft or rape/sexual assault.
- In nearly 20% of homicide cases in 2005, intimate-partner violence (IPV) was identified as a contributing factor. When IPV was a factor, over 78% of suspects were male, while 65% of victims were female.
- Incidents resulting in multiple deaths were most often homicides that were followed by suicide of the suspect (49.9%) or multiple homicides (41.6%).

- In 63.2% of cases, victims who were killed by law enforcement officers and were tested for alcohol were over the legal limit of 0.08 mg/DL.

According to information provided by SANDAG, a total of 75 homicides occurred in the San Diego region in 2009, the lowest number in the past 25 years. During this period, the number of homicides fluctuated from 278 in 1991 to a low of 75 in 2009 (SANDAG, 2010).

In addition to the homicide and assault data provided by SANDAG's Criminal Justice Clearinghouse, the County of San Diego HHSA's Community Health Statistics department provides a wealth of data related to homicide and assault. This data includes the annual incidence and rate, plus demographic profiles of victims of both homicide and assault serious enough to require medical treatment in the ED or hospitalization.

Those most impacted by homicide during 2007, as measured by the age-adjusted (age-specific for age categories) rates per 100,000 include males, African Americans, Latinos, and persons between the ages of 15 and 54. Additionally, age-adjusted death rates in the Central, South and East regions were higher than the overall County rate, 7.5, 4.8 and 4.4, respectively.



(CoSDCHS, 2010)

Assault

Defining assault becomes complex when reviewing both public health and crime statistics. While the intent of this section is to review the prevalence of violence in San Diego County using available data sources, including County Public Health and SANDAG crime data, it is important to acknowledge the differences in these reporting systems. Part of this process includes understanding how assault is classified.

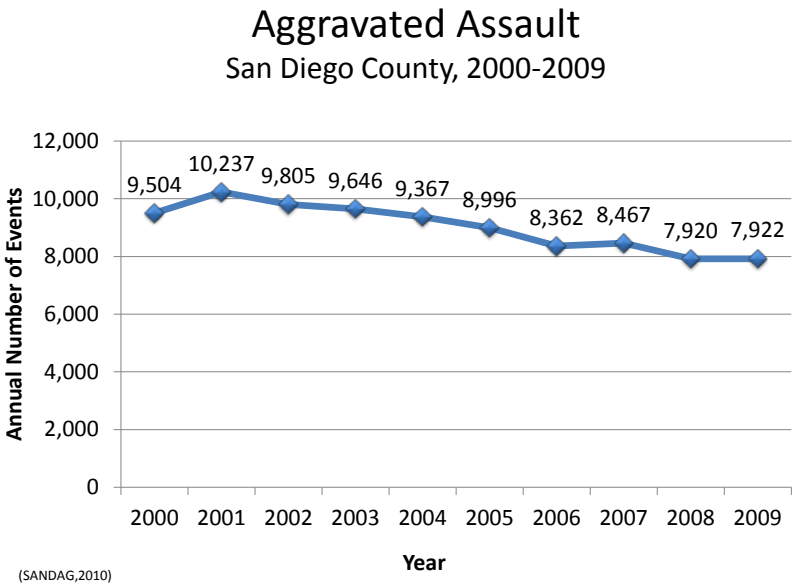
SANDAG uses the FBI's Uniform Crime Reporting (UCR) Program definition of aggravated assault — "An unlawful attack by one person upon another for the purpose of inflicting severe or aggravated bodily injury." The UCR Program further specifies that this type of assault is usually accompanied by the use of a weapon or by other means likely to produce death or great bodily harm. Attempted aggravated assault that involves the display of — or threat to use — a gun, knife or other weapon is included in this crime category because serious personal injury would likely result if the assault were completed (URC, 2010).

For public health purposes only, the term "assault" is used and is defined using ICD-9 Ecodes E960-E969, which describe how the assault occurred, i.e., fighting, rape, poisoning, strangulation, etc.

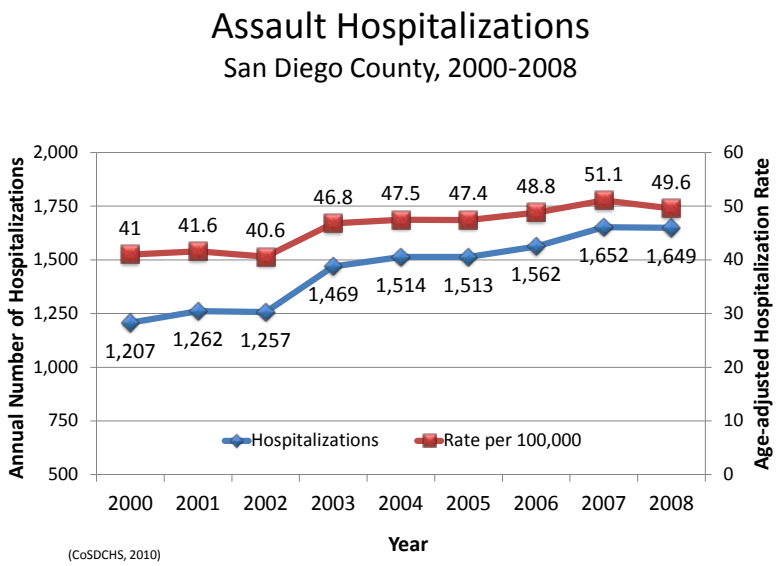
Used together, both of these data sets help create a fuller understanding of the problem of violence and the outcomes of these events.

Aggravated Assaults

According to information provided by SANDAG, there were 7,922 aggravated assaults in the San Diego region during 2009, similar to 2008. Since 2001 there has been a 22.6% decline in assaults (SANDAG, 2010).



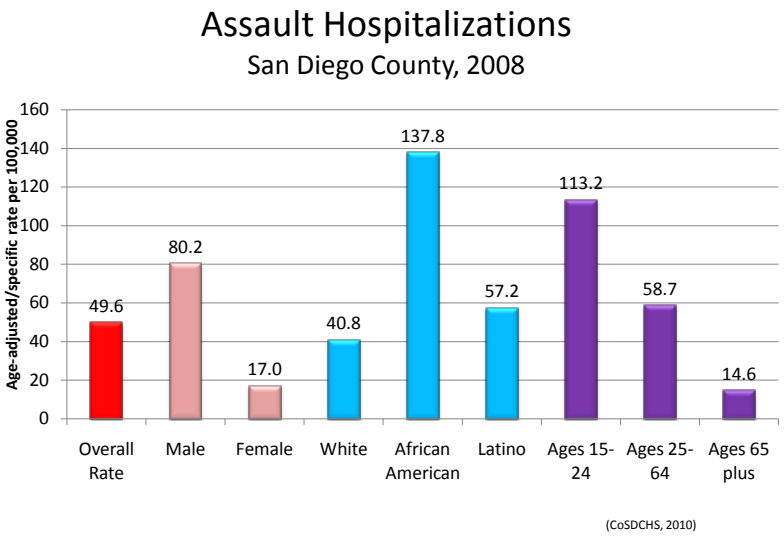
(SANDAG,2010)



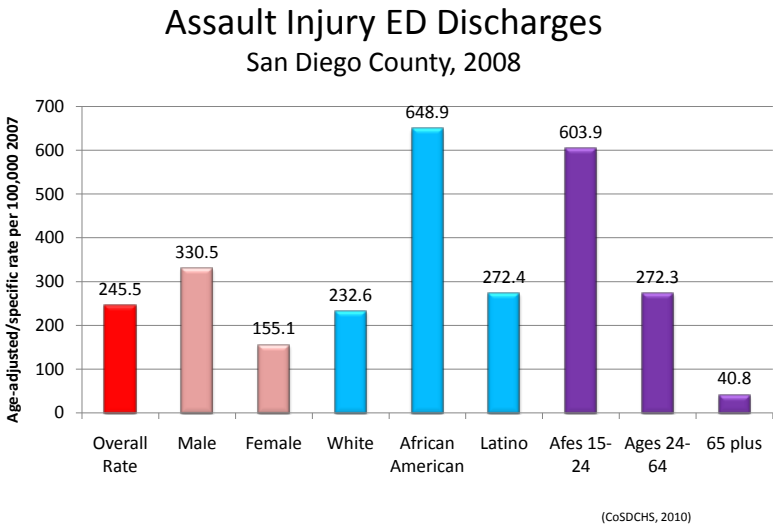
(CoSDCHS, 2010)

Hospitalizations – Between 2000 and 2008, 13,055 persons in San Diego County were hospitalized as a result of an assault injury, averaging 1,451 persons per year. During this nine-year period, the annual number of hospitalizations related to an assault injury increased by 36.6%. The age-adjusted hospitalization rate increased by 21.0%.

Those most impacted by assault injuries requiring hospitalization during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos, and persons between the ages of 15 and 64. Additionally, age-adjusted hospitalization rates in the Central, East and South regions were higher than the overall County rate, 109.9, 58.4 and 75.8 per 100,000, respectively.



Emergency Department Discharges – Between 2006 and 2008, 23,860 persons in San Diego County were discharged from hospital EDs following treatment for an assault injury, averaging 7,953 persons per year. During this three-year period, the annual number of ED discharges following treatment for assault injuries increased by 2.1% and the age-adjusted ED discharge rate changed less than 1%, from 245.8 to 245.5.



ED discharge rates show that those most impacted by assault injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, African Americans, Latinos, and persons between the ages of 15 and 24. Additionally, age-adjusted ED rates in the Central, East and South regions were higher than the overall County rate, 406.9, 286.3 and 278.2 per 100,000, respectively.

Suicide and Self-Inflicted Injury

Suicide occurs when a person ends his or her life, and it is a major, preventable public health problem. In 2008, suicide was the eighth-leading cause of death in San Diego County, accounting for 359 deaths, with an overall age adjusted rate of 11.3 suicide deaths per 100,000 people (SDEpi, 2010). Suicide deaths are only part of the problem: more people survive suicide attempts than actually die. Those who attempt suicide are often seriously injured and require medical and psychiatric care. The following section reviews the prevalence of suicide in San Diego County, along with self-inflicted injury hospitalizations and ED discharges following treatment for self-inflicted injuries. Included in this section are trends and profiles of those most impacted.

Self-inflicted injury is the deliberate harm of one's own body to cause injury. The self-inflicted injury data shown in this report does not indicate if the intent was suicidal. Common types of self-inflicted injury include cutting, scratching, hitting, biting and burning.

While the data reported here represents those who have committed or attempted to commit suicide, it has been estimated that there may be from eight to 25 attempted suicides per every one suicide death (Moscicki, 2001).

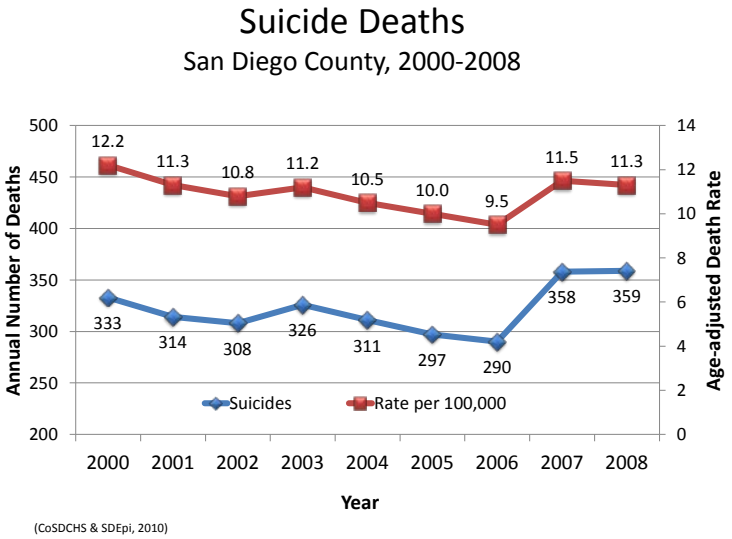
Risk Factors for Suicide

According to the National Institute of Mental Health (NIMH) there are at least eight generally accepted risk factors for suicide. These include:

- Depression and other mental disorders, or a substance-abuse disorder (often in combination with other mental disorders). More than 90 percent of people who die by suicide have these risk factors.
- Prior suicide attempt.
- Family history of mental disorder or substance abuse.
- Family history of suicide.
- Family violence, including physical or sexual abuse.
- Firearms in the home, the method used in more than half of suicides.
- Incarceration.
- Exposure to the suicidal behavior of others, such as family members, peers, or media figures.

Suicide

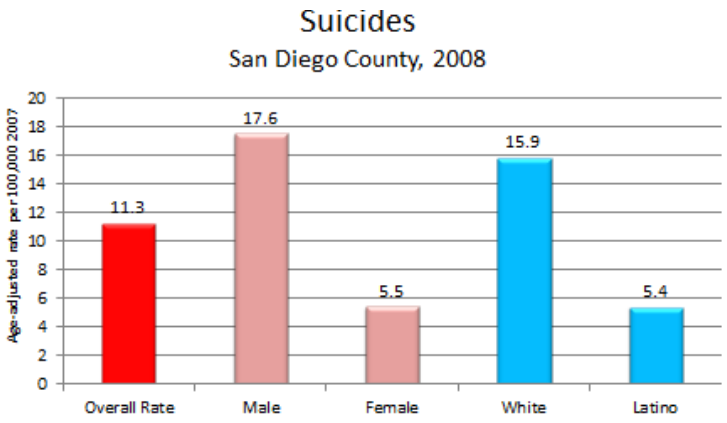
During 2008, 359 San Diego residents died as a result of suicide, and the age-adjusted rate was 11.3 per 100,000 population. Between 2000 and 2008, there was a 3.3% increase in the number of suicides; however, the rate of suicides declined by 7.4%. Between 2000 and 2008, 2,896 San Diegans died as a result of suicide.



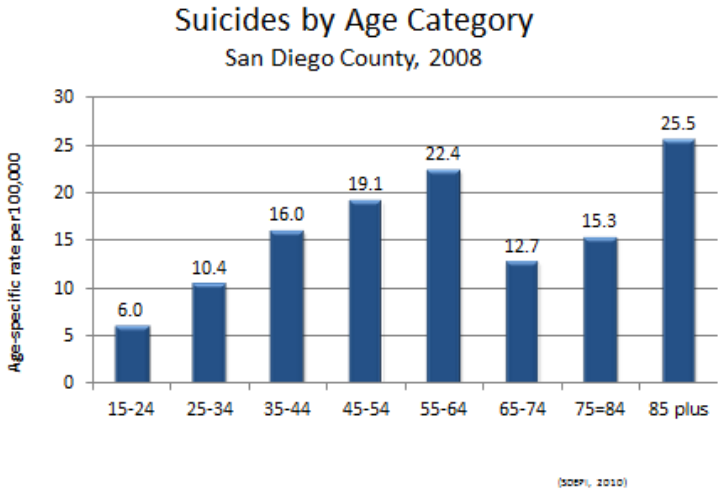
(CoSDCHS & SDEpi, 2010)

Review of non-natural causes of death in San Diego County between 1998 and 2007 found that suicide was the second leading cause of non-natural death for all ages. During this period:

- Among those ages 55 to 74, suicide was the leading cause of non-natural death
- Among those ages 10 to 14, 20 to 54 and 75 and older, suicide was the second leading cause of non-natural death



Those most impacted by suicide during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include males, whites, persons between the ages of 35 and 64, and those ages 85-plus. Additionally, age-adjusted suicide rates in the East, North Coastal and Central regions were higher than the overall County rate, 13.8, 12.4 and 11.7 per 100,000, respectively.

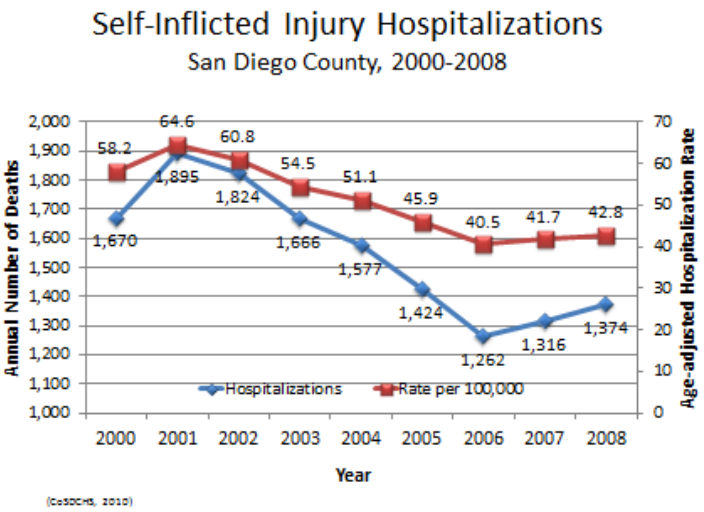


(SDEPI, 2010)

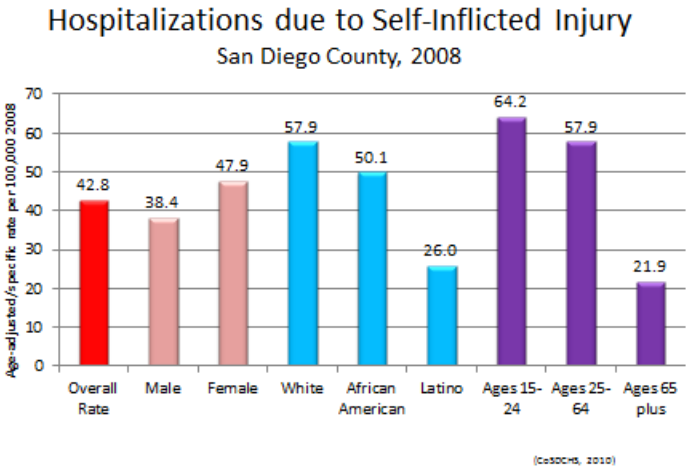
Self-Inflicted Injury

Self-inflicted injury, as reflected by hospitalizations and ED discharges, are four to seven times more common than completed suicides. The following provides trends, and profiles those most impacted by self-inflicted injury.

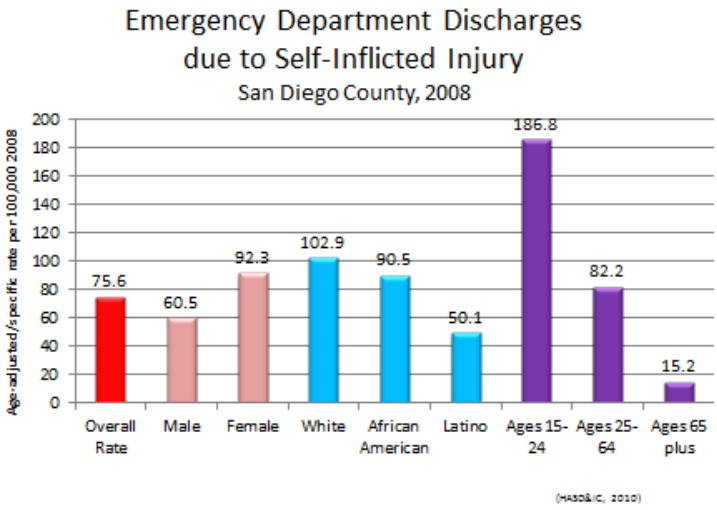
Hospitalizations – Between 2000 and 2008, 14,008 persons in San Diego County were hospitalized as a result of self-inflicted injuries, averaging 1,556 persons per year. During this nine-year period, the annual number of hospitalizations related to a self-inflicted injury decreased by 17.7%. The age-adjusted hospitalization rate decreased by 26.5%.



Those most often hospitalized as a result of self-inflicted injury during 2008, as measured by the age-adjusted (age-specific for age categories) rate per 100,000, include females, whites and African Americans, and persons ages 15 or 64. Additionally, hospitalization rates in the Central, South and East regions were higher than the overall County rate, 63.4, 52.4 and 49.1 per 100,000, respectively.



Emergency Department Discharges – Between 2006 and 2008, 6,525 persons in San Diego County were discharged from hospital EDs following treatment for self-inflicted injuries, averaging 2,175 persons per year. During this three-year period, the annual number of ED discharges following treatment for self-inflicted injuries increased by 27.4%. Between 2006 and 2008, the age-adjusted ED discharge rate increased by 24.6%., from 60.7 to 75.6.



Those most impacted by self-inflicted injury based on ED utilization during 2008, as measured by the rate per 100,000, include females, whites and African Americans, and persons ages 15 or 24. Additionally, ED discharge rate of 135.8 per 100,000 in the East Region was the highest of the six County regions.

Economic Costs

The economic costs of injury and violence are massive, including not only the costs related to medical expenses but also wage and productivity losses, administrative expenses and motor vehicle damage. The following are a sample of cost estimates from a variety of sources. Each is briefly described and referenced, if additional information is desired.

National Safety Council – The National Safety Council (NSC) makes estimates of the average costs of fatal and nonfatal unintentional injuries as a means to measure the impact on the economy and to illustrate the importance of injury prevention. The costs are a measure of the dollars spent and income not received due to accidents, injuries and fatalities.

Average Economic Cost per Death, Injury or Crash, 2008	
Death	**$1,300,000**
Nonfatal Disabling Injury	**$63,500**
Property Damage Crash (including non-disabling injuries)	**$8,300**

Additional information related to this study is available on the NSC website at: http://www.nsc.org/news_resources/injury_and_death_statistics/Pages/EstimatingtheCostsofUnintentionalInjuries.aspx

Centers for Disease Control and Prevention – The CDC, through a variety of funded research projects, provides economic cost estimates related to injury and violence. One recent study found that, nationwide, the total costs associated with nonfatal injuries and deaths due to violence in 2000 totaled more than $70 billion. Most of this cost ($64.4 billion or 92%) was due to lost productivity. However, an estimated $5.6 billion was spent on medical care for the more than 2.5 million injuries due to interpersonal and self-directed violence. This 2007 study, entitled *Medical Costs and Productivity Losses Due to Interpersonal and Self-Directed Violence in the United States*, provides a comprehensive look at the cost of violence in the U.S. Some of the key findings from this study include:

- Most of the costs of violence stem from males and young adults. Sixty-eight percent of the costs from assaults and 63% of the costs from self-inflicted injuries were associated with males aged 15 to 44.
- Americans suffer 2.2 million medically treated injuries due to interpersonal violence annually, at a cost of $37 billion ($33 billion in productivity losses, $4 billion in medical treatment).
- The cost of self-inflicted injuries (suicide and attempted suicide) is $33 billion annually ($32 billion in productivity losses, $1 billion in medical costs).
- People aged 15 to 44 years comprise 44% of the population, but account for nearly 75% of injuries and 83% of costs due to interpersonal violence.
- The nearly 17,000 annual homicides result in $22.1 billion in costs. The average cost per homicide was $1.3 million in lost productivity and $4,906 in medical costs.
- The average cost per case for a nonfatal assault was $57,209 in lost productivity and $23,353 in medical costs.
- The average cost per case of suicide is $1 million in lost productivity and $2,596 in medical costs. The average cost for a nonfatal self-inflicted injury was $9,726 in lost productivity and $7,234 in medical costs.

Additional information related to this study is available on the American Journal of Preventive Medicine Web site at: http://www.ajpm-online.net/article/S0749-3797%2807%2900086-4/pdf.

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RESOURCE LIST

The following lists, in alphabetical order, those resources used in the completion of this report. These may be useful to readers wishing to learn more about topics covered.

American Cancer Society

This is the primary website for the American Cancer Society and has links to a variety of cancer facts, figures and statistics.

Website address: http://www.cancer.org/docroot/home/index.asp

American Heart Association

This is the primary website for the American Heart Association and has links to facts, figures and statistics related to heart disease, stroke and a variety of related health conditions.

Website address: http://www.heart.org/HEARTORG/

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) is the world's largest, ongoing telephone health survey system, tracking health conditions and risk behaviors in the United States yearly since 1984. Conducted by the 50 state health departments as well as those in the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands, with support from the CDC, BRFSS provides state-specific information about issues such as asthma, diabetes, healthcare access, alcohol use, hypertension, obesity, cancer screening, nutrition and physical activity, tobacco use, and more.

Website address: http://www.cdc.gov/brfss/

California Cancer Registry

This is the primary website for the California Cancer Registry and contains a variety of cancer-related, California-specific cancer facts and figures.

Website address: http://www.ccrcal.org/

California Department of Public Health

The California Department of Public Health provides state leadership in public health and healthcare financing and works to create a more effective public health infrastructure in California. The department increases accountability and improves the effectiveness of both public health and healthcare purchasing activities.

Website address: http://www.cdph.ca.gov/Pages/default.aspx

The California Endowment

The California Endowment is a private, statewide health foundation created in 1996 as a result of Blue Cross of California's creation of WellPoint Health Networks, a for-profit corporation. The Endowment commissions and funds reports that reflect the work of grantees in their three program goal areas: Access to Health, Community Health and the Elimination of Disparities, and Culturally Competent Health Systems. All publications are available for download.

Website address: http://www.calendow.org/Home.aspx

California Health Interview Survey

The California Health Interview Survey (CHIS) is the most comprehensive source of health information on Californians. CHIS data are used by legislators, policy makers, local health departments, state agencies, community organizations, advocacy groups, foundations, researchers, and many others. Since 2001, the CHIS has been conducted every two years with many core questions repeated in each survey for measuring significant shifts over time. New questions are also added each survey year to address emerging concerns that are important for planning and policy development.

Website address: http://www.chis.ucla.edu/

California Healthcare Foundation

The California HealthCare Foundation (CHCF) is an independent philanthropic organization committed to improving the way healthcare is delivered and financed in California. CHCF commissions research and analysis; publishes and disseminates information; convenes meetings of key healthcare groups; and funds the development of programs and models aimed at improving healthcare in California. The CHCF website has a wealth of information and publications related to a wide variety of current healthcare issues.

Website address: http://www.chcf.org/

Department of Health Care Services

The Department of Health Care Services' (DHCS) mission is to protect and promote the health status of Californians through the financing and delivery of individual healthcare services. The DHCS finances and administers a number of individual healthcare service delivery programs, including the California Medical Assistance Program (Medi-Cal). This website contains a variety of health related data, an annual County Health Status Profile and zip code level birth and death data from 1989 through 2007.

Website address: http://www.dhcs.ca.gov/Pages/default.aspx

Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention website is the gateway to a wealth of health related information, publications, data and statistics. Some of the information and data available include:

Surveys

- National Health and Nutrition Examination Survey (NHANES)
- National Health Care Surveys (NHCS)
- National Health Interview Survey (NHIS)
- National Immunization Survey (NIS)

Publications

- Health-E Stats
- Health, United States
- HIV/AIDS statistics and surveillance reports
- National Center for Health Statistics publications
- NIOSH surveillance publications and other resources

Statistics

- National Death Index (NDI)
- National Vital Statistics System (NVSS)
- Vital Stats
- Vital Statistics Data online

Website address: http://www.cdc.gov/

Community Health Improvement Partners

Community Health Improvement Partners (CHIP) is a collaboration of San Diego health care systems, hospitals, community clinics, insurers, physicians, universities, community based organizations and the County of San Diego who are dedicated to a common vision. With the core functions of assessment; outreach; education and advocacy; program development; and collaboration, CHIP currently has more than 20 programs, initiatives and work groups-many working with persons of diverse social economic status and cultural backgrounds.

The CHIP Website provides access to a wide range of health related information focusing on the San Diego regions. Topics include:

- Access to Healthcare
- Behavioral health
- Childhood Obesity
- Community Charting the Course VI
- Suicide prevention
- Health literacy
- Workplace wellness

Website address: http://www.sdchip.org

The Commonwealth Fund

The Commonwealth Fund, established in 1918, has as its mission the promotion of a high-performing healthcare system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including low-income people, the uninsured, minority Americans, young children and elderly adults.

The Fund carries out this mandate by supporting independent research on healthcare issues and making grants to improve healthcare practice and policy. This site has a wealth of information related to health access, quality and the Affordable Care Act.

Website address: http://www.commonwealthfund.org/

C-STATS

The California Department of Health Services, Tobacco Control Section and the Tobacco Education Clearinghouse of California (TECC), created the C-STATS website is to provide access to a wide variety of information, including evaluation resources for local projects, publications and local information on a broad range of tobacco-related indicators, from behavioral measures to local policies.

This site allows access to statewide or county-level information. Information may be selected at either single or multiple years and displayed in HTML, PDF, or MS Excel spreadsheet formats.

Available data includes:

- Demographic information
- Smoking behavior
- Cessation
- Reducing secondhand smoke
- Other forms of tobacco use
- Tobacco-related attitudes/health beliefs
- Health consequences of smoking
- Economic consequences of smoking
- Media exposure

Website address: http://www.cstats.info/

Families USA

Families USA is a national nonprofit, non-partisan organization dedicated to the achievement of high-quality, affordable healthcare for all Americans. Their website provides a variety of publications and resources related to Patient Protection and Affordable Care Act — including who will benefit, what it will mean for your state, and information on the new law, Medicaid and children's health, Medicare, the uninsured, and minority health.

Website address: http://www.familiesusa.org/

Healthy People 2020

Healthy People 2020 provides science-based, 10-year national objectives for improving the health of all Americans. For three decades, Healthy People has established benchmarks and monitored progress over time in order to encourage collaborations across sectors, guide individuals toward making informed health decisions and measure the impact of prevention activities. This website is the access point to Healthy People 2020 information, data and publications.

Website address: http://www.healthypeople.gov/2020/default.aspx

Institute of Medicine of the National Academies

The Institute of Medicine (IOM) of the National Academies provides science-based advice on matters of biomedical science, medicine and health. A nonprofit organization specifically created for this purpose as well as an honorific membership organization, the IOM was chartered in 1970 as a component of the National Academy of Sciences.

The Institute provides a vital service by working outside the framework of government to ensure scientifically informed analysis and independent guidance. The IOM's mission is to serve as adviser to the nation to improve health. The Institute provides unbiased, evidence-based, and authoritative information and advice concerning health and science policy to policy makers, professionals, leaders in every sector of society and the public at large.

This site provides access to hundreds of scientific studies and books related to healthcare.

Website address: http://www.iom.edu/

Henry Kaiser Family Foundation

The Henry Kaiser Family Foundation is a non-profit, private operating foundation focusing on the major healthcare issues facing the U.S., with a growing role in global health. Kaiser develops and runs its own research and communications programs, sometimes in partnership with other non-profit research organizations or major media companies. Their goal is to serve as a non-partisan source of facts, information and analysis for policymakers, the media, the healthcare community and the public.

Information available on their website includes research and publications on Patient Protection and Affordable Care Act, Medicaid/SCHIP, Medicare, healthcare costs and insurance, health coverage and the uninsured, HIV/AIDS, minority health, and women's health issues.

Website address: http://www.kff.org/

National Cancer Institute

The National Cancer Institute (NCI) is part of the National Institutes of Health (NIH), which is one of 11 agencies that compose the Department of Health and Human Services (HHS). The NCI, established under the National Cancer Institute Act of 1937, is the federal government's principal agency for cancer research and training. This site provides access to a variety of cancer statistics, research reports and publications.

Website address: http://www.cancer.gov/

National Institutes of Health

The National Institutes of Health (NIH) is the nation's medical research agency — making important medical discoveries that improve health and save lives. The NIH, a part of the U.S. Department of Health and Human Services, is the primary federal agency for conducting and supporting medical research.

Website address: http://www.nih.gov/

Office of the Surgeon General

The Surgeon General of the Public Health Service focuses the nation's attention on important public health issues. Reports of the Surgeon General on the adverse health consequences of smoking triggered nationwide efforts to prevent tobacco use. Reports and other publications on nutrition, violence and HIV/AIDS — to name a few — have heightened America's awareness of important public health issues and generated major public health initiatives. This website is the access point to the reports and publications produced by the Office of the Surgeon General.

Website address: http://www.surgeongeneral.gov/

San Diego County Public Health Services — County Health Statistics Reports

The San Diego County Public Health Services provides a wide range of regional health data by age category, race/ethnicity, gender and geographic region. This data is provided by the Community Health Statistics Unit (CHSU), Emergency Medical Services (EMS) and Community Epidemiology and Immunization. Data can be accessed at one of the following websites:

- Community Health Statistics Unit — Website address: http://www.sdhealthstatistics.com
- Emergency Medical Services — Website address: http://www.SanDiegoCountyEMS.com
- Community Epidemiology & Immunization — Website address: http://www.sdepi.org

Substance Abuse and Mental Health Services Administration

The Substance Abuse and Mental Health Services Administration (SAMHSA), Office of Applied Studies collects and reports on national and state data to help policymakers, treatment providers and patients make informed decisions regarding the prevention and treatment of mental and substance use disorders. This website provides access to a variety of publications related to alcohol, tobacco and illegal drug use.

Website address: http://www.oas.samhsa.gov/index.htm

World Health Organization

The World Health Organization (WHO) is the directing and coordinating authority for health within the United Nations system. It is responsible for providing leadership on global health matters, shaping the health research agenda, setting norms and standards, articulating evidence-based policy options, providing technical support to countries, and monitoring and assessing health trends. This website provides access to a wide variety of health related publications, data and statistics.

Website address: http://www.who.int/en/

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) was developed in 1990 to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability and social problems among youth and adults in the United States. These behaviors, often established during childhood and early adolescence, include:

- Tobacco use
- Unhealthy dietary behaviors
- Inadequate physical activity
- Alcohol and other drug use
- Sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection
- Behaviors that contribute to unintentional injuries and violence

The YRBSS includes national, state and local school-based surveys of representative samples of 9th through 12th grade students. These surveys are conducted every two years, usually during the spring semester. The national survey, conducted by CDC, provides data representative of high school students in public and private schools in the United States. The state and local surveys, conducted by departments of health and education, provide data representative of public high school students in each state or local school district. The San Diego Unified School District participates in the YRBSS.

Website address: http://www.cdc.gov/HealthyYouth/yrbs/index.htm

GLOSSARY OF TERMS

The definitions of health terms used in this report correspond with the definitions used in various reports published by the County of San Diego Health and Human Services Agency, Public Health Services, Community Health Statistics Unit. This glossary is intended to define and clarify the terms used in this report.

The County of San Diego disease and injury data presented in this report represent only principal diagnoses (or underlying cause of death) and do not include secondary diagnoses. Injury data using ICD10 coding (death) only use underlying cause of death; injury data using Ecodes from Emergency Department and Hospital discharges include only primary Ecodes (mechanism of injury).

Age-adjusted rate: Calculations of age-adjusted rates take into account the age of each case relative to a standard age distribution of a reference population. Currently, the 2000 U.S. standard population is used in age adjusting. Since many causes of mortality disproportionately affect older persons, disease mortality is often reported with age adjusted rates.

Age-adjusted rates are used to compare relative risk (over time or between populations), while removing the effect of differences in the age of a population. Age-adjusting shows differences between groups that are not due to differences in age distribution. This may be important in many cases when comparing risk across populations with different underlying age structures. Age adjusted rates should be viewed as relative indexes rather than as direct or actual measures of risk.

For many users of these data, the magnitude of an issue is important, not only the risk outside of age. Often, planning and resource needs are based on data. In this case, knowing that a group contains an older population is valid and important for planning for those diseases which affect different aged population sectors. Additionally, differences may be due to other reasons besides age, such as gender or race/ethnicity. One may want to consider several of these demographic factors when examining a health issue.

AIDS: new cases reported by providers to County Public Health Services, cases need not be investigated and confirmed.

Asthma: ICD9 code 493; ICD10 codes J45, J46. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Assault injury: injuries that are intentionally inflicted by another, ICD9 codes E960-E969. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Chlamydia: new cases reported by providers to County Public Health Services, cases need not be investigated and confirmed.

Colorectal Cancer: cancer of the colon, rectum or anus, ICD10 codes C18-C21. These codes apply to County of San Diego death data.

COPD: Chronic Obstructive Pulmonary Disease, ICD9 code 490-492, 496; ICD10 codes J40-J44, J47. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Coronary Heart Disease: ischemic and hypertensive heart disease, ICD9 codes 402, 410-414, 429.2; ICD10 codes I11, I20-I25. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Diabetes: diabetes mellitus, includes insulin-dependent and non insulin-dependent diabetes, ICD9 code 250; ICD10 codes E10-E14. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Early Prenatal Care: care beginning during the first trimester of pregnancy. Rates (%) are calculated amongst those births whose start of prenatal care is known (i.e. those whose start of-care is unknown or missing are excluded from the denominator).

Fall-related: accidental falls, ICD9 Ecodes E800-E886, E888; ICD10 codes WOO-W19. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Female Breast Cancer: ICD10 code C50. These codes apply to County of San Diego death data.

Fetal mortality: number of deaths of fetuses more than 20-weeks gestation or 350 grams per 1,000 live births, and fetal deaths. *MCFHS*

Firearm-related: all intents, ICD9 Ecodes E922, F955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4; ICD10 codes W32-W34, X72-X74, U01.4, X93-X95, Y22-Y24, Y35.0. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Gonorrhea: new cases reported by providers to County Public Health Services, cases need not be investigated and confirmed.

Homicide: deaths that are intentionally inflicted by another, ICD10 codes U0I-UO2, X85-Y09, Y87.1. These codes apply to County of San Diego death data.

Infant mortality: number of deaths of infants under one year of age per 1,000 live births.

Live Birth: a product of conception, which after complete expulsion or extraction from the mother, breathes or shows any other evidence of life. This is not synonymous with the term "pregnancy," which can result in a miscarriage, fetal death, induced abortion or live birth.

Low birth weight: birth weight less than 2,500 grams (approximately 5.5 lbs).

Lung Cancer: cancer of the trachea, bronchus or lung, ICD10 codes C33-C34. These codes apply to County of San Diego death data.

Motor Vehicle Injury: unintentional injury of anyone involved in a motor vehicle accident (collision or non-collision) on a public road, including occupants, pedestrians and cyclists, ICD9 codes E810-819; ICD10 codes V30-V39 (.4-.9), V40-V49 (.4-.9), V50-V59 (.4-.9), V60-V69 (.4-.9), V70-V79 (.4-.9), V81.1, V82.1, V83-V86 (.0-.3), V20-V28 (.3-.9), V29 (.4-.9), V12-V14 (.3-.9), V19 (.4-.6), V02-VO4 (.1, .9), V09.2, V80 (.3-.5), V87 (.0-.8), V89.2. These codes apply to County of San Diego death and hospital discharge data.

Overdose/Poisoning: all intents, ICD-9 Ecodes E850-E869, E950-E952, E962; ICD10 codes X40-X49, X60-X69, X85- X90, Y10-Y19, Y35.2, U01.6-U01.7. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Pedestrian injury attributed to Motor Vehicle Accidents: unintentional injury of pedestrians involved in motor vehicle accidents on a public road, ICD9 codes E810- 819(.7); ICD 10 codes V02-VO4 (. I,.9), V09.2. These codes apply to County of San Diego death and hospital discharge data.

Preterm birth: birth prior to 37 completed weeks of gestation.

Prevalence Rate: the number of new and old cases of a disease or occurrence of an event during a particular period. It is expressed as a ratio in which the number of events is the numerator and the population at risk is the denominator.

Primary and Secondary Syphilis: new cases reported to and confirmed by County Public Health Services.

Prostate Cancer: ICD10 code C61. These codes apply to County of San Diego death data.

Rate: also referred to as actual rate or crude rate, is the number of cases divided by the population. For example, if there were 987 cases among a population of 654,321, we calculate the crude rate by the number of cases divided by population of 654,321, which results in a rate of 150.8 per 100,000 population. This means for every 100,000 people, 150-151 cases would be expected.

Root Cause: A root cause is an initiating cause of a causal chain which leads to an outcome or effect of interest. Commonly, root cause is used to describe the depth in the causal chain where an intervention could be implemented practically to change performance and prevent an undesirable outcome.

Self-inflicted injury: injuries that are intentionally inflicted by self, ICD9 codes E950-E959. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Stroke: cerebrovascular disease, ICD9 codes 430-438; ICD10 codes I60-I69. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Suicide: deaths that are intentionally inflicted by self, ICD10 codes UO3, X60-X84, Y87.0. These codes apply to County of San Diego death data.

Tuberculosis (TB): new active cases reported to and confirmed by County Public Health Services,

Underlying Cause of Death: The underlying cause of death is defined by the World Health Organization (WHO) as the disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury. Under international rules for selecting underlying cause from the reported conditions, every death is attributed to one underlying cause based on information reported on the death certificate.

Unintentional Injury: ICD9 Ecodes E800-E869, F880-E929; ICD10 codes V01-X59, Y85-Y86. This generalized unintentional injury may overlap with specific indicators, such as drowning, smoke/fire, suffocation, falls, motor vehicle or pedestrian deaths, as well as the unintentional portion of overdose/poisoning and firearm injuries. These codes apply to County of San Diego death, hospital discharge and emergency department discharge data.

Very low birth weight: birth weight less than 1,500 grams (approximately 3lbs, 4oz). *MCFHS*

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